From: Adam Sherman
To: Spellman, John (DEC)
Cc: "Cummins, Gerald"; Adam Gutta
Subject: RE: Troy (Water Street) Site (4-42-029) - CCR for Phase 1A (Gas Pipeline Corridor) Remedial Action
Date: Tuesday, January 30, 2024 5:30:42 PM
Attachments: image001.png
image002.png

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Good evening, John.

The signed/stamped CCR for Phase 1A is ready for download at the link below. The requested figure has been added to Appendix A-1. In addition, import fill quantities on Table 1 and Section 2.8.2 were also updated per my 12/7/23 email.
Troy_Area_2_Ph1A_CCR

Please let me know if you have any comments or questions.

Thanks, Adam

Adam Sherman, P.E.
Brown and Caldwell | Albany, NY
T 518.560.5911 | **C** 201.602.0075

From: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Sent: Wednesday, January 24, 2024 8:32 AM
To: Adam Sherman <ASherman@Brwncald.com>; 'Cummins, Gerald' <Gerald.Cummins@nationalgrid.com>
Cc: Adam Gutta <agutta@BrwnCald.com>
Subject: RE: Troy (Water Street) Site (4-42-029) - CCR for Phase 1A (Gas Pipeline Corridor) Remedial Action

Good morning Adam,

Yes, the snapshot works and please send a signed/stamped report.

Thank you,

John

John Spellman, P.E.
Project Manager, Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7014
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Phase 1A (Gas Pipeline Corridor) Remedial Action Construction Completion Report
Troy (Water Street) Site – Area 2 and Area 3
Troy, Rensselaer County, New York

Prepared for
Niagara Mohawk Corporation d/b/a National Grid
300 Erie Boulevard West
Syracuse, New York 13202

January 2024

Project Number: 160119.330

New York State Professional Engineer Certification:

I, Adam R. Sherman, certify that I am currently a NYS registered professional engineer, I had primary direct responsibility for the implementation of the subject construction program, and I certify that the Remedial Design was implemented and that all construction activities were completed in substantial conformance with the DER-approved Remedial Design.

All use restrictions, institutional controls, engineering controls and/or any operation and maintenance requirements applicable to the site are contained in an environmental easement created and recorded pursuant to ECL 71-3605 and that any affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.



Adam R. Sherman, P.E.
Managing Engineer
New York State P.E. License #087306

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List of Abbreviations

ACM	asbestos-containing material
AROD	Amended Record of Decision
ASTM	ASTM International
BC	Brown and Caldwell Associates
BFS	Blast Furnace Slag
bgs	below ground surface
CAMP	Community Air Monitoring Plan
CCR	Construction Completion Report
CMP	Construction Management Plan
cm/s	centimeters per second
CSSHASP	Contractor Site-Specific Health and Safety Plan
d/b/a	doing business as
ESC	Erosion and Sediment Control
ESMI	Environmental Soil Management, Inc. of New York
FFS	Focused Feasibility Study
FS	Feasibility Study
GPS	Global Positioning System
HDPE	high density polyethylene
IRM	Interim Remedial Measure
ISCO	In Situ Chemical Oxidation
ISS	In Situ Solidification
k	hydraulic conductivity
LDC	Local Development Corporation
LLDPE	linear low-density polyethylene
LRI	Land Remediation, Inc.
MGP	Manufactured Gas Plant
MHHW	Mean High-High Water
MHW	Mean High Water
MLLW	Mean Low-Low Water
MWL	Mean Water Level
NAPL	Non-Aqueous Phase Liquid
NGVD	National Geodetic Vertical Datum
NMPC	Niagara Mohawk Power Corporation
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
NYSSSESC	New York State Standards and Specifications for Erosion and Sediment Control
OU	Operable Unit
PDI	Pre-Design Investigation
PHA	Process Hazard Analysis
PID	Photoionization Detector
PL	Pipeline
PSA	Preliminary Site Assessment
psi	pounds per square inch
PVC	Polyvinyl Chloride
RA	Remedial Action
RDR	Remedial Design Report
RDWP	Remedial Design Work Plan
RI	Remedial Investigation
ROD	Record of Decision
SI	Supplemental Investigation
SIR	Site Investigation and Remediation
SRI	Supplemental Remedial Investigation
SSO	Site Safety Officer
SWPPP	Stormwater Pollution Prevention Plan
TWCA	Temporary Waste Containment Area
UCS	Unconfined Compressive Strength
USGS	United States Geological Survey
VOC	Volatile Organic Compound
WPCP	Water Pollution Control Plant

Section 1

Introduction and Background

This Construction Completion Report (CCR) has been prepared by Brown and Caldwell Associates (BC) on behalf of Niagara Mohawk Power Corporation (NMPC), doing business as (d/b/a) National Grid (referred to herein as National Grid) to document the implementation of Remedial Action (RA) activities at Area 2 and Area 3 of the Troy (Water Street) Site located in the City of Troy, Rensselaer County, New York (hereafter referred to as the "Site"). This phase of remediation was conducted to complete the remediation of areas in the vicinity of the new natural gas pipeline, which was installed in parallel with this phase of remediation. The natural gas pipeline replacement (referred to as the "Gas Utility [PL E-20] Partial Replacement Project") was completed by National Grid's Gas Group and is documented in a completion letter report prepared BC, dated March 14, 2023 (BC, March 14, 2023). Remedial activities are being performed at the Site in accordance with an Order on Consent (Index No. A4-0473-0000) between NMPC, d/b/a National Grid, and the New York State Department of Environmental Conservation (NYSDEC), which was executed on November 7, 2003.

The location of Area 2 and Area 3 is depicted on Figure 1. The Site, which was the location of former manufactured gas plant (MGP) operations, iron/steel manufacturing operations, and other industrial operations (refer to Section 1.3), is part of NYSDEC Site No. 4-42-029 and has been separated into Operable Units (OUs), some which have been separated into "Areas" for investigation purposes. The July 2003 Record of Decision (ROD) and March 2011 Amended Record of Decision (AROD) identified the four areas into which the Site was subdivided. Area 2 is identified as a portion of Operable Unit No. 1 (OU-1) and Area 3 is identified as a portion of OU-2 of NYSDEC Site No. 4-42-029. Area 4 is considered its own distinct site (DEC Site No. 4-42-029A) and the Hudson River is considered a separate OU (OU-3) of Site No. 4-42-029.

Area 2 is owned by the Troy Local Development Corporation (Troy LDC). The design for the selected RA for Area 2 is documented in two NYSDEC-approved Remedial Design Reports (RDRs), the Southern Area RDR (BC, January 2013) and the Northern Area RDR (BC, July 2018). In April 2021, the implementation of the Area 2 RA was reorganized into multiple phases to accommodate the PL E-20 Partial Replacement Project, property owner considerations regarding Site use and development, and project permitting requirements. The Phase 1A portion of the remediation, which is documented herein, addresses excavation and in situ solidification (ISS) in areas within the vicinity of the PL E-20 gas pipeline. Future phases are anticipated to include Phase 1B (remainder of the remediation in the southern portion of the Site, including excavation in the vicinity of the former By-Products Building and the southern area Site cover), Phase 2 (remediation in the northeastern portion of the Site and along the Wynantskill Creek, including multiple excavations, ISS, and the northeastern area Site cover), and Phase 3 (remediation in the northeastern portion of the Site and along the Hudson River, including multiple excavations, ISS, and the northwestern area Site cover). The re-phasing of the Area 2 remediation was approved by the NYSDEC in an email dated May 4, 2021.

Area 3 is located immediately to the south of Area 2 and on property owned by Chevron USA. Remedial design activities for Area 3 have not been completed. Rather the implementation of this initial phase of remediation within the gas corridor was completed in accordance with an NYSDEC-approved work plan prepared by BC and dated November 9, 2021 (BC, November 9, 2021). The

initial phase of Area 3 remediation, which is documented herein, addresses excavation in areas within the vicinity of the PL E-20 gas pipeline.

1.1 Report Organization

This CCR is organized as follows, which is consistent with the requirements of NYSDEC's DER-10 Technical Guidance for Site Investigation and Remediation (hereafter referred to DER-10):

- **Section 1:** Introduction and Background
- **Section 2:** Description of Completed Work
- **Section 3:** Description of Design Changes
- **Section 4:** Schedule for Completed Work
- **Section 5:** Conclusion
- **Section 6:** References

1.2 Site Location and Description

Pre-Remediation Site Conditions for Area 2 and Area 3 are provided for reference as Figure 2 and Figure 3, respectively. Area 2 and Area 3 are located along King Road and River Road near the intersection with Water Street in the City of Troy, Rensselaer County, New York.

Area 2

Area 2 encompasses 16 acres, is transected by King Road (oriented north-south) and is bordered by: the Hudson River to the west; the Wynantskill Creek to the north; a railroad to the east (owned by CSX Corporation); and property owned by Chevron USA, Inc. to the south.

The majority of Area 2 is owned by the Troy LDC, while National Grid owns a small parcel in the northwest portion of Area 2 (approximately 0.5 acre), on which a natural gas regulator station is located. The property is currently zoned industrial and is surrounded by parcels currently used for a combination of commercial, industrial, and railroad uses.

Area 2 is generally a flat lying area between the relatively steep slope east of the railroad, and the steep bank from the Site down approximately 20 feet to the Hudson River. The Hudson River in this area is tidal; the level in the river fluctuates approximately 4 to 5 feet twice per day. Surface water gauging data for the Hudson River obtained from the United States Geological Survey (USGS) Station 01359139 (Hudson River at Albany, New York), which is located approximately 4.5 miles downriver (i.e., south), indicate the following typical water elevations (elevations reported relative to National Geodetic Vertical Datum of 1929 (NGVD 1929)[1]:

- **Mean High-High Water (MHHW):** Elevation 4.9 feet (annual average MHHW ranged from elevation 4.67 to 5.09 feet)[2]
- **Mean High Water (MHW):** Elevation 4.5 feet (annual average MHW ranged from elevation 4.32 to 4.69 feet)[3]

[1] The reported water elevations represent the average values at USGS Station 01359139 for "water years" (water years span from October of the previous year to September of the water year, i.e., Water Year 2009 spans from October 2008 to September 2009), with readily available data from USGS website (http://wdr.water.usgs.gov/). Data from the following "water years" was used to generate the average values: 1996, 2003, 2006, 2007, 2008, 2009, and 2010.

[2] MHHW represents the average water level for the higher of the two high tides in a day.

[3] MHW represents the average of the two high tides that occur in a day.

- **Mean Water Level (MWL):** Elevation 2.2 feet (annual average MWL ranged from elevation 2.06 to 2.34 feet)[4]
- **Mean Low-Low Water (MLLW):** Elevation -0.7 feet (annual average MLLW ranged from elevation -0.82 to -0.46 feet)[5]

The Wynantskill Creek flows from east to west through the northern part of Area 2. East of Area 2, the creek has a steep gradient. On Area 2, the gradient flattens, but the flow remains swift. The creek enters a concrete lined channel just north of the former location of the Water Gas Building. This concrete channel extends approximately 300 feet to the mouth of the creek where it discharges to the Hudson River.

Based on the 1980 National Flood Insurance Program and Flood Insurance Rate Map, the majority of Area 2 is designated as Zone B. Zone B indicates that the area is between the 100-year and 500-year flood stage for the Hudson River. Directly adjacent to the river (i.e., along the bank), the area is designated as Zone A12 (located within the 100-year flood stage). The 100-year flood elevation at the Site is approximately 24.5 feet, NGVD 1929.

A warehouse building constructed in the 1980's, which previously housed an electronics recycling business (E-Lot), is located in the northwestern portion of Area 2. Since 2009, the property owner (Troy LDC) has performed demolition activities on Area 2, including razing of the former Water Gas Building, By Products Building, Benzol Building, and other former MGP-era buildings. The remaining above-grade structures include the warehouse building (former E-Lot building), the coke silos, and two small structures along the Hudson River (former scale house and coke bin).

Outside of the building footprints, the existing surface materials consist primarily of asphalt pavement or crushed stone, with sparsely vegetated areas with the exception of the river and creek banks, which are vegetated with trees and brush. A paved access road referred to as King Road runs north-south through the Site and connects to Main Street to the north and Water Street to the south.

Notable utilities within Area 2 include the 12-inch natural gas transmission line (PL E-20), which formerly ran along the top of the riverbank, but was replaced during the PL E-20 Partial Replacement Project and now has an alignment that runs east from the gas regulator station and then runs south along King Road. A 42-inch sanitary sewer forcemain runs along the eastern property boundary adjacent to the CSX railroad. Other known utilities include electrical (overhead and underground), telecommunications, septic, and water.

Area 3

Area 3 encompasses 1.5 acres, is abutted to the north by property owned by Troy LDC (Area 2 of the Site), to the east by River Road and a railroad spur (owned and operated by CSX Corporation) to the south by the elevated Troy-Menands Bridge and property owned by Chevron USA, Inc., and to the west by the Hudson River.

Similar to Area 2, the topography of Area 3 is generally flat, with the exception of the steep bank of the Hudson River along the western side of Area 3. The flat portion of Area 3 is typically between elevation 25 and 28 feet, NGVD 1929.

Area 3 is currently vacant and does not contain any notable above-ground structures with the exception of the Troy-Menands Bridge (Route 378), which spans over Area 3 and extends over the Hudson River. Utilities that are known to be active on Area 3 include the 12-inch diameter natural

[4] MWL represents the average water level, including low and high tides.

[5] MLLW represents the average water level for the lower of the two low tides in a day.

gas transmission line (i.e., PL E-20 gas line discussed above for Area 3) and a 36-inch to 48-inch diameter stormwater drain, oriented east-west which discharges to the Hudson River. Other active utilities located adjacent to Area 3 and within River Road include potable water and a 42-inch diameter sanitary sewer forcemain.

1.3 Site History

Industrial operations at the Site began in the mid- to late-1800s with several generations of iron and steel making facilities. Manufactured gas production evolved on the Site to support the production of coke for the iron and steel industry. In 1859, portions of the Site were granted by the State of New York to the Troy Iron and Nail Factory. By 1885 the Troy Steel and Iron Company had been incorporated and had operations occurring in the vicinity of the Site. The last major iron industry development in the area was the Bessemer Steel Works built in 1864 in the area south of Wynantskill Creek.

In 1924, the Hudson Valley Coke Products Corporation was formed and the first coke plant was constructed at the Site. By 1925, the coke plant was providing coke and manufactured gas for public consumption. Hudson Valley Coke Products Corporation sold the facility to Hudson Valley Fuel Products, which merged into New York Power and Light, which in turn was consolidated into Niagara Mohawk Power Corporation (NMPC) in 1950. During the time of NMPC's (including their predecessor companies) involvement, manufactured gas was produced in the coke ovens (known as the main plant site) and at two auxiliary plants known as the producer plant and the water gas plant. In the 1930's the western segment of Wynantskill Creek was re-aligned and channelized in a concrete lined channel and the former channel was backfilled with approximately 40 feet of fill. NMPC sold most of the property to Republic Steel in 1951. The Public Service Commission required NMPC to retain the water gas plant as a standby source of gas from 1951 until 1956 when the MGP was retired.

King Fuels began operating a bulk petroleum terminal and distribution center at the Area 2 portion of the Site in 1957 and, through a series of transactions during the 1960's and concluding in 1973, had acquired that parcel from Republic Steel except for the natural gas regulator station retained by NMPC. In 2004, the 2,000,000 cf gas holder was demolished by King Fuels for scrap steel. King Fuels filed for bankruptcy and the property was subsequently purchased by the Troy LDC in 2006. National Grid maintains ownership of the approximate 0.5-acre property associated with the natural gas regulator station, located in the northwestern portion of the Site. As discussed in Section 1.2, since 2009, the Troy LDC has razed the majority of the above grade structures with the exception of the warehouse building (former E-Lot building), the coke silos, and two small structures along the top of the riverbank. The Area 2 portion of the Site is currently vacant with the only active operations being those associated with the gas regular station.

In 1955 Republic Steel Corporation sold the property which is occupied by Area 3 to American Bitumuls & Asphalt Company, which was acquired by the Chevron Asphalt Company in 1965. The Chevron Asphalt Company constructed an asphalt plant on the property. Chevron ceased asphalt operations around 1998 and the majority of the plant structures were razed in 2006. Area 3 has generally been unoccupied since 2006.

1.4 Regulatory History and Previous Remedial Actions

A summary of the regulatory history and previous remedial actions on Area 2 and Area 3 are discussed below.

Area 2

The chronology of remedial activities at Area 2 is summarized below:

- **June 1994 to September 1995:** Preliminary Site Assessment (PSA).
- **December 1997 to March 1998:** Interim Remedial Measure (IRM) to remove lime sump and its contents.
- **December 1997 to March 1998:** IRM to remove 300,000-cubic feet gasholder and its contents.
- **September 1996 to September 1998:** Remedial Investigation (RI).
- **September 1998 to 2002:** Supplemental Investigations and Feasibility Study (FS).
- **February 2003**: Proposed Remedial Action Plan (PRAP).
- **July 2003:** Record of Decision (ROD) issued by NYSDEC.
- **October 2003 to February 2004:** Pre-Design Investigation (PDI) and Report.
- **April to December 2004:** Supplemental PDI Activities.
- **October 2004 – January 2005:** Initial in situ chemical oxidation (ISCO) pilot test activities.
- **July 2005 to May 2006:** Second ISCO pilot test and reporting.
- **July 2005 to March 2006:** Resumption of supplemental PDI activities and reporting.
- **June 2006:** Review of PDI findings with DEC, and agreement that certain components of the remedy selected in the July 2003 ROD warrant re-evaluation; and that supplemental investigatory activities were required for this re-evaluation.
- **April 2007 to February 2008**: Supplemental Investigation (SI) and reporting.
- **April to May 2008**: Remedial Action to remove purifier waste deposits and the contents of tar liquor sump and oil/water separator structures.
- **October 2008 to February 2009**: Remedial Action to remove contents of the air plenum and underground vault structures.
- **June 2009**: RA to remove waste from the demolition of former cooling towers.
- **July 2010**: Focused Feasibility Study (FFS).
- **January 2011**: Proposed ROD Amendment.
- **March 2011**: AROD issued by NYSDEC.
- **June 2011:** Remedial Design Work Plan (RDWP).
- **June 2012:** Remedial Design Report (50% Design Submittal) for the Southern Area.
- **October 2012:** Remedial Design Report (95% Design Submittal) for the Southern Area.
- **January 2013:** Final Remedial Design Report (100% Design Submittal) for the Southern Area.
- **August 2013:** Remedial Design Report (50% Design Submittal) for the Northern Area.
- **August 2015:** Remedial Design Report (95% Design Submittal) for the Northern Area.
- **July 2018:** Remedial Design Report (Final 100% Design Submittal) for the Northern Area.
- **May to November 2022:** Implementation of Phase IA remediation.

Area 3

The chronology of remedial activities at Area 3 is summarized below:

- **November 2003:** Order on Consent (Index No. A4-0473-00001) between Niagara Mohawk Power Corporation (now doing business as National Grid) and the NYSDEC.
- **2006:** Demolition of asphalt plant structures by Chevron and identification of a structure containing suspected byproduct of former MGP operations (i.e., tar).

- **December 2011:** NYSDEC approval of a settlement agreement between Chevron USA, Inc. and National Grid which assigns National Grid the responsibility for the portion of Area 3 lying north of the centerline of the Troy-Menands Bridge.
- **February 2015:** RI Work Plan to assess the nature and extent of potential MGP-related impacts underlying the Site.
- **August 2016:** Supplemental RI (SRI) Work Plan.
- **October 2016:** IRM to remove the tar from tank T-41 and surface tar.
- **January 2018:** IRM CCR for surface tar removal.
- **March 2018:** Data Summary Report.
- **January 2019**: RI Report.
- **January 2021:** Feasibility Study (FS) Report.
- **March 2021:** ROD issued by NYSDEC.
- **July 2021:** Remedial Design Work Plan (RDWP) which included the Area 3 Pre-Design Investigation (PDI) Work Plan
- **July to November 2021:** Implementation of the PDI Work Plan (including decommissioning of monitoring wells on Area 3, refer to Section 2.2)
- **November 2021:** Work Plan for Remedial Action Implementation of the PL E-20 Gas Pipeline Corridor
- **May to November 2022:** Implementation of Phase IA remediation.

1.5 Remedial Action Overview

The RA overview at Area 2 and Area 3 is discussed in the following subsections.

Area 2 Phase 1A Remedial Action

Area 2 Phase 1A RA activities were implemented from May 2022 through November 2022, and generally included the following:

- Excavation of soil from Excavation Area A.
- Pre-ISS excavation and ISS treatment of soil within the target areas in the vicinity of the gas pipeline corridor.
- Demolition of subsurface structures within the excavation and ISS areas.
- Transportation and off-site treatment and/or disposal of materials.
- Dewatering and off-site disposal of remediation wastewaters.
- Backfilling with imported fill materials, backfilling with material approved for re-use (e.g., crushed concrete), and grading and construction of surface restoration over the remediated areas.

Area 3 Gas Pipeline Corridor Remedial Action

Area 3 Gas Pipeline Corridor RA activities were implemented from May 2022 through November 2022, and generally included the following:

- Excavation of soil from the target areas in the vicinity of the gas pipeline corridor.
- Demolition of subsurface structure within the excavation limits.
- Transportation and off-site treatment and/or disposal of materials.
- Dewatering and transportation off-site of remediation wastewaters.

- Backfilling with imported fill materials, and grading and construction of surface restoration over the remediated areas.

1.6 Coordination with the Partial Replacement of PL E-20 Gas Transmission Line Project

As discussed, in parallel with the Area 2 and Area 3 RA, National Grid Gas implemented a partial replacement of the gas utility pipeline PL E-20 located on portions of Area 2 and Area 3. The PL E-20 Project began in areas south of Area 3 and progressed north towards and through Area 3 and then Area 2. A brief summary of the PL E-20 Project activities is described in this section. Additional documentation of the PL E-20 Project is addressed under a separate completion letter titled "Completion Letter Report, Gas Utility (PL E-20) Partial Replacement Project" (BC, March 14, 2023) submitted to the NYSDEC on March 14, 2023.

To maintain coordination between the Area 2 and Area 3 remediation activities and the PL E-20 Project, weekly project meetings were held between members from both project teams to discuss progress, upcoming work plans, and sequencing. In addition, routine meetings were held between the Site Safety Officers (SSOs) and the construction managers for additional in-field coordination. To complete the projects, a temporary detour road (refer to Section 2.2) was installed by the remediation project to accommodate work for both projects within King Road.

On Area 2 and Area 3 of the Troy (Water Street) Site, after remediation activities were completed and backfilled, the PL E-20 project team excavated the proposed gas pipeline trench and the new gas transmission pipe was installed, backfilled, and the surfaces were restored as part of either the PL E-20 Project or the remediation project.

1.7 Project Roles and Responsibilities

The following parties comprised the project team for the project activities:

- **NYSDEC:** Regulatory agency responsible for review and approval of the design documents, oversight of RA implementation, and review and approval of this CCR.
- **National Grid Site Investigation and Remediation (SIR):** National Grid entity responsible for the implementation of the Areas 2 and 3 RA activities.
- **National Grid Gas:** National Grid entity responsible for the PL E-20 Partial Replacement Project.
- **BC:** Design Engineer, Construction Manager, and Construction Quality Assurance Engineer retained by National Grid. Responsible for the design, including the drawings, specifications, and bid documents (collectively referred to herein as the Design Documents), construction management, and construction quality assurance observation and documentation.
  - BC subcontracted Eurofins Lancaster Laboratories, Inc. for analytical testing of backfill/fill for emerging contaminants.
  - BC subcontracted Hartgen to perform archeological monitoring in accordance with the archeological monitoring plan dated April 2022 (OPRHP 21 PR06614), which was approved by the New York State Historic Preservation Office.
- **Land Remediation, Inc. (LRI):** Remediation Contractor retained by National Grid to implement the Area 2 and Area 3 RA. Primary subcontractors used by LRI included:
  - HSE Consulting Services, LLC (HSE) for third-party implementation of the Contractor Site-Specific Health and Safety Plan (CSSHASP) and community air monitoring plan (CAMP).
  - NMB Land Surveying, PLLC (NMB) and Tri-Point Construction Layout, Inc. (Tri-Point) for construction surveying, settlement monitoring, and development of the record drawings.

- Vanguard Construction Solutions, Inc for vibration monitoring.
- Construction Technology for geotechnical laboratory and field backfill and compaction testing.
- Alpha Analytical (Alpha) for analytical laboratory testing (i.e., waste characterization and import material source certification).
- Classic Environmental Inc for asbestos abatement.
- Parratt-Wolff, Inc for monitoring well decommissioning.
- Badger Daylighting for vacuum excavation to locate utilities.
- National Construction Rentals, Inc for permanent and temporary fence installation.
- J. Hunziker Asphalt Paving, LLC for asphalt pavement restoration.
- Edward L. Horn, P.E. for pre-construction and post-construction building assessment.

Section 2

Description of Work Completed

Activities associated with the implementation of the Area 2 and Area 3 RA began May 2022 and were completed November 2022 (refer to Section 4 for a summary of the project schedule) and included the following activities, which are further described in subsequent sections:

- Pre-mobilization
- Existing conditions surveying and pre-construction assessment
- Mobilization and Site preparation
- Temporary controls implementation
- Select demolition and removal of subsurface structures/pipes
- Dewatering and on-site storage
- Excavation
- ISS
- Backfill/fill materials and placement
- Waste Management
- Site restoration
- Demobilization

Refer to Appendix A for the Record Drawings of work completed and refer to Appendix B for a photograph log documenting RA construction (Appendix B-1 for Area 2 photograph log and Appendix B-2 for Area 3 photograph log).

2.1 Pre-Mobilization

The following summarizes the pre-mobilization activities:

- **Permitting and Access:**
  - An access agreement was executed between the Area 2 property owner (Troy LDC) and National Grid to address implementation of the Area 2 remediation.
  - An access agreement was executed between the Area 3 property owner (Chevron Corporation) and National Grid to address implementation of the Area 3 remediation.
  - Correspondence with the Troy LDC and City of Troy representatives to discuss the scope and schedule of remediation activities.
  - A City of Troy Work Permit was obtained by LRI for remedial action activities (refer to Appendix C).
- **Pre-Construction Meeting:** A pre-construction meeting was held on May 9, 2022, and attended by representatives from NYSDEC, National Grid, BC, and LRI.
- **Process Hazard Analysis (PHA):** National Grid, BC, and LRI completed National Grid's internal PHA process to identify potential hazards associated with the Area 2 and Area 3 RA activities and identify methods, precautions, and safeguards to mitigate hazards to safely complete the construction.

- **Pre-Construction Submittals:** LRI prepared and submitted pre-construction submittals to BC, including work plans identifying the means, methods, equipment, and materials to be used. The major submittals included the following:
  - Photo/video documentation of pre-construction Site conditions.
  - CSSHASP identifying hazards associated with planned work activities and measures to mitigate those hazards.
  - Construction Management Plan (CMP): the CMP contained a collection of plans that lay out the means and method for construction implementation, including:
    - A project schedule detailing the breakdown of construction sequencing.
    - Construction Quality Control Plan for general discussion on construction quality control.
    - Contingency Plan for emergency situations with planned response actions.
    - Survey Control Plan identifying the surveyor and means and methods of survey control (e.g., control points and daily quality control).
    - Vibration and Settlement Monitoring Plan describing means and methods to monitor vibrations caused by construction activities and potential settlement of nearby infrastructure (former E-Lot building).
    - Traffic Control Plan to identify truck routes to and from the Site and traffic control measures (e.g., temporary flaggers and signage and temporary detour road).
    - Decontamination Plan documenting decontamination procedures for equipment and personnel.
    - Site Security Plan detailing 24/7 security protocols for the Site.
    - Dust, Vapor, Odor and Noise Control Plan establishing a monitoring plan (e.g., number and location of monitoring stations), project action levels (e.g., concentrations of dust/particles that trigger control/response measures), and control/response measures (e.g., water spraying to prevent dust generation).
    - Utility Support and Protection Plan describing means and methods for supporting and protecting active utilities.
    - Demolition and Debris Management Plan detailing methods and sequence of demolition work and debris management.
    - ISS Plan identifying means and methods of implementing ISS.
    - Excavation and Fill Plan documenting means and methods for soil removal from the Area 2 Excavation Area A and the Area 3 excavation area and backfilling with imported material and material approved (via sampling and laboratory analysis of samples) for re-use.
    - Excavation support methods to support excavation slopes, active utilities, and existing structures.
    - SWPPP Implementation Plan identifying type, location, and inspection/maintenance of ESCs.
    - Dewatering procedures and description of means and methods of dewatering, on-site storage/management and disposal of wastewater.
    - Waste Management Plan identifying waste streams to be generated as a result of work activities, means and methods for the management, transportation and treatment/disposal of each waste stream, and identification of off-site disposal facilities.

    - Perimeter utility cut and cap means and methods.
    - Site Restoration Plan describing the means and methods for restoration of the Site after completion of the RA activities.
  - Backfill source information and sampling results from geotechnical and analytical testing which were submitted to NYSDEC for review and approval of the source, quality, and quantity of backfill and surface restoration materials (refer to Section 2.8 for backfill and fill material documentation, sources, and quantities).
- **Existing Conditions Survey.** As part of pre-construction activities, LRI subcontracted NMB, a New York State Licensed Land Surveyor, to layout and stake the excavation areas, utilities, and former MGP-related structures. NMB also established survey control points for the Site to be used during the project. LRI reviewed survey control points and self-performed day-to-day surveying during construction utilizing a Global Positioning System (GPS)-enabled excavator and a hand-held rover survey station. The survey information collected during the project included the horizontal and vertical extents of the ISS cells and excavation areas, subsurface structures and utilities encountered during the work, backfill, surface restoration (e.g., asphalt and crushed stone), and other features encountered during work activities. Survey information was reviewed and signed and sealed by NMB as the New York State Licensed Land Surveyor and incorporated into the Record Drawings included in Appendix A.
- **Pre-Construction Assessment.** A pre-construction structural assessment was performed by a New York State licensed Professional Engineer of the warehouse building interior and exterior (refer to Appendix G). Additionally, LRI inspected and photographed existing Site features to document pre-construction conditions including the warehouse building exterior and parking lot, silos west of the warehouse building, perimeter fencing, the intersection of King Road and Water Street, the north entrance from Main Street onto King Road, Troy-Menands Bridge supports, bridge over the Wynantskill Creek, above ground utilities and additional existing Site structures. Following construction activities, a post-construction structural assessment of the warehouse building interior and exterior was performed (refer to Appendix G) to confirm that there were no adverse impacts to the building from the RA construction.

2.2 Mobilization and Site Preparation

Mobilization of equipment, materials, and personnel required for construction activities associated with Area 2 and Area 3 RA began on May 9, 2022. Coinciding with mobilization, a construction kick-off meeting was held on May 9, 2022, to discuss the scope of work and roles and responsibilities of the involved parties described in Section 1.7. Following mobilization, LRI began Site preparation activities, which included:

- **General Site Preparation and Temporary Facilities:** Temporary climate-controlled office trailers with electricity and internet were mobilized to the Site and maintained during the project. Site trailers provided on-site office/meeting spaces for the project team and other Site visitors. Temporary sanitary facilities, including portable toilets and handwashing stations, were also maintained on-site during the project.
- **Clearing of Vegetation and Surface Debris:** Trees and shrubs within the limit of work were cleared to accommodate remediation activities, staging areas, and a temporary detour road. Below ground vegetation debris (stumps) within the remediation limits and temporary roadways were grubbed. Refer to Section 2.9 for a description of waste management activities. Existing surface debris, generally consisting of brick, concrete, wood, miscellaneous construction and demolition debris, and tires was present at the Site prior to construction activities. The pre-existing surface debris is not associated with the remediation project and is being managed

separately by the Property Owner. Pre-existing surface debris within the Phase 1A limit of work was relocated to and consolidated in the northeastern corner of the Site for future management by the Property Owner. Tires were segregated and stockpiled separately from other debris. The location of the staged debris is shown on the Record Surveys included in Appendix A.

- **Stormwater Management and Erosion and Sediment Control Measures:** In accordance with the NYSDEC-approved Stormwater Pollution Prevention Plans (SWPPPs) for the South Area and North Area (included with the South Area RDR [BC, January 2013] and North Area RDR [BC, July 2018], respectively) and New York State Standards and Specifications for Erosion and Sediment Control (NYSSSESC) (NYSDEC, 2016), ESCs were established and maintained on Site during construction. ESCs included compost filter socks installed along the perimeter of the work area (refer to Photograph #7 in Appendix B-1 and Photographs #5 and #6 in Appendix B-2), surrounding catch basin inlets, and around the perimeter of imported material stockpiles. During construction activities, ESC measures were inspected weekly and following precipitation events and repaired, as needed. The SWPPP inspection reports are included in Appendix N.
- **Temporary Construction Access Roads:** Temporary construction access roads and stabilized construction entrances were installed on Area 2 and Area 3 where construction vehicles traveled over soil or gravel surfaces. These access roads were separate from the temporary detour road described below and were constructed generally with crushed stone aggregate (e.g., No. 3 stone, refer to Section 2.8.2) placed on top of a geotextile. Refer to Photograph #36 in Appendix B-1 for a photograph of the temporary construction access roads.
- **Temporary Detour Road:** To complete RA activities within the alignment of King Road, a temporary detour road was constructed and maintained during construction for use by the public (e.g., nearby businesses, Rensselaer County wastewater treatment plant personnel, and pedestrians). The temporary detour road was lined with concrete barriers and chain-link fencing to secure the Site and restrict non-project personnel from accessing the work area via the detour road. The concrete barriers and fencing extended from south end of the Site near the intersection with Water Street to the north end of the Site (the concrete wall along the Wynantskill Creek).
- **Temporary Bridge:** A temporary bridge was installed over the Wynantskill Creek parallel with and west of the existing bridge. The temporary bridge was installed for use by construction vehicles. Signage was posted at the bridge entrance directing all construction vehicles to use the temporary bridge and for all other traffic to use the existing bridge.
- **Monitoring Well Decommissioning:** Monitoring well decommissioning records are in Appendix E.
  - **Area 2 Monitoring Well Decommissioning:** A total of 25 monitoring wells (24 overburden and 1 bedrock) were decommissioned in accordance with "CP 43: Groundwater Monitoring Well Decommissioning Policy" (NYSDEC, 2009) during the Phase 1A remediation project. Refer to Appendix E for the monitoring well decommissioning records.
    - 20 overburden wells were decommissioned by filling with grout: MW-16, MW-18, MW-19, MW-20, MW-21, MW-32, PZ-1, PZ-7, PZ-15a, PZ-15c, PZ-16a, PZ-16b, PZ-16c, PZ-17b, PZ-20, PZ-21, PZ-22a, PZ-22b, PZ-22c, and RW-1
    - Three overburdened wells were decommissioned by over-drilling and removal: MW-33, MW-34, and PZ-17a
    - One bedrock well was decommissioned by over-drilling and removal: PZ-16d
    - One overburden well was decommissioned by complete destruction during ISS mixing: PZ-15b
    - Monitoring wells PZ-17c and MW-39 were planned to be decommissioned as part of this phase of work but were left in-place following a design modification (refer to Section

3.1). Photograph #13 in Appendix B-1 shows a typical grout-in-place set up for monitoring well decommissioning activities.

  - **Area 3 Monitoring Well Decommissioning:** During pre-design investigation activities on Area 3 in 2021 (i.e., before RA construction) a total of 6 monitoring wells were decommissioned in accordance with "CP 43: Groundwater Monitoring Well Decommissioning Policy" (NYSDEC, 2009). Decommissioning was performed by Parratt-Wolff, subcontracted to BC. This work is documented here for completeness.
    - Six overburden wells were decommissioned by filling with grout: MW-1S, MW-1S REP, MW-1D, MW-4, MW-5S, and MW-5D

- **Utility and Subsurface Pipe Locating and Protection/Removal:** The following describes the utility locating and protection/removal activities completed during the project.
  - Utility locating activities included:
    - **Dig Safe and Ground Penetrating Radar:** Prior to conducting intrusive activities, the locations of subsurface utilities were marked in the field and a utility stakeout was performed by Dig Safely New York, the County of Rensselaer, and the City of Troy to locate and mark out utility locations (e.g., electric, telecommunications, gas, water, septic, stormwater, storm sewer, and sanitary sewer). Ground penetrating radar was used within and around the footprint of the remediation areas to identify potential subsurface obstructions (e.g., former utilities, MGP-related process piping, and subsurface structures), and approximate locations were marked out. Subsurface/intrusive utility locating is discussed in the subsequent sections.
    - **Vacuum Excavation:** Prior to intrusive activities, utility locating was performed to identify utilities within the Area 3 excavation area, Excavation Area A on Area 2, and the ISS area on Area 2. Vacuum excavation, a soft-dig intrusive utility locating method, was used at locations where near-surface utilities or subsurface obstruction were marked out (refer to Photograph #20 in Appendix B-1 and Photograph #3 in Appendix B-2).
  - The following utilities and piping were encountered on Area 3. Refer to Section 2.4 for discussion of subsurface structures (e.g., foundations) encountered during construction.
    - **Former Brick Conveyance:** An approximately 60-inch-tall arched brick conveyance structure suspected to be a former stormwater tunnel was encountered within the Area 3 excavation area between approximately elevation 23 feet NGVD (4 feet below ground surface [bgs]) and elevation 19 feet NGVD (9 feet bgs). City of Troy personnel were contacted but reported they were not familiar with the structure. A video inspection was performed via a remote-controlled camera to investigate the alignment, length, and condition of the structure. The video inspection report, included as Appendix Q of this CCR, concluded that the brick conveyance structure extends west and east of the Area 3 excavation area but debris (e.g., fallen bricks) inhibited further access. This structure was removed from the Area 3 excavation limits and capped (bricked up) at the east and west side of the excavation. Refer to Photographs #13 and #14 in Appendix B-2 showing the location of this structure and the interior of this structure.
    - **Plastic Pipe:** A 4-inch polyvinyl chloride (PVC) pipe extending from the sewer manhole at the intersection of Water Street, King Road, and River Road was encountered within the Area 3 excavation area at approximately 18 inches bgs. The PVC pipe was presumed to extend to a former sewer leach field and was cut and capped outside of the excavation limits.
    - **Former MGP-related Process Pipes:** Three 2-inch diameter pipes (oriented north-south) wrapped in asbestos containing material (ACM) suspected to be former MGP-related

process pipes were encountered within the Area 3 excavation area at approximately 1-foot bgs. Asbestos abatement was performed including removal of the pipes from the excavation area. The pipes were cut and capped at the limit of excavation. Refer to Section 2.9 for waste management of the pipes and ACM. The location of the former MGP-related process pipes is shown on the Record Drawings in Appendix A. Refer to Photographs #5 and #6 in Appendix B-2.

- The following utilities and piping were encountered on Area 2. Refer to Section 2.4 for discussion of subsurface structures (e.g., foundations) encountered during construction.
  - **Septic Service Line:** One active septic service line was identified during utility locating activities along the eastern side of the former E-Lot building at approximately 4 feet bgs. The septic line, a 4-inch diameter steel pipe, serviced the former E-Lot building and extended north towards a leach field located in the parking area north of the building. The service line was cut and capped at the edge of the building and removed in its entirety.
  - **Leach Pipes:** Three 2.5-inch PVC leach pipes north of the former E-Lot building (leach field) were encountered at approximately 12 to 18 inches bgs. The pipes were cut and capped outside the limits of the ISS area. Refer to the Record Surveys in Appendix A for the location of the capping of leach pipes.
  - **2-inch Diameter Water Line:** One 2-inch diameter copper water line was identified adjacent to the active septic service line during utility locating services. The line was confirmed to be abandoned by the City of Troy and was removed where present (refer to Appendix A). This line did not extend beyond the limits of the ISS area.
  - **12-inch Diameter Water Main:** A 12-inch diameter steel pipe was encountered within the western portion of Excavation Area A (oriented north-south) at approximately 3 feet bgs. The pipe was confirmed by City of Troy personnel to be an abandoned water line and the pipe was cut and capped outside the limits of the ISS area. Refer to the Record Surveys in Appendix A.
  - **36-inch Diameter Former MGP-related Process Pipe:** A 36-inch diameter steel pipe was encountered along the western sidewall of Excavation Area A at approximately 5 feet bgs. This pipe was not located within the excavation footprint. The pipe is suspected to be a process pipe associated with the former MGP. In e-mail correspondence on July 25, 2022 (refer to Appendix O), NYSDEC approved National Grid's proposed plan to leave the pipe in-place and to properly inspect and manage it as part of a later phase of remediation.
  - **Multiple Former MGP-related Process Pipes:** Additional pipes suspected to be process pipes associated with the former MGP were encountered in the remediation areas. These pipes were either removed in their entirety or removed within the remediation areas and cut and capped at the limits of excavation or ISS as follows:
    - Three 12-inch diameter steel pipes, oriented north-south, were encountered at approximately 4 feet bgs within the ISS area. These pipes were removed and cut/capped at the limits of the area.
    - Two 18-inch diameter steel pipes, oriented north-south, were encountered at approximately 4 feet bgs within Excavation Area A. These pipes were removed and cut/capped at the limits of the area.
    - One 12-inch diameter steel pipe, oriented north-south, was encountered at approximately 4 feet bgs in the eastern portion of Excavation Area A. The pipe was removed and cut/capped at the limits of the area.

  - One 12-inch diameter and one 6-inch diameter steel pipe, oriented east-west, were encountered at approximately 3 feet bgs in the western portion of Excavation Area A. The pipes were removed and the eastern sides were cut/capped at the limits of the area. The pipes did not extend further to the west.
- **Former Brick Conveyance:** The top of a brick conveyance structure suspected to be associated with the former MGP was encountered near the northeast corner of former Sump 4 (oriented northwest-southeast) at approximately 18 feet bgs (near the bottom and assumed to extend beneath the sump). The structure was demolished in-place within the limits of the ISS area and the north and south ends were plugged with debris prior to soil mixing. Refer to Photograph #43 in Appendix B-2.
- **Telecommunication Line:** A 2-inch diameter telecommunication utility (owned by Verizon, oriented north-south) was encountered at approximately 2 feet bgs and was temporarily cut to accommodate implementation of ISS. This line was restored following ISS activities (refer to Section 2.10).

- **Pre-Excavation Waste Characterization Sampling:** Prior to excavation activities in Area 2 and Area 3, test pit locations were completed for pre-excavation sampling and waste characterization within Area 2 Excavation Area A, the excavation area on Area 3, and the ISS area. Refer to Section 2.9.2 for a summary of waste characterization activities.

2.3 Temporary Controls Implementation

Temporary controls installed and maintained at the Site during Area 2 and Area 3 construction included the following:

- **Staging Areas:** Staging areas for imported fill material, pre-existing debris, ISS grout plant, and temporary water storage were located and maintained within the Area 2 and Area 3 limits of work. Miscellaneous materials and supplies (e.g., ESC materials, odor control materials, powdered bentonite [an ISS reagent], straw bales, etc.) were stored in the warehouse building warehouse until used. Staging areas were located to facilitate equipment ingress and egress, allow for proper sequencing of the field activities, and to minimize the impact to on-site traffic and operations.
- **Temporary Waste Containment Areas:** TWCAs were located and maintained within the limits of work of Area 2 and Area 3 and were located near excavation areas to minimize tracking and cross-contamination of impacted material. TWCAs consisted of straw bales placed to form a perimeter berm followed by a 40-millimeter linear low-density polyethylene (LLDPE) liner. Excavated material not loaded directly into truck beds for transport to the disposal facility was placed in TWCAs and covered with a liner at the end of each workday. Refer to Photograph #42 in Appendix B-1 for a typical TWCA.
- **Decontamination Pad and Stations:** A decontamination pad for equipment decontamination was constructed as appropriate for the equipment being decontaminated to provide a location to remove and contain dirt, debris, and other potentially contaminated material from vehicles and equipment prior to their departure from the Site. Construction equipment that handled or traversed over potentially contaminated material was cleaned via mechanical means to remove dirt and debris. As needed, low-flow high-pressure water sprayers were used to remove dirt and debris that could not be removed via mechanical means. Several personnel decontamination stations were maintained daily near the active work area in accordance with the CSSHASP. Waste from the decontamination activities as well as decontamination pad construction materials were disposed off-site (refer to Section 2.9). Wastewater generated from cleaning vehicles was collected and stored on-site for off-site disposal (refer to Section 2.5 and 2.9).

- **Vapor and Odor Controls:** Vapor and odor controls were implemented as necessary during construction based on visual and olfactory observations and in response to work zone and community air monitoring readings. Vapor and odor control measures implemented during construction included:
  - Wetting work areas and access roads with water to prevent dust generation.
  - Spraying the work area and staging areas with RusmarFoam® odor control foam manufactured by Rusmar Inc. (hereafter referred to as Rusmar foam) to control odors; refer to Photographs #29 in Appendix B-1 and Photograph #4 in Appendix B-2 for photographs of odor control application).
- **Work Zone and Community Air Monitoring:** Work zone air monitoring was performed near active work areas by HSE during intrusive activities to protect the health and safety of Site workers. The work zone air monitoring program included use of a photoionization detector (PID) to monitor concentrations of volatile organic compounds (VOCs) and a dust/particulate meter to monitor concentrations of particulates. Community air monitoring was also performed by HSE to monitor air quality at the perimeter of the Site. The community air monitoring program included monitoring for VOCs, odors, and dust and was performed in accordance with the Design Documents and the NYSDEC-approved CAMP which met the requirements of the New York State Department of Health's (NYSDOH) Generic Community Air Monitoring Plan (NYSDOH, May 2010). Community air monitoring included four air monitoring stations (one positioned upwind and three positions downwind of the work areas) each equipped with a PID and a dust/particulate monitor and an automatic notification system to alert HSE if concentrations above the action levels were detected. Baseline community air monitoring was performed on May 11 and May 12, 2022, before the start of Site activities. The community air monitoring results, including monitoring station raw data and weekly monitoring reports, are included in Appendix F. During the activities on Area 2 and Area 3, the community air monitoring action levels (15-minute time-weighted average concentrations) were not exceeded with the following exception:
  - June 29, 2022 – A dust exceedance at a downwind air monitoring station on Area 3. Work activities at the time of exceedance included crushing/processing concrete. The automatic alert system malfunctioned and did not notify CAMP personnel. CAMP personnel were alerted of the exceedance during their routine inspection of the CAMP stations, typically performed every hour. Work was paused and additional measure were put into place to control dust (i.e., longer intermittent breaks between use of the demolition hammer, use of water spray hose against the direction of the wind). Troubleshooting was performed and the automatic alert system was tested each day to confirm it was working properly. Additionally, LRI implemented a standard procedure to spray concrete with a water hose during all demolition to reduce dust generation.
- **Traffic Controls:** Traffic controls consisted of temporary signage posted at the northern and southern limits of the Site on King Road and Water Street, respectively, to direct construction and non-construction vehicles to the correct roads (refer to Section 2.2). A temporary detour road was constructed and maintained during construction for use by the public (refer to Section 2.2). Additionally, LRI personnel performed traffic flagging, as necessary, for large construction vehicles (e.g., trucks, excavators, and forklifts) navigating to/from the Site.
- **Site Security:** Throughout work activities, Site security was maintained 24-hours per day and 7 days per week by third party uniformed security personnel at the Site. There were no security incidents with the following exception:
  - On November 1, 2022, between 6 a.m. and 7 a.m. during security shift change, approximately 2 to 5 cubic yards of brick and debris was illegally dumped in front of the

security booth located at the northern end of the temporary bridge over the Wynantskill Creek. On November 2, 2022, Troy police and Troy LDC were notified. To deter further illicit dumping, concrete Jersey barriers and fencing were installed north of the Wynantskill Creek.

- **Vibration, Settlement, and Crack Monitoring:** Vibration, settlement, and crack monitoring was conducted during activities on Area 2 to monitor the warehouse building. Refer to Photographs #25 and #99 in Appendix B-1 for a typical settlement monitoring point and vibration monitoring station, respectively. Vibration monitoring reports and summary tables of settlement and crack monitoring are included in Appendix G.
  - Monitoring equipment was set up to monitor vibrations at the warehouse building. There were several instances when vibrations were detected at levels that exceeded the project action levels. In response, work methods were paused and adjusted as necessary (e.g., adjusting equipment location, excavating slower to use less force) before resuming work.
  - Settlement monitoring points were installed and surveyed by Tri-Point during construction. In total, five settlement monitoring points were installed. Two settlement monitoring points were installed on the north exterior wall of the warehouse building, two settlement monitoring points were installed on the east exterior wall of the warehouse building, and one settlement monitoring point was installed on the south exterior wall of the warehouse building. During construction, the settlement monitoring points were surveyed to monitor lateral and vertical movement. Minor movement of the settlement points attributed to survey error was documented, however, no significant movement of the settlement monitoring points occurred during construction.
  - Crack monitoring points were installed at cracks identified during the pre-construction assessment of the structures (refer to Section 2.1) and monitored by LRI to assess movement (e.g., contraction or separation) during construction. In total, five crack monitoring points were installed on the warehouse building. Three crack monitoring points were installed on interior walls of the warehouse building and two crack monitoring points were installed on concrete floor slabs inside of the warehouse building. No movement of the crack monitoring points occurred during construction.

2.4 Select Demolition and Removal of Subsurface Structures

The following provides a description of the subsurface structures encountered during RA implementation and how each was managed.

- **Area 3 - Former Concrete Tarvia Tank Foundation:** One concrete foundation, associated with a former Tarvia tank based on historical drawings of the MGP, was demolished and removed as part of excavation activities. The foundation which overlapped with the northwest end of the Area 3 excavation was partially demolished (the rest of the foundation was left intact). The foundation consisted of a slab and a footer both with steel reinforcement (the foundation footer formed a ring with soil backfill on the inside) and extended from ground surface down to approximately elevation 21 feet NGVD. During demolition and resizing activities, the concrete debris was inspected by BC and NYSDEC personnel for potential visual MGP-related impacts. Although no impacts were observed, the steel reinforcement prevented the concrete from being appropriately re-sized for re-use as backfill. The concrete debris and fill material were disposed at Green Ridge RDF Landfill.
- **Concrete Foundations:** Several concrete pyramid foundations, concrete slabs with steel reinforcement, and concrete-filled steel piles were encountered and removed during excavation activities on Area 2 and Area 3. The concrete pyramid foundations and concrete slabs were resized with a demolition hammer, and the debris was inspected for potential visual MGP-related

impacts. None was observed but the concrete debris was unable to be resized for re-use and was transported off-site for disposal at Green Ridge RDF Landfill. Steel reinforcement from the foundations was transported off-site for recycling (refer to Section 2.9). The concrete-filled steel piles were removed from the ISS area and inspected by BC and NYSDEC personnel. No signs of MGP-related impacts were observed and the piles were approved for re-use as backfill in Excavation Area A by NYSDEC (refer to Section 2.8.1). Refer to Photographs #39, #41, and #50 in Appendix B-1 for concrete foundations encountered during excavation activities in Excavation Area A. Refer to Photograph #9 in Appendix B-2 for concrete pyramid foundations encountered during excavation activities on Area 3.

- **Area 2 - Concrete Cooling Tower Foundation:** A concrete foundation for the former primary cooling towers located within the east portion of Excavation Area A was demolished as part of excavation activities. The foundation extended from ground surface down to approximately elevation 18 feet NGVD and was solid concrete (no reinforcement). The foundation was demolished in-place within the limits of the excavation and the concrete debris was inspected by BC and NYSDEC personnel for potential visual MGP-related impacts. None were observed and the concrete debris was approved for re-use as backfill within the excavation area. The debris was resized using a demolition hammer and concrete crusher to be smaller than 12-inch maximum dimension before use as backfill in Excavation Area A (refer to Section 2.8.1). Refer to Photograph #52 in Appendix B-1 for a photograph of demolition of the concrete cooling tower foundation.
- **Area 2 - Former Lime House:** The aboveground remains of a former MGP masonry structure on Area 2 was demolished in-place prior to excavation activities. Based on historical drawings of the MGP Site, this structure was associated with a former lime house. The debris was resized using a demolition hammer and debris was disposed at Green Ridge RDF Landfill.

2.5 Dewatering and On-Site Storage

This section provides a summary of the dewatering and the on-site temporary wastewater storage performed during construction.

Dewatering included the following components:

- **Dewatering sumps** – Dewatering sumps were installed on the decontamination pad, the Temporary Waste Containment Areas, in Area 2 Excavation Area A (limited to removing contact stormwater following large rainfall events), and sumps were formed when cutting open pipes to collect the contents of subsurface pipes. Sumps were constructed of 12-inch diameter high density polyethylene (HDPE) buckets with slots or perforations cut into the sides.
- **Submersible sump pumps** – Submersible pumps were placed in the sumps to remove water from the area.
- **Dewatering conveyance hoses/pipes** – The discharge hoses from dewatering pumps were connected to a pipe header where flow was combined before discharging to the on-site temporary wastewater storage.
- **Water Storage** – On-site storage consisted of one 21,000-gallon storage tank (frac tank) with secondary spill containment.

The volume of water collected during the project was measured using the storage tank gauge. Approximately 200 gallons of water was generated from Area 3 and approximately 5,800 gallons of wastewater was generated from Area 2 (total of approximately 6,000 gallons) during construction. Water was transported to the City of Schenectady Wastewater Pollution Control Plant for treatment (refer to Section 2.9).

2.6 Excavation

Following start-up of work zone and community air monitoring, utility clearance, collection of pre-excavation waste characterization samples and waste profiling, and set-up of the on-site dewatering and storage, excavation activities began. Excavation activities on Area 2 and Area 3 are described in the following sub-sections.

2.6.1 Excavation on Area 2 (Excavation Area A)

Excavation Area A was implemented as follows:

- Soil removal started at the west edge of Excavation Area A and the excavation face was advanced down to the target bottom at elevation 18 feet NGVD. Soil, abandoned utilities, demolished structures, and subsurface debris were removed as excavation progressed. Temporary construction barrels with chains were established daily around the active excavation area to provide a visual delineation of the exclusion zone/active work area.
- Excavated soil was visually inspected by LRI, BC, and NYSDEC personnel to identify and segregate soil suitable for disposal at Green Ridge RDF Landfill or for thermal treatment at Clean Earth.
  - Soil with little to no moderate odors and visual staining was direct loaded or staged within a temporary waste staging area on Area 2 before being loaded out for transportation to Green Ridge RDF Landfill (refer to Section 2.9).
  - A relatively small amount soil with visible NAPL was segregated and staged within the temporary waste containment area on Area 2 before being loaded out for transportation to Clean Earth for thermal treatment (refer to Section 2.9).
- Abandoned utilities encountered during excavation (refer to Section 2.2) were removed and segregated for disposal as debris at Green Ridge RDF Landfill (refer to Section 2.9).
- Structures within the excavation area were demolished and concrete debris determined suitable for re-use was placed as backfill within the excavation area (refer to Section 2.4). Other debris was commingled with excavated soil for disposal at Green Ridge RDF Landfill (refer to Section 2.9).
- Once the full excavation area was advanced to the target bottom elevation 18 NGVD, the bottom and sidewalls were inspected by BC and NYSDEC personnel for visible NAPL.
  - A portion of the sidewall at the southeast corner of Excavation Area A was observed to contain visible NAPL following removal of a concrete wall/foundation. This location was over-excavated to remove visible NAPL.
  - A thin layer of NAPL was observed beneath the alignment of King Road on the southern sidewall. This layer was previously observed during Site investigation activities and is believed to have been placed as part of historical road construction activities. Consistent with the selected remedy, this layer of material within the roadway will not be targeted for excavation but will be address by future remediation components (i.e., engineering and institutional controls). Refer to Photograph #58 in Appendix B-1 for a photograph of this layer.
- After the excavation bottom and sidewalls were inspected by BC in consultation with the NYSDEC and excavations were determined to be complete, the excavation extents were surveyed and are documented in the Record Surveys (refer to Appendix A). Refer to Photographs #44 and #54 in Appendix B-1 for photographs of the final excavation limits.
- Following surveying, the excavation was backfilled (refer to Section 2.8).

Table 1 provides a summary of the excavation volumes. In total, an estimated 5,947 cubic yards of soil/material was excavated from Excavation Area A (refer to Survey Volumes included in Appendix A).

2.6.2 Excavation on Area 3

Excavation at Area 3 was implemented as follows:

- Soil removal started at the southern portion of the Area 3 excavation area and the excavation face was advanced down to the target bottom elevation (varied) in accordance with the Design Drawings. Soil, abandoned utilities, demolished structures, and subsurface debris were removed as excavation progressed. Temporary construction barrels with chains were established daily around the active excavation area to provide a visual delineation of the exclusion zone/active work area.
- Excavated soil was visually inspected by LRI, BC, and NYSDEC personnel to identify and segregate soil suitable for disposal at Green Ridge RDF Landfill or for thermal treatment at Clean Earth.
  - Soil with little to no moderate odors and visual staining was direct loaded or staged within a temporary waste staging area on Area 2 before being loaded out for transportation to Green Ridge RDF Landfill (refer to Section 2.9).
  - A relatively small amount of soil with visible NAPL was segregated and staged within the TWCA on Area 2 before being loaded out for transportation to Clean Earth for thermal treatment (refer to Section 2.9).
- Abandoned utilities encountered during excavation (refer to Section 2.2) were removed and segregated for disposal as debris at Green Ridge RDF Landfill (refer to Section 2.9).
- Structures within the excavation area were demolished. No concrete debris was determined suitable for re-use (refer to Section 2.4). Other debris was comingled with excavated soil for disposal at Green Ridge RDF Landfill (refer to Section 2.9).
- As portions of the excavation area were advanced to the target bottom elevations, the area was inspected for visible NAPL by BC in consultation with NYSDEC. After the excavations were determined to be complete, the excavation extents were surveyed and are documented in the Record Surveys (refer to Appendix A). Refer to Photographs #11 and #15 in Appendix B-2 for photographs of the final excavation bottom and sidewalls.
- Following surveying, the excavation was backfilled (refer to Section 2.8).

Table 1 provides a summary of the excavation volumes. In total, an estimated 1,850 cubic yards of soil/material was excavated from the Area 3 excavation area (refer to Survey Volumes included in Appendix A).

2.7 In Situ Solidification on Area 2

This section provides a summary of the start-up phase and full-scale implementation of ISS. A start-up phase was performed to confirm the grout mix design and equipment capabilities to achieve the ISS performance standards. For reference, the performance standards for ISS for this project were:

- **Hydraulic Conductivity (K):** Achieve a maximum hydraulic conductivity of 1 x 10^{-5} centimeters per second (cm/s) for individual samples and an average hydraulic conductivity of 1 x 10^{-6} cm/s or less based on the geometric mean of the test results.
- **Unconfined Compressive Strength (UCS):** Achieve a target minimum average of 50 pounds per square inch (psi) (based on geometric mean) and preferred maximum of 500 psi.

2.7.1 Start-Up Phase

Before full-scale ISS, LRI performed a start-up test to determine the grout mix design and confirm equipment capabilities. Mobilization and set up of the grout plant was completed on June 20, 2022. The ISS start-up phase began with cells C-37A and C-38 on June 21, 2022, and was completed with cell C-39 on June 22, 2022. Refer to Record Drawings included in Appendix A for the location of the ISS start-up phase cells.

The procedure for construction of the start-up phase ISS cells was generally as follows:

- The ISS cells were pre-cut (excavated) to a depth of approximately 5 feet bgs to contain soil mixing swell. Pre-cut soils were placed along the perimeter of the cell to form berms to contain swell.
- A test pit was advanced from the bottom of the pre-cut depth (5 feet bgs) to the target bottom elevation of that cell according to the Design Drawings. ISS cells C-37A and C-38 were advanced to approximately elevation 2 feet NGVD and ISS cell C-39 was advanced to approximately elevation -3 feet NGVD.
- After excavation and removal of structures (e.g., former MGP structures) and debris, the test pit was backfilled to the pre-cut depth.
- Grout was mixed at the on-site grout plant consisting of a mix of dry reagents (60% Portland Cement Type I/II [cement], 40% Grade 100 blast furnace slag [BFS], and bentonite) and water, each measured in terms of percent wet weight of soil (assumed to be 130 lbs/cf) to be mixed. Once mixed, the grout was pumped into the cells.
  - Start-up Cell 37A was mixed on June 21, 2022, with a grout addition rate of 8 percent of 60:40 cement:BFS and 0.8 percent of bentonite, with a water-to-reagent ratio of 1:1.
  - Start-up Cell C-38 was mixed on June 21, 2022, with a grout addition rate of 9 percent of 60:40 cement:BFS and 0.9 percent of bentonite, with a water-to-reagent ratio of 1:1.
  - Start-up Cell C-39 was mixed on June 22, 2022, as follows.
    - Grout was added at an addition rate of 10 percent of 60:40 cement:BFS and with a water-to-reagent ratio of 1.25:1. No bentonite was added to this mix.
    - An additional 2 percent of 60:40 cement:BFS (for a total addition rate of 12 percent) with a water-to-reagent ratio of 1.25:1 was added to the cell.
- Following initial mixing of the soil and grout, performance monitoring samples were collected to confirm complete mixing and to collect samples for laboratory analysis.
  - Performance monitoring samples were collected using a submersible sampling device and cured according to ASTM International (ASTM) D1632 and D1633, Method B. The samples were taken from the cells at the depths selected by BC personnel. Sample molds were stored in a cooler in an on-site office trailer to protect the samples from damage for between 48 and 72 hours prior to shipment to the laboratory (PW Laboratories, Inc.) for testing. The laboratory stored the samples and allowed them to cure for the designated number of days, then the samples were tested for hydraulic conductivity (ASTM D5084) and UCS (ASTM D1633). Hydraulic conductivity testing was typically performed at 7 and 28 days of curing and UCS was performed at 7, 14, and 28 days of curing.
- Excess soil from the pre-cut was staged within the ISS area and loaded out during full scale excavation for off-site disposal.

The start-up phase performance monitoring test results were evaluated by LRI and the project team. The results for hydraulic conductivity and UCS from each grout mix met the minimum project performance requirements. Based on the performance monitoring results, a mix design was

proposed for full-scale ISS (refer to email correspondence with NYSDEC dated July 1, 2022, included in Appendix O) which consisted of 60:40 cement:BFS at an addition rate of 10 percent, bentonite at an addition rate of 0.25 percent, and a water-to-reagent ratio of 1.25:1.

The grout mix was evaluated as ISS operations progressed and more testing data became available but was not modified during full-scale implementation. The results of the ISS start-up phase testing are included in Appendix J. Refer to Photographs #28 and #29 in Appendix B-1 for start-up phase sampling and soil mixing.

2.7.2 Full-Scale ISS

Full-scale ISS began on July 5, 2022, following evaluation and selection of the final grout design (refer to Section 2.7.1). Full-scale ISS followed a similar procedure as the start-up phase with the following exception. During the first week of full-scale ISS, the ISS mix was observed to have a very thick consistency which obscured visual observations and impeded collection of quality control samples. This was discussed during the July 13, 2022, construction meeting (refer to the meeting summary in Appendix O) and it was agreed that the bentonite addition rate would be reduced slightly to between 0.10 and 0.15 percent.

2.7.2.1 Pre-ISS Excavation

The cell was pre-cut (excavated) down to between approximately 2 to 5 feet bgs (depending on total cell depth and if cells were near sensitive features [former E-Lot building]) to contain soil mixing swell. The pre-cut soils were placed along the perimeter of the cell to form berms to contain swell.

A test pit was advanced from the bottom of the pre-cut depth to the target design depth to identify subsurface piping or structures (refer to Section 2.2 and Section 2.4). After excavation and removal of piping or structures, the test pit was backfilled to the pre-cut depth.

Excess soil from the pre-cut was staged within the ISS area and loaded out for off-site disposal.

2.7.2.2 ISS Implementation

Grout was mixed at the on-site grout plant and pumped into the cell. As grout was pumped into the cell, the cell was mixed progressively down to full depth (e.g., the top 2 to 3 feet of soil was mixed before progressing down to the next 2 to 3 feet of soil). Soil mixing was observed by BC routinely to monitor the consistency of the mix. Refer to Photographs #63 and #65 showing the consistency of well-mixed soil.

Generally, the pre-ISS excavation and test pitting removed obstructions prior to mixing. However, there were two instances when subsurface obstructions were encountered during soil mixing.

- **Cell C-40 mixed on July 8, 2022.** While mixing this cell, a 24-inch cast iron pipe was struck at approximately 13 feet bgs (approximately elevation 11 feet NGVD). The ISS equipment operator estimated that the pipe was oriented in a north-south direction. When struck, approximately 28 batches (approximately 5,080 gallons) of grout mix were diverted from the cell into the pipe. The on-site NYSDEC representative was immediately notified. The Wynantskill Creek and the Hudson River were observed throughout the remainder of the day and no signs of grout discharge to the water bodies was observed. ISS Area C-40 was over-excavated on the north and south end of the pipe and the pipe was cut and plugged.
- **Cell C-14 mixed on July 22, 2022.** During ISS mixing an obstruction was encountered in the southwest corner of this cell. The top and bottom of the obstruction was at elevation 7 and 4, respectively (approximately 3 feet thick). The obstruction extended into the ISS area by approximately 4 to 5 feet. The ISS equipment operator was able to mix soil beneath and around the obstruction but was unable to dislodge/remove it. It is assumed to be a concrete

slab/foundation that extends to the west beneath Former Sump 4. This obstruction was not encountered in the adjacent ISS cells although a brick conveyance structure was encountered during pre-ISS excavation in adjacent cell C-15 (refer to Section 2.2).

Following mixing, performance monitoring samples were collected as described in the start-up phase (refer to Section 2.7.1) to confirm complete mixing through the cell.

- One set of samples (primary and secondary samples) were collected per day. The samples were taken from the cells at the depths selected by BC personnel. Sample molds were stored in a cooler and in an on-site office trailer to protect the samples from damage (for between 48 and 72 hours) prior to shipment to the laboratory (PW Laboratories, Inc.) for testing.
- The laboratory stored the samples and allowed them to cure for the designated number of days, then the primary samples were tested for hydraulic conductivity (ASTM D5084) and UCS (ASTM D1633). Hydraulic conductivity testing was typically performed at 7 and 28 days of curing and UCS was performed at 7, 14, and 28 days of curing.

The geometric average of the hydraulic conductivity of the ISS performance samples was 3.14×10^{-7} cm/s, which achieves the performance standard of 1×10^{-6} cm/s or less. The maximum hydraulic conductivity measured was 2.36×10^{-6} cm/s, which achieves the performance standard for a maximum hydraulic conductivity of 1×10^{-5} cm/s or less. The average of the 28-day UCS results was 422 psi, which achieves the performance standard of 50 psi or greater. The minimum 28-day UCS result was 260 psi which achieves the performance standard of 25 psi or greater.

Table 1 provides a summary of the pre-ISS excavation and ISS treatment (soil mixing) volumes. In total, implementation of the ISS included an estimated 2,570 cubic yards of pre-ISS excavation and 13,588 cubic yards of ISS treatment over an area of approximately 13,346 square feet (refer to surveyor volumes in Appendix A). Refer to Photographs #56, #60, and #64 in Appendix B-1 for photographs of full-scale ISS.

2.7.2.3 Post-ISS Excavation

Following the completion of ISS, swell generated during ISS activities was excavated to a minimum depth of 4 feet below final Site grades. Post-ISS excavation was also performed along the new PL E-20 gas line alignment to accommodate pipe bedding below the new gas line. Post-ISS excavation was implemented as follows:

- Excavation of swell generally followed the sequence of ISS soil mixing (started at the southern portion of the ISS area and progressed north).
  - Temporary construction barrels with chains were established daily around the active ISS area to provide a visual delineation of the exclusion zone/active work area.
- Excavated swell material was staged in the eastern portion of the ISS area. Most of this material was loaded out for disposal at Green Ridge RDF Landfill and some was blended with NAPL-impacted material for treatment at Clean Earth (refer to Section 2.9).

Table 1 provides a summary of the post-ISS excavation volumes. In total, approximately 1,390 cubic yards of ISS swell was excavated (refer to surveyor volumes in Appendix A). Refer to Photograph #66 in Appendix B-1 showing the top of ISS surface post-excavation.

2.7.2.4 ISS Quality Control

During the implementation of ISS, quality control methods were followed to ensure the ISS requirements were achieved. Quality control methods included:

- Collection of performance monitoring samples as previously described.

- Soil mixing activities were routinely observed to monitor soil mixing and confirm that cells were thoroughly mixed.
- Methods for controlling the horizontal and vertical limits of soil mixing included the use of an excavator integrated with a Trimble GCS900 Grade Control System and dual GPS allowing the equipment operator to visualize the mixing depth achieved in each cell.
- Methods for monitoring and controlling reagent quality included a review of the manufacturer's product data.
- A JM30 batching plant with controls in place to control, monitor, and mix the reagent quantities according to the approved grout mix design was operated by LRI personnel. The batch plant information was compiled into the daily mix reports included in Appendix J.
- To confirm that cells were thoroughly mixed and that mixing achieved the targeted depth, core samples were collected from the ISS mass in accordance with the NYSDEC *Guidance for Quality Control Coring on In Situ Solidification Projects*. The cores were completed using HQ wireline coring with core runs no longer than 5 feet. A minimum of one core was completed for every 5,000 square feet of ISS treatment area. Three cores were collected during this project. Core samples were visually inspected by BC, NYSDEC, and LRI personnel for visible NAPL, non-mechanically induced cracking within the core, the length of core sample recovered (measured per core run), NAPL coating on drill tools, and NAPL in the drill wash tub. No signs of visible NAPL were observed and the cores were determined to be thoroughly mixed. Following completion of each coring location, the borings were filled with grout. Refer to Appendix K for the ISS core logs collected during the project.

2.8 Backfill/Fill Materials and Placement

This section provides a summary of the fill and backfill materials and their placement. These materials included on-site materials approved for re-use and imported materials. Materials used met the geotechnical and analytical requirements established in the NYSDEC-approved design documents. Refer to Table 1 for a summary of the backfill and fill quantities used.

The following materials were used as backfill (refer to Table 1 for a summary of backfill and fill quantities):

- Area 2 Excavation Area A
  - Concrete debris approved for re-use and crushed to 12-inch minus size.
  - Concrete-filled steel piles approved for re-use.
  - Imported sand and gravel material (i.e., common fill).
- Area 2 ISS Area
  - Imported sand and gravel material (i.e., common fill).
- Area 3 Excavation
  - Imported sand and gravel material (i.e., common fill).
- Area 2 and Area 3 surface restoration
  - Imported New York State Department of Transportation (NYSDOT) Type 2 Subbase Course (i.e., crusher run).

Other materials used to construct temporary facilities (temporary roads, stabilized construction entrances, temporary waste containment areas, etc.) included the following:

- NYSDOT Type 2 Subbase (i.e., crusher run) for construction of the grout plant pad, construction of temporary bridge road, construction of temporary waste containment areas, construction of temporary access/haul roads, and backfilling potholes from utility locating.
- NYSDOT No. 2 Crushed Stone used for construction of the southern and northern temporary bridge abutments and for construction of temporary access/haul roads.
- NYSDOT No. 3 Crushed Stone used for construction of stabilized construction entrances and for construction of temporary access/haul roads.

In addition to the above materials, asphalt materials were also imported to the Site for road construction and restoration. Asphalt materials were imported from New Castle Asphalt, LLC (refer to Appendix D).

2.8.1 Re-Use Materials

Concrete debris was observed by BC, in consultation with the NYSDEC, during demolition activities for material without visual/olfactory indications of NAPL. Approximately 330 cubic yards of concrete were re-used at the bottom of Area 2 Excavation Area A (refer to Section 2.4).

During pre-ISS excavation and test pitting to remove obstructions from the ISS area, BC, in consultation with the NYSDEC, inspected several concrete-filled steel piles. No MGP-related impacts were observed. In an e-mail correspondence on July 26, 2022, the NYSDEC approved the re-use of 15 of these piles at the bottom of Area 2 Excavation Area A.

2.8.2 Imported Materials

Imported materials used to backfill the Area 2 Excavation Area A, the Area 2 ISS Area, the Area 3 excavation area, used for Site restoration and used for various temporary facilities are identified below. Request to Import/Reuse Fill or Soil forms for each material including source information, quality documentation, and import tickets for fill materials are included in Appendix H. Refer to Table 1 for a summary of the quantities used.

- **Sand and Gravel Material (Common Fill):** used as backfill for Excavation Area A, the ISS area, and Area 3 excavation area:
  - Source: RJ Valente, George Thompson Road, Mechanicville, New York 12118.
  - The source information, quality documentation, and results from analytical testing were provided to the NYSDEC via e-mail and approved as follows:
    - Request to Import/Reuse Fill or Soil form for Common Fill (10,000 cubic yards) from RJ Valente dated June 17, 2022, approved by NYSDEC via e-mail on June 22, 2022.
    - Request to Import/Reuse Fill or Soil form for Common Fill (additional 2,000 cubic yards, up to 12,000 cubic yards total) from RJ Valente dated September 23, 2022, approved by NYSDEC via e-mail on September 23, 2022.
  - In total, approximately 10,892 cubic yards of common fill was imported to the Site, including approximately 9,494 cubic yards for use in Area 2 and approximately 1,398 cubic yards for use in Area 3 construction.
- **Sand and Gravel Material (Common Fill and NYSDOT Type 2 Subbase):** stockpiled on Area 2 for use as backfill in implementation of Phase 1B remediation (refer to Section 3.1):
  - Source: Cohoes (Linden Street) Former MGP Site, Cohoes, New York 12047.
  - The source information, quality documentation, and results from analytical testing were provided to the NYSDEC via e-mail and approved as follows:

    - The fill material consisted of a mixture of Common Fill and NYSDOT Type 2 Subbase which had originally been imported to the Cohoes (Linden Street) Former MGP Site. Requests to Import Fill or Soil forms and data were submitted to and approved by the NYSDEC as part of the Cohoes (Linden Street) Former MGP Site. Refer to the Final Engineering Report prepared for the Cohoes (Linden Street) Former MGP Site (BC, October 2023).
    - Request to import fill from the Cohoes (Linden Street) Former MGP project was provided to the NYSDEC via e-mail on June 14, 2022, and approved, pending analytical results, by the NYSDEC via e-mail on June 15, 2022 (refer to Appendix O). Approximately 1,500 to 2,500 cubic yards of fill material was estimated to be imported.
    - The results from analytical testing dated September 30, 2022, approved by NYSDEC via e-mail on October 3, 2022 (included in Appendix O).
  - In total, approximately 1,500 cubic yards of fill was imported to the Site.
- **Crushed Stone Materials:**
  - Crushed stone materials used during Area 2 and Area 3 construction included:
    - NYSDOT Type 2 Subbase (i.e., crusher run) for construction of the grout plant pad, construction of temporary bridge road, construction of temporary waste containment areas, construction of temporary access/haul roads, and backfilling potholes from utility locating.
    - NYSDOT No. 3 Crushed Stone used for construction of stabilized construction entrances and for construction of temporary access/haul roads.
    - NYSDOT No. 2 Crushed Stone used for construction of the southern and northern temporary bridge abutments and for construction of temporary access/haul roads.
  - Source: RJ Valente, 3349 Route 2, Cropseyville, New York 12052.
  - The source information and quality documentation were provided to the NYSDEC via e-mail and approved as follows:
    - Request to Import/Reuse Fill or Soil form for NYSDOT Type 2 Subbase (up to 3,500 cubic yards) from RJ Valente dated May 10, 2022, approved by NYSDEC via e-mail on May 11, 2022.
    - Request to Import/Reuse Fill or Soil form for NYSDOT No. 2 Crushed Stone (up to 800 cubic yards) from RJ Valente dated May 10, 2022, approved by NYSDEC via e-mail on May 11, 2022.
    - Request to Import/Reuse Fill or Soil form for NYSDOT No. 3 Crushed Stone (up to 200 cubic yards) from RJ Valente dated May 10, 2022, approved by NYSDEC via e-mail on May 11, 2022.
    - Request to Import/Reuse Fill or Soil form for NYSDOT No. 3 Crushed Stone (200 cubic yards, up to 400 cubic yards total) from RJ Valente dated July 27, 2022, approved by NYSDEC via e-mail on August 1, 2022.
    - Request to Import/Reuse Fill or Soil form for NYSDOT Type 2 Subbase (additional 1,000 cubic yards, up to 4,500 cubic yards total) from RJ Valente dated September 23, 2022, approved by NYSDEC via e-mail on September 23, 2022.
  - In total, approximately 3,662 cubic yards of NYSDOT Type 2 Subbase was imported to the Site, including approximately 3,104 cubic yards for Area 2 and approximately 559 cubic yards for Area 3.

- In total, approximately 212 cubic yards of NYSDOT No. 2 Stone was imported to the Site, including approximately 199 cubic yards for Area 2 and approximately 13 cubic yards for Area 3 construction.
- In total, approximately 369 cubic yards of NYSDOT No. 3 Stone was imported to the Site, including approximately 321 cubic yards for Area 2 and approximately 48 cubic yards for Area 3 construction.
- At the completion of work, NYSDOT No. 2 and No. 3 Crushed Stone used to construct stabilized construction entrances and temporary access/haul roads was removed and disposed off-site with waste soil at Green Ridge RDF Landfill (refer to Section 2.9).

2.8.3 Backfill and Material Placement

This section describes materials placement, backfilling, and compaction.

Area 2 Excavation Area A Backfill: Following excavation of Excavation Area A and approval of the bottom and sidewalls, (refer to Section 2.6.1), an orange non-woven geotextile demarcation layer was installed on the excavation bottom and sidewalls. Backfilling progressed in a similar sequence as excavation (i.e., began in the eastern portion of Excavation Area A) and proceeded as follows:

- Imported common fill was placed, graded, and compacted, in approximately 12-inch-thick lifts.
- In the eastern-most portion of Excavation Area A, backfilling began using the concrete debris and the concrete-filled steel piles approved for re-use (refer to Section 2.8.1). Refer to Photograph #57 in Appendix B-1 for photograph of re-use concrete debris and concrete filled steel piles backfilled in Excavation Area A.
  - Concrete debris was mixed with imported common fill to minimize void space and backfilled and graded as a continuous layer on the bottom of the excavation.
  - The concrete-filled steel piles were placed as a single layer on the bottom of the excavation (oriented north-south) with space in-between the piles. Imported common fill was placed around and above the piles to minimize void space.
- Imported common fill was backfilled to bring Excavation Area A to subgrade elevations. Each lift of common fill, excluding the bottom lift where re-use material was placed, was tested for compaction (in-place moisture content and dry density) utilizing an in situ densometer. Areas which did not meet the compaction requirements were re-compacted or wetted and re-compacted until the area met the compaction requirements. The results of the compaction testing are included in Appendix M. Refer to Photographs #45, #47, #59, and #62 in Appendix B-1 for photographs of placement grading and compaction of common fill in Excavation Area A.

Area 2 ISS Area Backfill: Following post-ISS excavation of the ISS area, an orange non-woven geotextile demarcation layer was installed on top of the prepared ISS surface and backfilling began and proceeded as follows:

- Clean imported common fill was placed, graded, and compacted, in approximately 12-inch-thick lifts. Imported common fill was backfilled to bring the ISS area to subgrade elevations. Each lift of common fill was tested for compaction (in-place moisture content and dry density) utilizing an in situ densometer. Areas which did not meet the compaction requirements were re-compacted or wetted and re-compacted until the area met the compaction requirements. The results of the compaction testing are included in Appendix M. Refer to Photographs #69, #70, and #71 in Appendix B-1 for photographs of placement grading and compaction of common fill in the ISS area.
- Backfilling/filling with common fill continued until subgrade elevations were achieved.

Area 3 Excavation Backfill: Following excavation of the Area 3 excavation area, approval of the bottom and sidewalls, and surveying, an orange non-woven geotextile demarcation layer was installed on the excavation bottom and sidewalls and backfilling began and proceeded as follows:

- Clean imported common fill was placed, graded, and compacted, in approximately 12-inch-thick lifts.
- Imported common fill was backfilled to bring the ISS area to subgrade elevations.
- Each lift of common fill was tested for compaction (in-place moisture content and dry density) utilizing an in situ densometer. Areas which did not meet the compaction requirements were re-compacted or wetted and re-compacted until the area met the compaction requirements. The results of the compaction testing are included in Appendix M. Refer to Photographs #16, #17, and #18 in Appendix B-2 for photographs of placement grading and compaction of common fill in the Area 3 excavation area.
- Backfilling/filling with common fill continued until subgrade elevations were achieved.

Area 2 Surface Restoration: Following backfilling of Area 2 Excavation Area A and the ISS Area and preparation of subgrade, fill materials were placed to restore the Site to match pre-construction surface types. The Site restoration grades are shown on the Record Drawings in Appendix A. Area 2 surface restoration included the following:

- Asphalt Pavement Site Restoration: King Road was restored with asphalt pavement. Asphalt pavement included installation of an orange non-woven geotextile demarcation layer, followed by a minimum 12-inch-thick layer of NYSDOT Type 2 Subbase (compacted in 6-inch lifts) on top of the prepared subgrade surface, followed by installation of a 3-inch-thick layer of NYSDOT Type 3 Binder asphalt pavement (refer to Appendix D for product information). Refer to Photograph #86 and #87 in Appendix B-1 for photographs of the asphalt subbase and Photographs #90 and #93 in Appendix B-1 for photograph of placement and compaction testing of asphalt pavement.
- Crushed Stone Site Restoration: The former E-Lot building parking area and portions of the excavation and ISS areas not restored with asphalt pavement (i.e., beyond the limits of King Road) were restored with crushed stone surfacing. Crushed stone restoration included installation of an orange non-woven geotextile demarcation layer (refer to Appendix D for product information) followed by installation of a minimum 12-inch-thick layer of NYSDOT Type 2 Subbase (compacted in 6-inch lifts). Refer to Photographs #74 and #85 in Appendix B-1 for photographs of the crushed stone restoration.

Area 3 Surface Restoration: Following backfilling of the Area 3 excavation and subgrade preparation, fill materials were placed to restore the Site to match pre-construction surface types (i.e., crushed stone surfacing). The Site restoration grades are shown on the Record Drawings in Appendix A.

- Crushed Stone Site Restoration: Area 3 was restored with crushed stone surfacing including installation of an orange non-woven geotextile demarcation layer (refer to Appendix D for product information) followed by installation of a minimum 12-inch-thick layer of NYSDOT Type 2 Subbase (compacted in 6-inch lifts). Refer to Photograph #20 in Appendix B-2 for a photograph of the crushed stone restoration.

2.9 Waste Management

Waste materials generated during construction were characterized (as appropriate) for on-site re-use (refer to Section 2.8.1) or off-site disposal (described in this section). Waste identified for off-site disposal was manifested, transported, and treated and/or disposed at National Grid-approved off-site facilities in accordance with applicable federal and state regulations and guidelines. Table 1 provides a summary of the waste management quantities for Area 2 and Area 3 RA. Documentation

of waste sent off-site for treatment/disposal is included in Appendix L. Refer to Photographs #61 and #68 in Appendix B-1 and Photograph #12 in Appendix B-2 for photographs of soil being loaded out into haulers for transportation to the off-site disposal/treatment facilities.

2.9.1 Waste Transporters and Disposal Facilities

Trucking companies used to transport waste materials to off-site facilities were licensed haulers with current 6 New York Code of Rules and Regulations (NYCRR) Part 364 permits. Trucks, including the trailers, beds, gates, and tarps/covers, were inspected upon arrival to the Site. During loading, trucks and/or trailers were staged on top of polyethylene sheeting (to contain spilled soil or debris during loading) and beds or trailers were lined with polyethylene sheeting. After being loaded, tarps were placed and secured over the waste, trucks were inspected, and dirt and debris was removed from the vehicle body and wheels before leaving the Site. LRI contracted the following waste transporters for remediation:

- Cedar Hill Trucking, Inc, (NYS Part 364 Waste Transporter Permit Number [NYS Permit No.] #4A-314) for transport of soil with visible NAPL to ESMI.
- Longhorn Trucking Company (NYS Permit No. #4A-485) for the transport of construction and demolition debris and soil without visible NAPL to Green Ridge RDF Landfill.
- Blue Diamond Trucking (NYS Permit No. #4A-670) for the transport of wastewater to City of Schenectady Water Pollution Control Plant (WPCP).

Waste generated during remedial construction was transported to the following facilities:

- Green Ridge RDF landfill located at 424 Peters Road, Gansevoort, New York 12831 (Facility ID #5414600018).
- Clean Earth located at 304 Towpath Lane, Fort Edwards, New York 12828 (Facility ID #5533000038)
- City of Schenectady WPCP located at 300 Anthony Street, Schenectady, New York, 12308 (Facility SPDES Permit #NY0020518)

2.9.2 Waste Characterization

As part of the Construction Management Plan, LRI prepared a waste characterization sampling plan for the anticipated waste materials. Waste material anticipated to be generated during the Area 2 and Area 3 RA and which required waste characterization included non-hazardous debris with no visible NAPL, non-hazardous debris with visible NAPL, soil with no visible NAPL, soil with visible NAPL, soil impacted with purifier waste, and construction wastewater.

Prior to excavation activities in Area 2 and Area 3, test pit locations were selected for pre-excavation sampling within Area 2 Excavation Area A, the excavation area on Area 3, and the ISS area. During remedial construction, additional waste characterization was performed for previously uncharacterized waste materials. Refer to Photographs #24 and #55 in Appendix B-1 for photographs of typical waste characterization sampling.

The following composite waste characterization samples (summarized below) were collected for waste characterization analytical testing in accordance with the off-site disposal facility requirements. Composite samples were collected from several locations and from various depths to be representative across the excavation areas or stockpiles (as applicable).

- Composite samples collected from soil with no visible non-aqueous phase liquid (NAPL) were sampled at frequencies and analyzed for parameters required by Green Ridge RDF Landfill facility in Gansevoort, New York, including:
  - Area 3 Excavation:

    - June 1, 2022: Area 3 Test Pit 1, Area 3 Test Pit 2, Area 3 Test Pit 3, Area 3 Test Pit 4, Area 3 Test Pit 5
  - Area 2 Excavation Area A:
    - June 15, 2022: Area 2A Test Pit 1, Area 2A Test Pit 2, Area 2A Test Pit 3, Area 2A Test Pit 4, Area 2A Test Pit 5, Area 2A Test Pit 6, Area 2A Test Pit 7
    - September 19, 2022: Stockpile 1, Stockpile 2
  - Area 2 ISS Area:
    - June 15, 2022: ISS Test Pit 1, ISS Test Pit 2, ISS Test Pit 3
    - July 22, 2022: Area 2 ISS Test Pit 4, Area 2 ISS Test Pit 5, Area 2 ISS Test Pit 6, Area 2 ISS Test Pit 7, Area 2 ISS Test Pit 8
    - August 10, 2022: Area 2 ISS Swell 9, Area 2 ISS Swell 10
    - September 2, 2022: Area 2 ISS Swell 11, Area 2 ISS Swell 12, Area 2 ISS Swell 13
- Soil with visible NAPL, discoloration, and/or strong odors was encountered during excavation activities on both Area 2 and Area 3 (i.e., after pre-excavation waste characterization was completed). This soil was segregated and staged in temporary waste containment areas (TWCAs) constructed on the Site where it was generated (i.e., material from Area 2 was staged on Area 2). The soil was observed to contain substantial visible NAPL. At the direction of Clean Earth, Inc. of Fort Edward, New York (formerly Environmental Soil Management of New York [ESMI], referred to as "Clean Earth") the NAPL-rich soil was blended with soil with no visible NAPL to create a more uniform waste stream. Waste characterization samples were collected at frequencies and analyzed for parameters required by Clean Earth. Waste characterization samples collected from the soil with visible NAPL included the following:
  - Area 3 Excavation:
    - June 15, 2022: Area 3 Tar Material (blend)
  - Excavation Area A:
    - August 12, 2022: Area 2 Tar Blend 1, Area 2 Tar Blend 2 (the tar blend was composed of a mix of soil with no visible NAPL and soil with visible NAPL)
- Wastewater generated during construction was collected and stored on-site from Area 2 and Area 3 work activities (refer to Section 2.5). A waste characterization sample was collected on September 22, 2022.

The results of analytical testing for waste characterization are included in Appendix I.

2.9.3 Waste Treatment and Disposal

The following provides a summary of the of the waste materials treated and disposed off-site. Corresponding waste management documentation is included in Appendix L.

- **Asbestos Containing Material:** ACM, in the form of pipe wrap on former MGP process pipes removed from Area 2 and Area 3, was manifested and disposed by National Grid Gas and their licensed contractor.
- **Soil with no Visible NAPL:** A total of 20,519 tons (17,499 tons from Area 2 and 3,020 tons from Area 3) of soil with no visible NAPL was disposed at Green Ridge Landfill. This soil was generated from the Area 2 and Area 3 excavations and from Area 2 ISS Area.
  - Construction and demolition debris (from demolition of aboveground and subsurface structures, asphalt, steel piping, etc.) was resized as needed and disposed with this waste stream at Green Ridge Landfill.

- **Soil with Visible NAPL:** A total of 1,278 tons (1,155 tons from Area 2 and 123 tons from Area 3) of soil with visible NAPL was disposed at Clean Earth. This soil was generated from the Area 2 and Area 3 excavation areas.
- **Metal Debris:** 32 tons of scrap metal from Area 2 was recycled at NH Kelman, Inc. of Cohoes, New York. This metal was collected during site clearing and generated from Area 2 excavations.
- **Construction Wastewater:** Approximately 6,000 gallons of wastewater from Area 2 and Area 3 (refer to Section 2.5 for dewatering activities) was treated at the City of Schenectady WPCP.
- **Miscellaneous Debris:** Miscellaneous debris including vegetative and demolition debris and soil waste generated from Site clearing activities was disposed at Green Ridge RDF Landfill.
- **Solid Waste from Construction Activities:** Solid waste generated from construction activities included miscellaneous waste from construction trailers and packaging. Solid waste was disposed at Green Ridge RDF Landfill.

2.10 Site Restoration

Site restoration activities included the following:

- Crushed stone surface restoration areas included demarcation fabric and a minimum of 12 inches of crushed stone (refer to Appendix D for demarcation fabric product and to Section 2.8 for crushed stone material information)
- Asphalt pavement surface restoration areas included minimum of 12 inches of crushed stone and 3-inch-thick layer of asphalt pavement. Refer to Appendix D for demarcation fabric and asphalt pavement product information and to Section 2.8 for crushed stone and asphalt material information.
- Vegetative surface restoration was performed between the former E-Lot building and King Road and included seeding and mulching with straw to restore vegetation to this area (refer to Photograph #98 in Appendix B-1).
- Installation of new 7-foot-high chain link fence and gate on Area 3 (refer to Photograph #23 in Appendix B-2).
- Relocation of the 8-foot-high chain-link fencing and concrete jersey barriers from the temporary detour road (Section 2.2) to along restored King Road (refer to Photograph #95 in Appendix B-1).
- Verizon's telecommunication utility that was temporarily cut to accommodate implementation of ISS (refer to Section 2.2) was restored by Verizon personnel on November 7, 2022.

2.11 Demobilization

A punch list was developed and maintained by the Project Team throughout demobilization activities. Demobilization activities included the following:

- Decontamination and demobilization of excavation equipment, the on-site temporary wastewater storage tank, and other equipment.
- Removal of temporary controls including ESCs, waste staging areas (refer to Section 2.9 for disposal information), material staging areas, vibration, crack, and settlement monitoring equipment, community air monitoring equipment, Site security, and traffic controls.
- Removal of the ISS grout plant equipment and materials.
- Removal of temporary utilities and sanitary facilities.
- Removal of temporarily stored materials and clean out of the former E-Lot building.
- Post-construction assessment of the former E-Lot building (Refer to Appendix G for the pre- and post-construction assessment reports).

- Installation of a new mailbox for the former E-Lot building.
- Cleanup and removal of ancillary equipment, temporary construction trailers and other facilities, and miscellaneous debris (refer to Photograph #101 and #105 in Appendix B-1).

Demobilization from the Site was completed on November 18, 2022.

Section 3

Description of Design Changes

During Area 2 and Area 3 construction, changes were made to the planned remedial design for several reasons, including responding to unanticipated subsurface conditions and improved Site restoration. This section provides a description of the Area 2 and Area 3 design changes.

3.1 Area 2 Design Changes

Design changes for Area 2 (i.e., changes from the South Area RDR [BC, January 2013] and North Area RDR [BC, July 2018]) included the following:

- **Monitoring Well Decommissioning Modifications:** In an e-mail correspondence dated June 7, 2022 (included in Appendix O), the NYSDEC approved several modifications to the planned well decommissioning. The well decommissioning method for PZ-15b was modified from grout-in-place method to in-place destruction via ISS mixing. PZ-17c and MW-39 could not be located for decommissioning during Phase 1A and instead will be addressed during a later phase of remediation.
- **Adjustment of ISS Cells Around Former Sump 4:** During remediation activities north of the former E-Lot building, discrepancies between the Design Drawings and field conditions were identified regarding the location of the former Sump 4 structure. The structure was identified to be approximately 9 feet further north than shown on Drawing C-140. The Phase 1A ISS limits were adjusted to avoid this structure and maintain an approximate 2-foot off-set from the structure. Former Sump 4 will be remediated during a later phase of remediation. The NYSDEC approved this adjustment in an e-mail dated July 19, 2022 (included in Appendix O). In addition, ISS cells C-3 and C-5 were adjusted an additional 1 to 1.5 feet to avoid the northern end of former Sump 4. In an e-mail dated August 9, 2022, the NYSDEC approved the revised ISS layout (refer to Appendix O).
- **Modifications to Asphalt Restoration:** Based on discussions with the Troy LDC, final restoration of King Road asphalt pavement will be completed by the Troy LDC. As such, the footprint of King Road was restored with 12 inches of crushed stone placed over geotextile fabric and an interim asphalt surface consisting of 3 inches of NYSDOT Type 3 Binder asphalt pavement. The final pavement of the roadway will be installed by the Troy LDC at the conclusion of the remaining remediation phases at Area 2.
- **Management of 30-inch Pipe Within West Sidewall of Excavation Area A:** During excavation activities in Excavation Area A, a 30-inch diameter pipe was encountered running parallel to the western excavation sidewall. In an e-mail correspondence dated July 25, 2022 (included in Appendix O), the NYSDEC approved a plan to leave the pipe intact during completion of Excavation Area A. The pipe will be investigated and managed accordingly during a subsequent phase of remediation at Area 2.
- **Management of Concrete Structure Within Excavation Area A:** During excavation activities in Excavation Area A, a concrete cooling tower foundation was encountered along the eastern sidewall. There were no signs of visible MGP impacts on the concrete. In an e-mail correspondence dated July 26, 2022 (included in Appendix O), the NYSDEC approved the proposed plan to re-use the concrete structure as backfill, following demolition and re-sizing to

6-inch minus, within the excavation. During the August 3, 2022, construction meeting (meeting summary included in Appendix P), the NYSDEC approved a request to adjust the size of the concrete debris from 6-inch minus size to a 12-inch minus size. Refer to Sections 2.4 and 2.8.1 for further discussion of the structure and re-use of this material.

- **Adjustment of the Western Edge of Phase 1A ISS:** A subsurface concrete structure reaching a depth of 19 to 20 feet bgs was encountered near the northwestern portion of the Phase 1A ISS area during pre-ISS excavation activities. The structure was surveyed and partially overlapped with the southernmost limits of ISS cells C-1 and C-2. The southern edge of these cells was adjusted to follow the edge of this structure. This structure is within an area subject to future remediation and will be investigated and remediated at that time.
- **Concrete Piles Used as Backfill in Excavation Area A:** Within the ISS footprint, concrete-filled steel piles were removed during pre-ISS excavation. The piles were inspected by BC, in consultation with the NYSDEC, and had no visible MGP impacts. In an e-mail correspondence dated July 26, 2022 (included in Appendix O), the NYSDEC approved the placement of 15 concrete-filled steel piles at the bottom of the excavation prior to backfilling (refer to Section 2.8.1).
- **Additional Restoration Tasks:** Several additional restoration tasks were completed to improve the Site, including:
  - A pressure-treated plywood cover was fabricated and installed over the vertical shaft (approximately 30-inch diameter open brick structure) located in the north-central portion of the Site. This feature was also surrounded with orange snow fence.
  - A new mailbox was installed for the former E-Lot building.
- **Staging of Fill Materials from the Cohoes (Linden Street) Former MGP Site:** Approximately 1,500 cubic yards of clean fill material was imported from the Cohoes (Linden Street) Former MGP Site and staged on-site for use as backfill during later phases of remediation at Area 2 (i.e., backfill during Phase 1B remediation). This material had originally been imported to the Cohoes (Linden Street) Former MGP Site to construct temporary access roads and was unable to be used as backfill at that site. Rather than send the material off-site for disposal, this material was approved for re-use at the Troy (Water Street) Site by the NYSDEC in an e-mail correspondence dated October 3, 2022 (refer to Appendix O). The imported material was placed within a staging area constructed with perimeter straw bales and a non-woven geotextile placed on the ground surface (refer to Appendix D-4). The staged material was covered with a polyethylene liner and ballasted with tires to prevent uplift from the wind.

3.2 Area 3 Design Changes

Design changes for Area 3 (i.e., changes from the Area 3 letter work plan for the PL E-20 gas corridor [BC, November 9, 2021]) included the following:

- **Fence Restoration:** A discrepancy was identified between the height of the gate/fence planned for restoration of Area 3 and the height of fence installed as part of the PL E-20 Partial Replacement Project along the eastern side of Area 3. To maintain consistency with the PL E-20 project, the Area 3 fence restoration was modified to include installation of a new 7-foot-tall chain-link gate and fencing (original design was 6-foot-tall gate and fencing). Additionally, three strands of barbed wire were installed on the restored chain-link gate and fencing to match fencing installed for the PL E-20 project.

Section 4

Schedule for Completed Work

The following is a summary of the schedule for completion of the Area 2 Phase 1A and initial Area 3 RA activities:

- May 6, 2022: Pre-construction inspection of the warehouse building (former E-Lot building) was performed.
- May 9, 2022: Pre-construction meeting was held; commenced mobilization to the Site and Site clearing (i.e., removal of trees and shrubs, relocation of miscellaneous surface debris).
- May 16, 2022: Commenced demolition of aboveground portion of former lime house structure on Area 2.
- May 17, 2022: ESC control measures were installed.
- May 31, 2022: Installation of temporary detour road completed; public traffic began using temporary detour road.
- June 6, 2022: Commenced mobilization and assembly of ISS grout plant; commenced set-up of temporary fence on Area 2.
- June 13, 2022: Area 3 excavation commenced; installation of temporary bridge over Wynantskill Creek completed.
- June 21, 2022: ISS start-up phase commenced.
- June 27, 2022: Commenced backfilling Area 3 excavation.
- June 29, 2022: Commenced mobilization of dewatering and on-site storage equipment; Area 2 Excavation Area A soil excavation commenced.
- July 1, 2022: ISS design mix selected; Area 3 restoration activities commenced.
- July 5, 2022: Full-scale ISS implementation commenced.
- August 1, 2022: Commenced backfilling Area 2 Excavation Area A.
- August 31, 2022: Commenced backfilling the ISS area.
- September 9, 2022: Area 2 Excavation Area A restoration commenced.
- September 28, 2022: Demobilized ISS grout plant.
- October 6, 2022: ISS area restoration commenced.
- October 12, 2022: Contents of on-site water storage were removed and sent off Site for disposal.
- October 13, 2022: ISS area restoration and Area 2 Excavation Area A restoration completed.
- October 27, 2022: Relocation of pre-existing debris east of King Road completed.
- October 21, 2022: Installation of King Road asphalt pavement completed.
- November 14, 2022: Relocation of fencing and Jersey barriers on Area 2 completed; installation of new fencing on Area 3 completed; demobilization of personnel, equipment, and materials from the Site completed.

Section 5

Conclusion

The Phase 1A RA activities completed at Area 2 of the Site and documented in this CCR have been performed in accordance with the NYSDEC-approved RDRs (Southern Area RDR [BC, January 2013] and Northern Area RDR [BC, July 2018]), additional NYSDEC correspondence documented herein, and in accordance other permits and approvals applicable to the project. The remaining phases of remediation at Area 2 (i.e., Phases 1B, 2, and 3), as discussed in Section 1, will be documented under separate cover.

The Area 3 RA activities documented in this CCR have been performed in accordance with the NYSDEC-approved Area 3 letter work plan for the PL E-20 gas corridor (BC, November 9, 2021). The remedial design for the remainder of the Area 3 remediation will be addressed in a subsequent Remedial Design Report and future remediation construction at Area 3 will be documented under separate cover.

Section 6

References

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Tables

TABLE 1
REMEDIATION QUANTITIES SUMMARY
TROY (WATER STREET) SITE
TROY, NEW YORK

Area 2 and 3 - Soil Excavation Quantities	
Excavation Activity	Volume (CY)
Area 3 Excavation	1,850
Area 2 Excavation Area A	5,947
Area 2 Phase 1A Pre-ISS Excavation	2,570
Area 2 Phase 1A Post-ISS Excavation	1,390

Area 2 - In-Place Backfill and Fill Material Quantities		
Material Type	Tons	Volume (CY)
Common Fill	15,190	9,494
NYSDOT Type II Subbase (restoration)	5,586	3,104
NYSDOT No. 2 Stone	358	199
NYSDOT No. 3 Stone	579	321
Re-Use Concrete	594	330

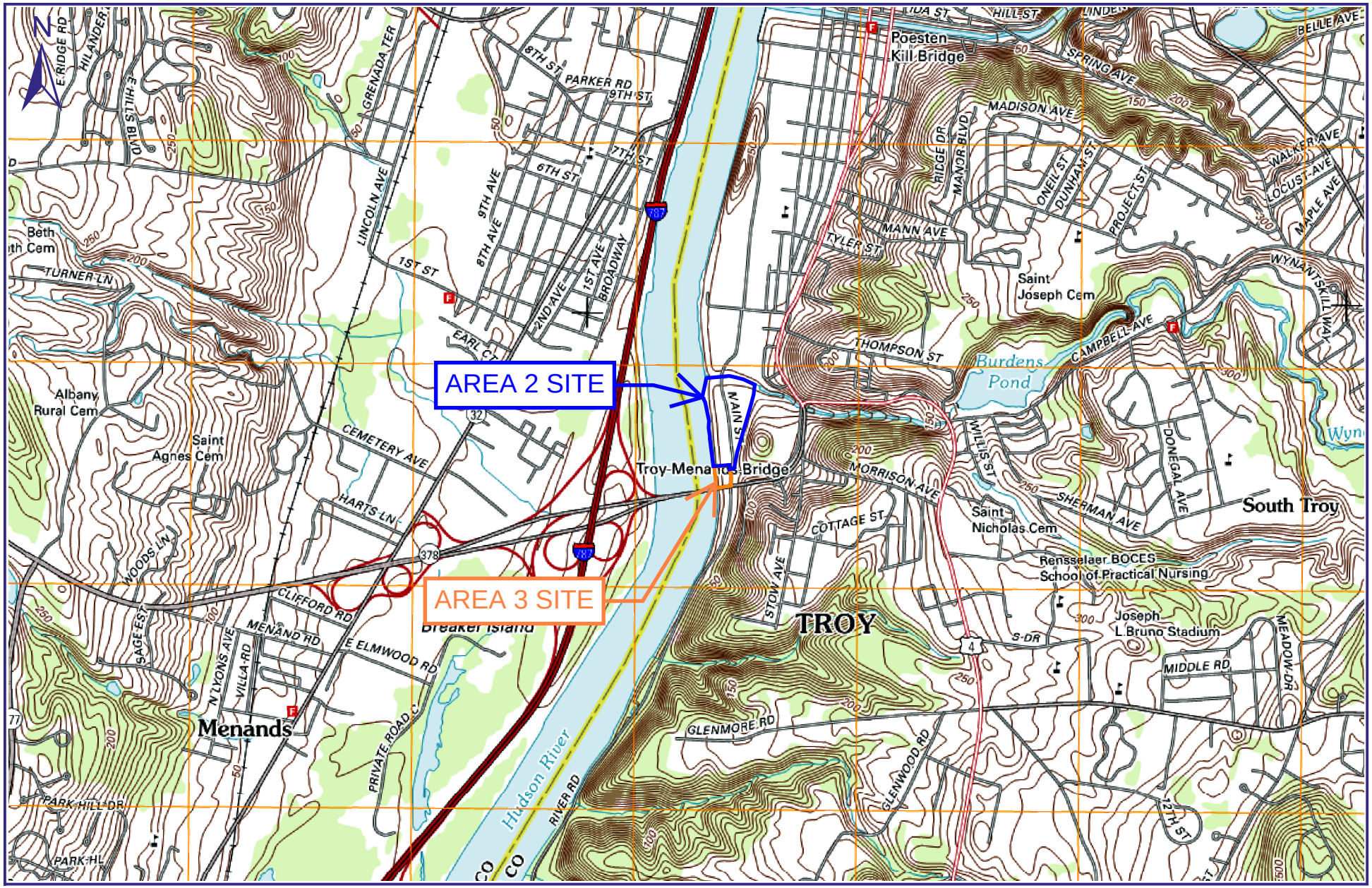
Area 3 - In-Place Backfill and Fill Material Quantities		
Material Type	Tons	Volume (CY)
Common Fill	2,237	1,398
NYSDOT Type II Subbase (restoration)	1,005	559
NYSDOT No. 2 Stone	23	13
NYSDOT No. 3 Stone	86	48

Waste Management Summary			
Material Type	Area 2 (Tons)	Area 3 (Tons)	Total (Tons)
Green Ridge RDF Landill	17,499	3,021	20,520
Clean Earth of New York (ESMI)	1,155	124	1,279
TOTAL	**18,654**	**3,144**	**21,799**

TABLE 1
REMEDIATION QUANTITIES SUMMARY
TROY (WATER STREET) SITE
TROY, NEW YORK

Area 2 In Situ Solidification (ISS) Quantities					
Cell ID	Pre-ISS Excavation Volume (CY)	ISS Volume (CY)	Cell ID	Pre-ISS Excavation Volume (CY)	ISS Volume (CY)
C-1	23	132	C-27	74	361
C-2	53	316	C-28	77	358
C-3	25	110	C-29	24	120
C-4	35	213	C-30	34	158
C-5	53	273	C-31	64	281
C-6	56	304	C-32	115	499
C-7	62	292	C-33	82	355
C-8	56	267	C-34	32	153
C-9	32	146	C-35	64	296
C-10	64	290	C-36	114	410
C-11	83	390	C-37A	38	158
C-12	51	239	C-37B	34	164
C-13	83	430	C-38	29	130
C-14	54	296	C-39	32	154
C-15	52	305	C-40	31	141
C-16	40	209	N-1	12	135
C-17	43	223	N-2	12	135
C-18	105	527	N-3	12	135
C-19A	55	283	N-4	12	135
C-19B	42	224	N-5	11	135
C-20	98	536	N-6	12	134
C-21	67	345	N-7	11	135
C-22	53	270	N-8	12	135
C-23	91	489	N-9	12	135
C-24	93	497	N-10	12	114
C-25	39	229	N-11	12	115
C-26	76	437	N-12	12	135
			Total:	**2,570**	**13,588**

Figures



Author: JMarolda Path: P:\GIS\National_Grid\Troy\Troy_SiteLoc.mxd

5/23/2013

Brown AND Caldwell

FIGURE 1
SITE LOCATION
NATIONAL GRID
TROY (WATER ST.) SITE - AREA 2, TROY, NEW YORK

Source: USGS 7.5 Minute Topographic Map
Troy South Quadrangle (2013)

0 1,000 2,000
Feet

0 60 120
SCALE IN FEET

HUDSON RIVER
TROY LOCAL DEVELOPMENT CORP. PROPERTY
PURIFIER WASTE DEPOSIT EXCAVATION AREA (COMPLETED IN 2008)
ACTIVE GAS REGULATION STATION
COKE SILOS
CONCRETE LOADING DOCK
SIDEWALK
RIM: 23.6
E-LOT BUILDING (FORMERLY VELOCITY EXPRESS)
FORMER SUMP 4
FORMER AIR PLENUM TUNNELS (COMPLETED CONTENTS REMOVAL IN 2009)
RUBBLE PILE
FORMER HEATER BUILDING
RIM: 26.2
STEEL-LIGHT CONCRETE VAULT
FORMER DILUTE OXIDE BOXES
FORMER TAR LIQUOR SUMP (COMPLETED CONTENTS REMOVAL IN 2008)
25,000 CF GASHOLDER PAD
FORMER ALIGNMENT OF WYNANTSKILL CREEK
FORMER 2,000,000 CF GASHOLDER PAD
FORMER SOUTH GARAGE
CONCRETE VAULT WITH 4" PIPE UNKNOWN MATERIAL
FORMER UNDERGROUND VAULT (COMPLETED CONTENTS REMOVAL IN 2009)
FORMER FUEL ISLAND
ACCESS ROAD (A.K.A. INDUSTRIAL PARKWAY OR KING ROAD)
PRIMARY COOLERS
FORMER OIL/WATER SEPARATOR (COMPLETED CONTENTS REMOVAL IN 2008)
FORMER WATER GAS BUILDING
RIVER ROAD
WATER STREET
APPROX. LOCATION OF MISC. DEBRIS PILE
FORMER MACHINE SHOP
FORMER OUTDOOR SUBSTATION
FORMER SUBSTATION
FORMER BY-PRODUCTS BUILDING
FORMER SUMP 1
FORMER CREOSOTE PAD
FORMER ACID STORAGE PAD
FORMER AMMONIA LIQUOR STORAGE PAD
FORMER TAR TANK PAD
FORMER LIME HOUSE
FORMER CREOSOTE TANK PAD
FORMER OXIDE PURIFIER PADS
FORMER LIME SUMP (CONTENTS REMOVED 1997-1998)
APPROX. LOCATION OF MISC. DEBRIS PILE
FORMER LOCKEROOM BUILDING
FORMER OFFICE/LAB/CAFETERIA BUILDING
FORMER 200,000 CF GASHOLDER PAD
FORMER 200,000 CF GASHOLDER PAD
FORMER 300,000 CF GASHOLDER PAD
FORMER BENZOL TANK PAD
FORMER BENZOL BUILDING
FORMER PHENOL BUILDING
CSX RAILROAD
WYNANTSKILL CREEK

LEGEND:

- PROPERTY LINE
- GRADE CONTOUR
- SPOT ELEVATION
- MEAN HIGH WATER LINE (APPROXIMATELY EL. 4.5)
- 100-YR FLOOD ELEVATION (EL. 24.5)
- ROAD (GRAVEL OR PAVED)
- FENCE
- GUARD RAIL
- RAILROAD TRACKS
- SANITARY SEWER
- GAS LINE
- PL E-20 GAS PIPELINE ALIGNMENT (SHOWN FOR REFERENCE, PIPELINE WAS INSTALLED AFTER PHASE 1A REMEDIATION WAS COMPLETED.)
- BURIED ELECTRICAL
- OVERHEAD WIRE
- WATER LINE
- TELECOMMUNICATION LINE
- SEPTIC
- STORM SEWER
- UNKNOWN UTILITY
- UTILITY POLE
- ELECTRIC MANHOLE
- TREES
- EXISTING BUILDING
- EXISTING ABOVE GRADE STRUCTURE
- APPROXIMATE LOCATION OF FORMER BUILDING, STRUCTURE, OR PAD (PAD AND BELOW GRADE STRUCTURE AND REMNANTS REMAIN)
- MONITORING WELL/PIEZOMETER

MAP SOURCE DATA:

1. BASE MAP INFORMATION OBTAINED FROM DRAWING PREPARED BY NIAGARA MOHAWK ENTITLED "TROY, WATER STREET - TOPOGRAPHIC MAP", DRAWING D-31454-E, DATED 10/3/94 AND SUPPLEMENTED WITH INFORMATION FROM THE AERIAL SURVEY DATED DECEMBER 2,1999 AND FLOWN BY LOCKWOOD.
2. PROPERTY LINE IS BASED ON METES AND BOUNDS OBTAINED FROM THE TITLE REPORT FOR THE PROPERTY (CHICAGO TITLE INSURANCE COMPANY, TITLE NO. 7210632-72419000, EFFECTIVE DATE 10/06/2006) AND INTERPRETED BY C.T. MALE ASSOCIATES IN AUGUST 2012.
3. AIR PLENUM AND UNDERGROUND VAULT LOCATIONS BASED ON SURVEY COMPLETED BY CLARK ENGINEERING AND SURVEYING, P.C. (CES) ON 2/3/09. SURVEY DEPICTED ON CES DRAWING ENTITLED "TUNNEL LOCATION SURVEY", DATED 3/4/09.
4. LIMITS OF PURIFIER WASTE DEPOSIT EXCAVATION, TAR LIQUOR SUMP (TLS), AND OIL/WATER SEPARATOR (OWS) OBTAINED FROM SURVEY DRAWING BY VAN DUSEN AND STEVES LAND SURVEYORS, DATED MAY 1, 2008. EXCAVATION OF PURIFIER WASTE AND CONTENTS OF TLS AND OWS WAS COMPLETED IN APRIL TO MAY 2008.
5. BATHYMETRIC SURVEY INFORMATION IN THE HUDSON RIVER BASED ON SURVEY COMPLETED BY OCEAN SURVEYS, INC. IN OCTOBER 2001 AND CONTOURED BY BLASLAND, BOUCK, AND LEE (BBL).
6. LOCATION OF REMAINING UNDERGROUND STRUCTURES SHALL BE CONSIDERED APPROXIMATE.
7. ELEVATIONS ARE BASED ON VERTICAL DATUM NGVD 1929.

Brown AND Caldwell

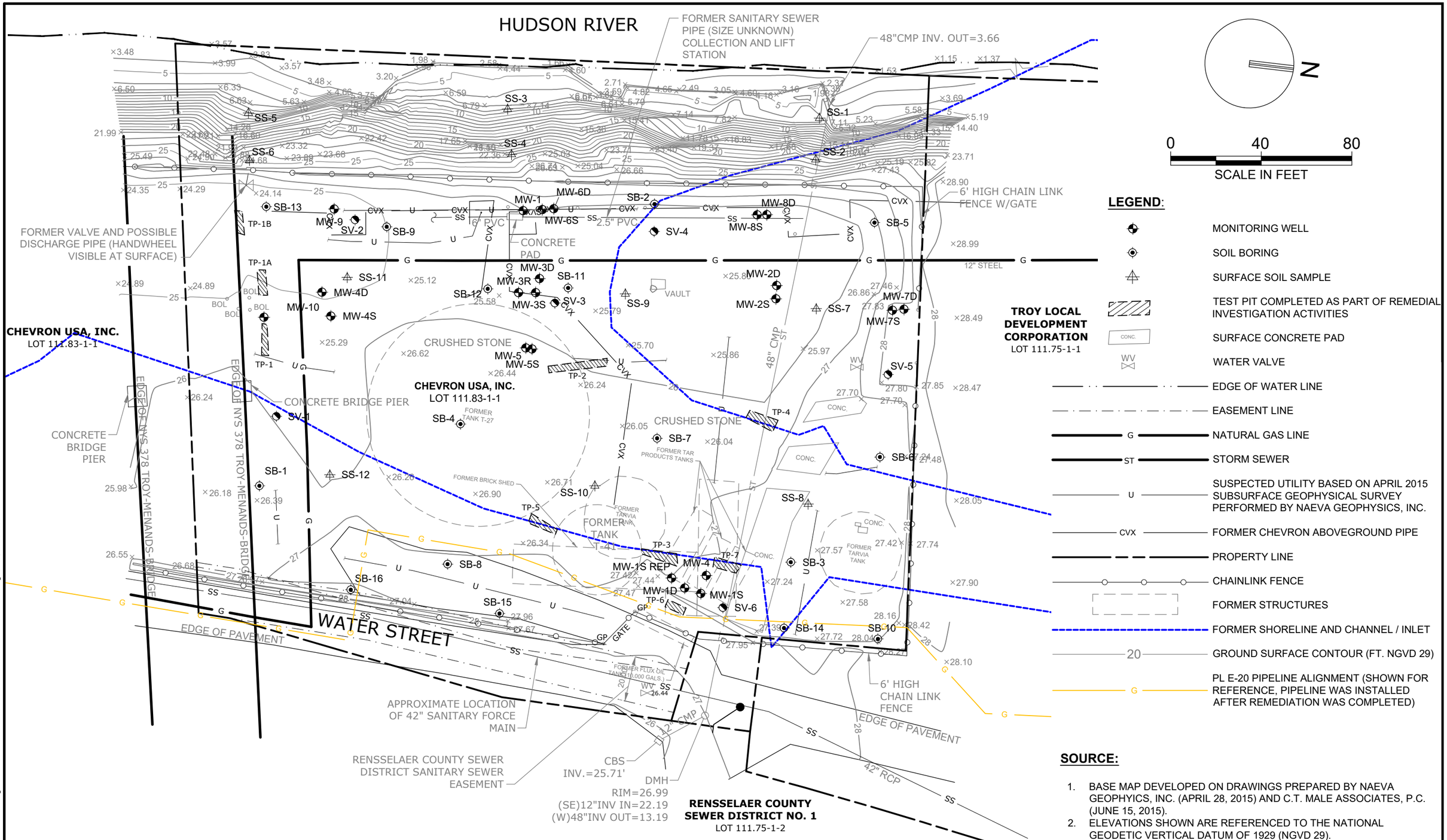
SCALE: AS NOTED
JOB NUMBER: 160119
DATE: APRIL 28, 2022

NATIONAL GRID
TROY (WATER STREET) SITE-AREA 2
TROY, NEW YORK

PRE-REMEDIATION SITE CONDITIONS PLAN - AREA 2

FIGURE
2

Path: C:\bcpwd\3369274 File Name: Figure 2 - Site Plan Plot Date: August 17, 2023 2:45 PM Cadd User: Richard Johnson



LEGEND:

- MONITORING WELL
- SOIL BORING
- SURFACE SOIL SAMPLE
- TEST PIT COMPLETED AS PART OF REMEDIAL INVESTIGATION ACTIVITIES
- SURFACE CONCRETE PAD
- WATER VALVE
- EDGE OF WATER LINE
- EASEMENT LINE
- G — NATURAL GAS LINE
- ST — STORM SEWER
- U — SUSPECTED UTILITY BASED ON APRIL 2015 SUBSURFACE GEOPHYSICAL SURVEY PERFORMED BY NAEVA GEOPHYSICS, INC.
- CVX — FORMER CHEVRON ABOVEGROUND PIPE
- PROPERTY LINE
- CHAINLINK FENCE
- FORMER STRUCTURES
- FORMER SHORELINE AND CHANNEL / INLET
- 20 — GROUND SURFACE CONTOUR (FT. NGVD 29)
- G — PL E-20 PIPELINE ALIGNMENT (SHOWN FOR REFERENCE, PIPELINE WAS INSTALLED AFTER REMEDIATION WAS COMPLETED)

SOURCE:

1. BASE MAP DEVELOPED ON DRAWINGS PREPARED BY NAEVA GEOPHYICS, INC. (APRIL 28, 2015) AND C.T. MALE ASSOCIATES, P.C. (JUNE 15, 2015).
2. ELEVATIONS SHOWN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

Path: C:\bcpwd\d3369274 File Name: Figure 3 - Pre-Remediation Site Conditions PLan Plot Date: August 17, 2023 2:50 PM Cadd User: Richard Johnson

Brown AND Caldwell

SCALE: 1" = 40'

JOB NUMBER: 160119

DATE: August 17, 2023

TROY (WATER ST.) SITE - AREA 3
TROY, NEW YORK

PRE-REMEDIATION SITE CONDITIONS PLAN - AREA 3

FIGURE 3

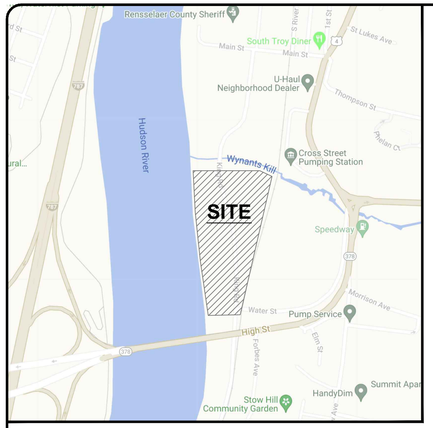
Appendix A: Record Survey Drawings and Volumes

Appendix A-1: Record Survey Drawings

Appendix A-2: Area 2 Volumes

Appendix A-3: Area 3 Volumes

Appendix A-1: Record Survey Drawings



SITE LOCATION MAP

N.T.S.

LEGEND:

- OH — OVERHEAD UTILITY LINE
- X — FENCE
- UTILITY POLE
- G — GAS LINE
- SS — SEWER LINE
- W — WATER LINE
- C — COMMUNICATION LINE
- 29 — MINOR CONTOUR
- 30 — MAJOR CONTOUR
- 28.6 — SPOT ELEVATIONS
- (W) — WELL

MAP REF. 1

HUDSON RIVER

MEAN HIGH WATERMARK (PER MAP REF. 1)

CONCRETE STRUCTURE

COKE SILOS

ACTIVE GAS REGULATION STATION

GATE

CONCRETE WALK

CONCRETE WALL

CONCRETE LOADING DOCK

E-LOT BUILDING (FORMERLY VELOCITY EXPRESS)

GRAVEL PARKING

BROKEN ASPHALT

WYNANTSKILL CREEK BRIDGE

AREA 2

AREA 3

DEBRIS PILE

KING ROAD

CONCRETE PAD

RIVER ROAD

WATER STREET

CB RIM=25.71'

DMH RIM=26.99'

ASPHALT

CONC.

BROKEN CONCRETE

WYNANTSKILL CREEK

0 50 100 Feet

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A MAY 12, 2022 AERIAL DRONE SURVEY.
2. SURVEY SUBJECT TO ANY SUBSURFACE CONDITIONS THAT MAY EXIST, IF ANY.
3. UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND BASED ON MAP REFERENCE 1 AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT IMPLY TO CONSTITUTE OR REPRESENT ALL UTILITIES UPON OR ADJACENT TO THE SURVEYED AREA. OTHER UTILITIES MAY EXIST, IF ANY.
4. THE HORIZONTAL DATUM USED FOR THIS SURVEY IS NEW YORK STATE PLANE COORDINATE SYSTEM – NEW YORK EAST NAD83.
5. THE VERTICAL DATUM USED FOR THIS SURVEY IS BASED ON NGVD29.

MAP REFERENCES

1. MAP ENTITLED "REMEDIAL ACTION CONSTRUCTION DRAWINGS FOR PHASE 1A REMEDIATION NYSDEC SITE NO. 4-42-029 TROY(WATER STREET) SITE-AREA 2", DATED APRIL 2022 AND PREPARED BY BROWN AND CALDWELL ASSOCIATES.

NMB LAND SURVEYING PLLC
20 TROY AVE. WYNANTSKILL NY, 12198
518-376-4630

NO.	DATE	REVISIONS DESCRIPTION	BY

UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY MAP IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. ONLY COPIES BEARING THE LAND SURVEYOR'S EMBOSSED SEAL AND SIGNATURE IN RED SHALL NOT BE CONSIDERED TO BE VALID COPIES. CERTIFICATES INDICATED OR IMPLIED HEREON SHALL RUN ONLY TO THE PARTY FOR WHOM THE SURVEY IS PREPARED, AND ON THEIR BEHALF TO THE ADDITIONAL PARTIES LISTED HEREON. CERTIFICATES ARE NOT TRANSFERABLE TO ADDITIONAL PARTIES, OR SUBSEQUENT OWNERS, NOT LISTED HEREON.

STATE OF NEW YORK — LICENSED LAND SURVEYOR — 050724

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

PRE-EXISTING CONDITIONS SURVEY

PHASE 1A REMEDIATION
NYSDEC SITE No. 4-42-029
TROY (WATER ST.) SITE-AREA 2

CITY OF TROY
COUNTY OF RENSSELAER — STATE OF NEW YORK

SURVEYED BY: AJK	CHECKED BY: NMB	DATE: 5-25-2022
DRAWN BY: AJK	JOB No. 4030	DWG No. EXISTING
SCALE: 1"=50'	SHEET 1 OF 1	



SITE LOCATION MAP
N.T.S.

MAP REF. 1

FORMER TAR TANK FOUNDATION

LIMIT OF EXCAVATION

RIVER ROAD

WATER STREET

KING ROAD

LEGEND:

- MINOR CONTOUR
- MAJOR CONTOUR
- SPOT ELEVATIONS
- CSX RAILROAD TRACKS
- FENCE

0 10 20 Feet

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A MAY THROUGH JULY 2022 FIELD SURVEY.
2. SURVEY SUBJECT TO ANY SUBSURFACE CONDITIONS THAT MAY EXIST, IF ANY.
3. UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND BASED ON MAP REFERENCE 1 AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT IMPLY TO CONSTITUTE OR REPRESENT ALL UTILITIES UPON OR ADJACENT TO THE SURVEYED AREA. OTHER UTILITIES MAY EXIST, IF ANY.
4. THE HORIZONTAL DATUM USED FOR THIS SURVEY IS NEW YORK STATE PLANE COORDINATE SYSTEM – NEW YORK EAST NAD83.
5. THE VERTICAL DATUM USED FOR THIS SURVEY IS BASED ON NGVD29.

MAP REFERENCES

1. MAP ENTITLED "REMEDIAL ACTION CONSTRUCTION DRAWINGS FOR PL E-20 GAS PIPELINE REPLACEMENT CORRIDOR NYSDEC SITE NO. 4-42-029 OU-2 TROY(WATER STREET)", DATED APRIL 2022 AND PREPARED BY BROWN AND CALDWELL ASSOCIATES.

NMB LAND SURVEYING PLLC
20 TROY AVE. WYNANTSKILL NY, 12198
518-376-4630

NO.	DATE	REVISIONS DESCRIPTION	BY

UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY MAP IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER ANY SURVEY MAP IN ANY WAY. ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MAP MARKED WITH THE LAND SURVEYOR'S INK SIGNATURE AND EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID COPIES. CERTIFICATES INDICATED OR IMPLIED HEREON SHALL RUN ONLY TO THE PARTY FOR WHOM THE SURVEY IS PREPARED, AND ON THEIR BEHALF TO THE ADDITIONAL PARTIES LISTED HEREON. CERTIFICATES ARE NOT TRANSFERABLE TO ADDITIONAL PARTIES, OR SUBSEQUENT OWNERS, NOT LISTED HEREON.

STATE OF NEW YORK — NATHAN M. BURROWS — 050723 — LICENSED LAND SURVEYOR

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

AREA 3 POST EXCAVATION SURVEY

GAS PIPELINE CORRIDOR REMEDIATION
NYSDEC SITE No. 4-42-029 OU-2
TROY (WATER ST.) SITE-AREA 3

CITY OF TROY
COUNTY OF RENSSELAER — STATE OF NEW YORK

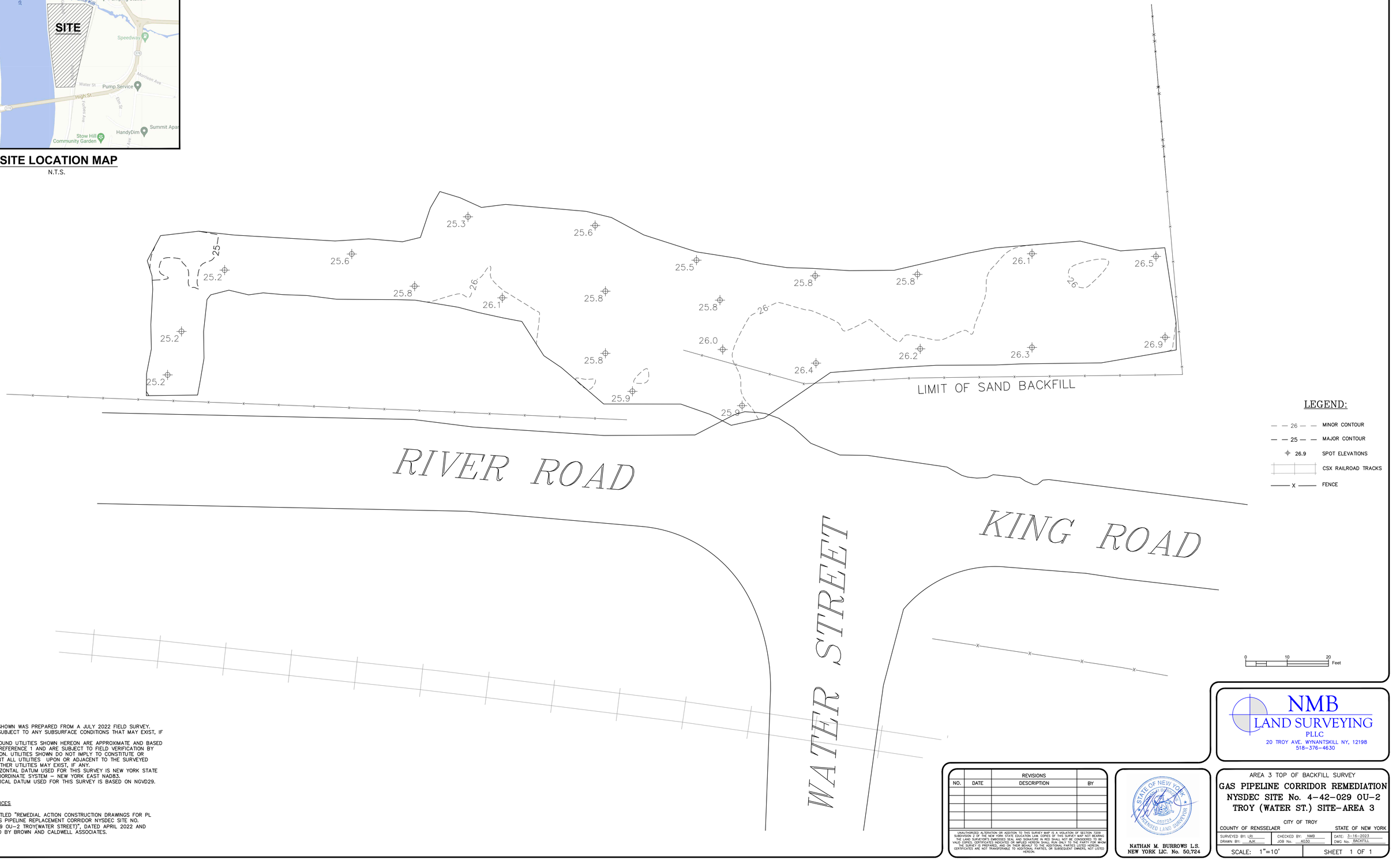
SURVEYED BY: LRI	CHECKED BY: NMB	DATE: 3-16-2023
DRAWN BY: AJK	JOB No. 4030	DWG No. POST EX
SCALE: 1"=10'	SHEET 1 OF 1	



SITE LOCATION MAP

N.T.S.

MAP REF. 1



LEGEND:

- — — 26 — — MINOR CONTOUR
- — — 25 — — MAJOR CONTOUR
- 26.9 SPOT ELEVATIONS
- CSX RAILROAD TRACKS
- —— X —— FENCE

0 10 20 Feet

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A JULY 2022 FIELD SURVEY.
2. SURVEY SUBJECT TO ANY SUBSURFACE CONDITIONS THAT MAY EXIST, IF ANY.
3. UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND BASED ON MAP REFERENCE 1 AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT IMPLY TO CONSTITUTE OR REPRESENT ALL UTILITIES UPON OR ADJACENT TO THE SURVEYED AREA. OTHER UTILITIES MAY EXIST, IF ANY.
4. THE HORIZONTAL DATUM USED FOR THIS SURVEY IS NEW YORK STATE PLANE COORDINATE SYSTEM – NEW YORK EAST NAD83.
5. THE VERTICAL DATUM USED FOR THIS SURVEY IS BASED ON NGVD29.

MAP REFERENCES

1. MAP ENTITLED "REMEDIAL ACTION CONSTRUCTION DRAWINGS FOR PL E-20 GAS PIPELINE REPLACEMENT CORRIDOR NYSDEC SITE NO. 4-42-029 OU-2 TROY(WATER STREET)", DATED APRIL 2022 AND PREPARED BY BROWN AND CALDWELL ASSOCIATES.

NO.	DATE	REVISIONS DESCRIPTION	BY

UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY MAP IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S EMBOSSED SEAL AND SIGNATURE IN RED SHALL NOT BE CONSIDERED TO BE VALID TRUE COPIES. THE CERTIFICATIONS HEREON ARE NOT TRANSFERABLE TO ANY PERSON FROM THE SURVEY IS PREPARED, AND ON THEIR BEHALF TO THE ADDITIONAL PARTIES LISTED HEREON. CERTIFICATES ARE NOT TRANSFERABLE TO ADDITIONAL PARTIES, OR SUBSEQUENT OWNERS, NOT LISTED HEREON.

STATE OF NEW YORK LICENSED LAND SURVEYOR 050754

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

NMB
LAND SURVEYING
PLLC
20 TROY AVE. WYNANTSKILL NY, 12198
518-376-4630

AREA 3 TOP OF BACKFILL SURVEY

GAS PIPELINE CORRIDOR REMEDIATION
NYSDEC SITE No. 4-42-029 OU-2
TROY (WATER ST.) SITE-AREA 3

CITY OF TROY
COUNTY OF RENSSELAER STATE OF NEW YORK

SURVEYED BY: LRI	CHECKED BY: NMB	DATE: 3-16-2023
DRAWN BY: AJK	JOB No. 4030	DWG No. BACKFILL
SCALE: 1"=10'	SHEET 1 OF 1	



SITE LOCATION MAP

N.T.S.

MAP REF. 1

LIMIT OF CRUSHED STONE
(FINAL GRADE)

RIVER ROAD

WATER STREET

KING ROAD

LEGEND:

- MINOR CONTOUR
- SPOT ELEVATIONS
- CSX RAILROAD TRACKS
- CRUSHED STONE
- FENCE

0 10 20 Feet

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A AUGUST 2022 FIELD SURVEY.
2. SURVEY SUBJECT TO ANY SUBSURFACE CONDITIONS THAT MAY EXIST, IF ANY.
3. UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND BASED ON MAP REFERENCE 1 AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT IMPLY TO CONSTITUTE OR REPRESENT ALL UTILITIES UPON OR ADJACENT TO THE SURVEYED AREA. OTHER UTILITIES MAY EXIST, IF ANY.
4. THE HORIZONTAL DATUM USED FOR THIS SURVEY IS NEW YORK STATE PLANE COORDINATE SYSTEM – NEW YORK EAST NAD83.
5. THE VERTICAL DATUM USED FOR THIS SURVEY IS BASED ON NGVD29.

MAP REFERENCES

1. MAP ENTITLED "REMEDIAL ACTION CONSTRUCTION DRAWINGS FOR PL E-20 GAS PIPELINE REPLACEMENT CORRIDOR NYSDEC SITE NO. 4-42-029 OU-2 TROY(WATER STREET)", DATED APRIL 2022 AND PREPARED BY BROWN AND CALDWELL ASSOCIATES.

NO.	DATE	REVISIONS DESCRIPTION	BY

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NMB
LAND SURVEYING
PLLC
20 TROY AVE. WYNANTSKILL NY, 12198
518-376-4630

STATE OF NEW YORK
NATHAN M. BURROWS
050724
LICENSED LAND SURVEYOR

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

AREA 3 TOP OF CRUSHED STONE SURVEY

GAS PIPELINE CORRIDOR REMEDIATION
NYSDEC SITE No. 4-42-029 OU-2
TROY (WATER ST.) SITE-AREA 3

CITY OF TROY
COUNTY OF RENSSELAER STATE OF NEW YORK

SURVEYED BY: LBI | CHECKED BY: NMB | DATE: 3-16-2023
DRAWN BY: AJK | JOB No. 4030 | DWG No. CRUSHER RUN

SCALE: 1"=10' | SHEET 1 OF 1



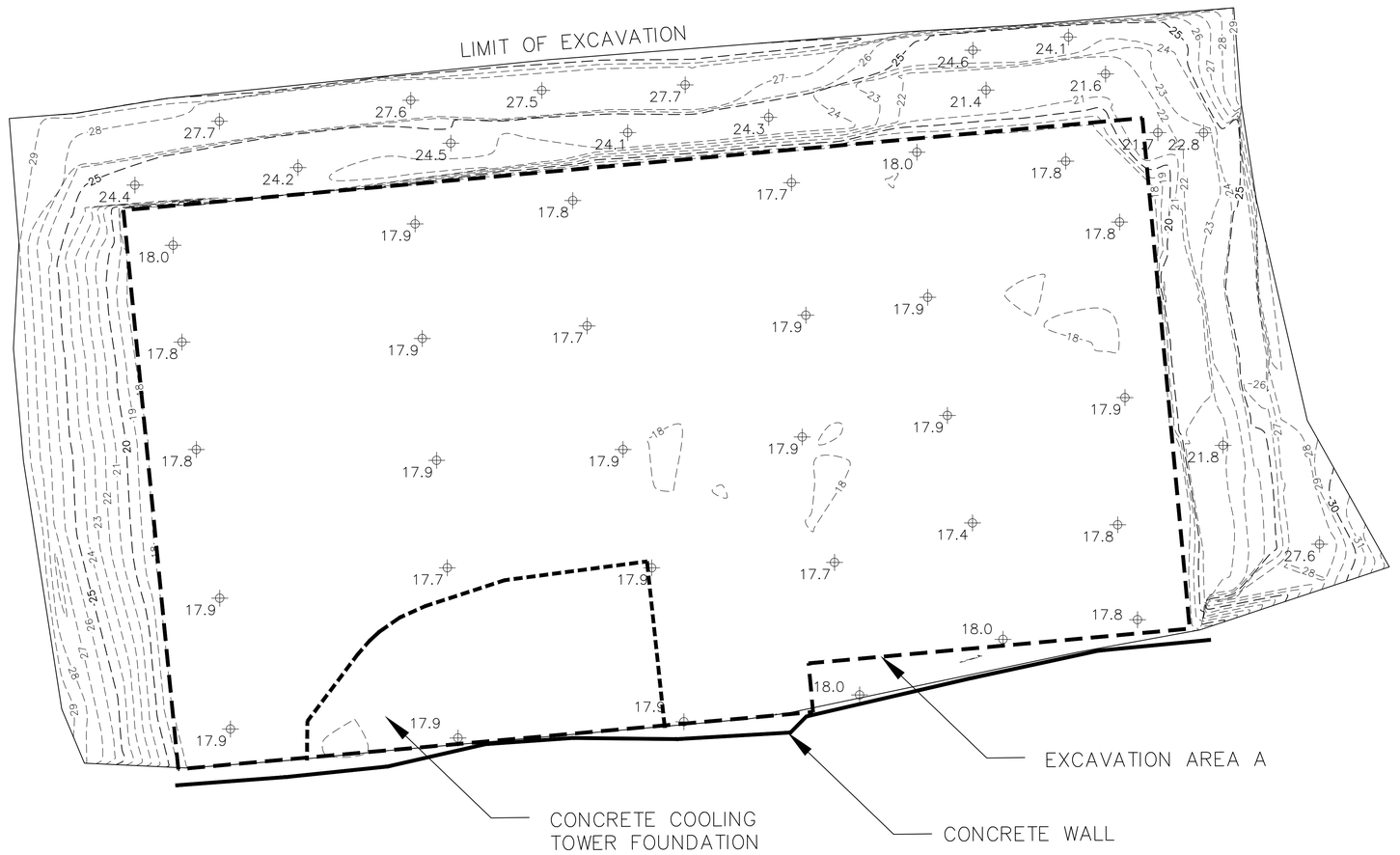
SITE LOCATION MAP

N.T.S.

MAP REF. 1

BROKEN
ASPHALT

KING ROAD



KING ROAD

LEGEND:

- 29 MINOR CONTOUR
- 30 MAJOR CONTOUR
- 28.6 SPOT ELEVATIONS
- LIMIT OF REMEDIATION EXCAVATION
- CONCRETE FOUNDATION

0 10 20 Feet

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A JULY 2022 FIELD SURVEY.
2. SURVEY SUBJECT TO ANY SUBSURFACE CONDITIONS THAT MAY EXIST, IF ANY.
3. UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND BASED ON MAP REFERENCE 1 AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT IMPLY TO CONSTITUTE OR REPRESENT ALL UTILITIES UPON OR ADJACENT TO THE SURVEYED AREA. OTHER UTILITIES MAY EXIST, IF ANY.
4. THE HORIZONTAL DATUM USED FOR THIS SURVEY IS NEW YORK STATE PLANE COORDINATE SYSTEM – NEW YORK EAST NAD83.
5. THE VERTICAL DATUM USED FOR THIS SURVEY IS BASED ON NGVD29.

MAP REFERENCES

1. MAP ENTITLED "REMEDIAL ACTION CONSTRUCTION DRAWINGS FOR PHASE 1A REMEDIATION NYSDEC SITE NO. 4-42-029 TROY(WATER STREET) SITE-AREA 2", DATED APRIL 2022 AND PREPARED BY BROWN AND CALDWELL ASSOCIATES.

NMB
LAND SURVEYING
PLLC
20 TROY AVE, WYNANTSKILL NY, 12198
518-376-4630

REVISIONS			
NO.	DATE	DESCRIPTION	BY

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STATE OF NEW YORK
NATHAN M. BURROWS
050724
LICENSED LAND SURVEYOR

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

AREA 2 (EXCAVATION AREA A)-POST EXCAVATION SURVEY

PHASE 1A REMEDIATION
NYSDEC SITE No. 4-42-029
TROY (WATER ST.) SITE-AREA 2

CITY OF TROY
COUNTY OF RENSSELAER STATE OF NEW YORK

SURVEYED BY: LRI	CHECKED BY: NMB	DATE: 3-16-2023
DRAWN BY: AJK	JOB No. 4030	DWG No. POST EX
SCALE: 1"=10'	SHEET 1 OF 1	



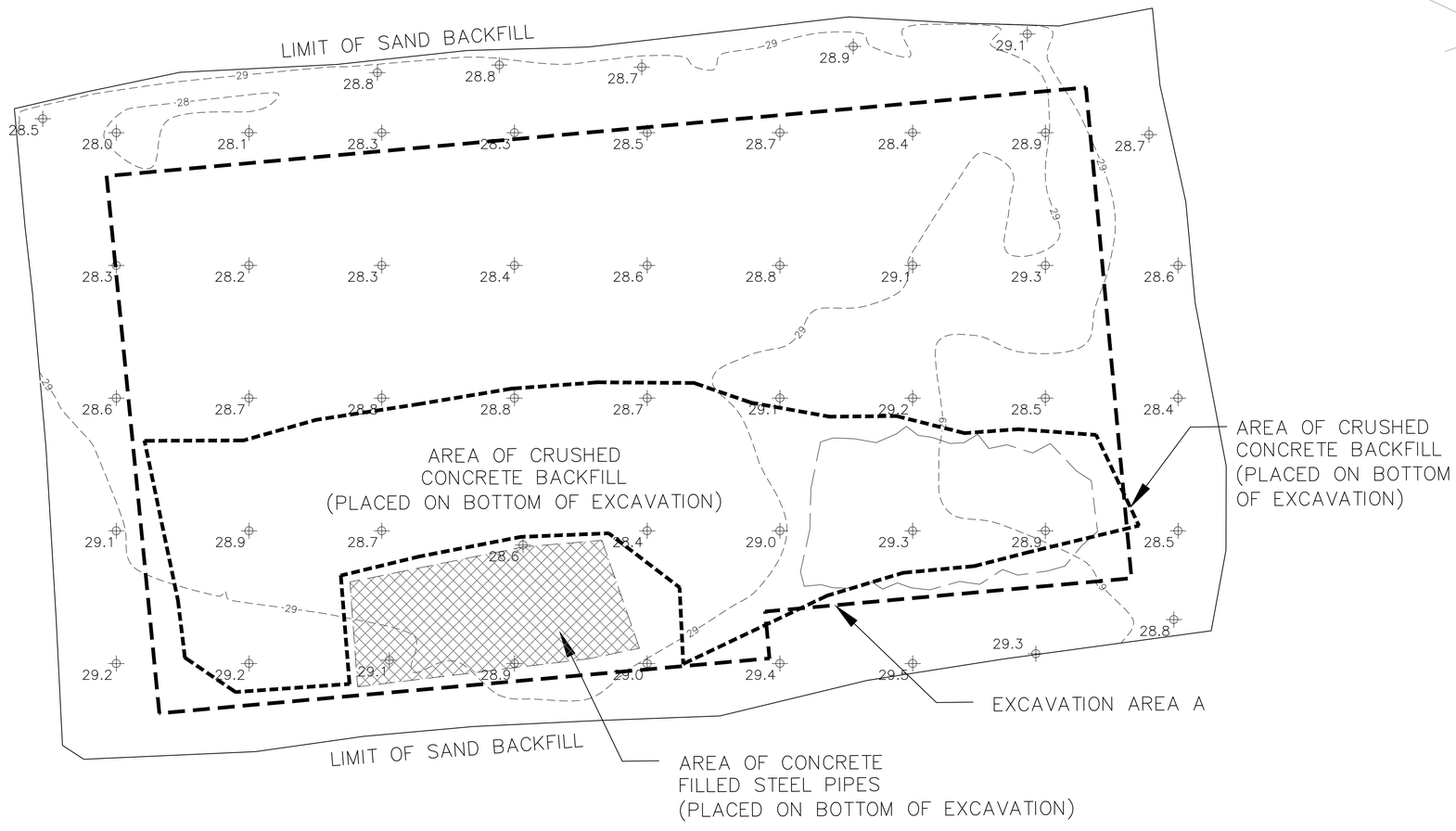
SITE LOCATION MAP

N.T.S.

MAP REF. 1

BROKEN
ASPHALT

KING ROAD



KING ROAD

LEGEND:

- MINOR CONTOUR
- MAJOR CONTOUR
- 28.6 SPOT ELEVATIONS
- LIMIT OF REMEDIATION EXCAVATION
- AREA OF CRUSHED CONCRETE BACKFILL
- AREA OF CONCRETE FILLED STEEL PIPES

0 10 20 Feet

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A AUGUST THROUGH SEPTEMBER 2022 FIELD SURVEY.
2. SURVEY SUBJECT TO ANY SUBSURFACE CONDITIONS THAT MAY EXIST, IF ANY.
3. UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND BASED ON MAP REFERENCE 1 AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT IMPLY TO CONSTITUTE OR REPRESENT ALL UTILITIES UPON OR ADJACENT TO THE SURVEYED AREA. OTHER UTILITIES MAY EXIST, IF ANY.
4. THE HORIZONTAL DATUM USED FOR THIS SURVEY IS NEW YORK STATE PLANE COORDINATE SYSTEM – NEW YORK EAST NAD83.
5. THE VERTICAL DATUM USED FOR THIS SURVEY IS BASED ON NGVD29.

MAP REFERENCES

1. MAP ENTITLED "REMEDIAL ACTION CONSTRUCTION DRAWINGS FOR PHASE 1A REMEDIATION NYSDEC SITE NO. 4-42-029 TROY(WATER STREET) SITE-AREA 2", DATED APRIL 2022 AND PREPARED BY BROWN AND CALDWELL ASSOCIATES.

NO.	DATE	REVISIONS DESCRIPTION	BY

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STATE OF NEW YORK
LICENSED LAND SURVEYOR
050724

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

NMB
LAND SURVEYING
PLLC
20 TROY AVE. WYNANTSKILL NY, 12198
518-376-4630

AREA 2 (EXCAVATION AREA A) – TOP OF BACKFILL SURVEY

PHASE 1A REMEDIATION
NYSDEC SITE No. 4-42-029
TROY (WATER ST.) SITE-AREA 2

CITY OF TROY
COUNTY OF RENSSELAER STATE OF NEW YORK

SURVEYED BY: LR	CHECKED BY: NMB	DATE: 3-16-2023
DRAWN BY: AJK	JOB No. 4030	DWG No. BACKFILL
SCALE: 1"=10'	SHEET 1 OF 1	



SITE LOCATION MAP
N.T.S.

MAP REF. 1

BROKEN
ASPHALT

KING ROAD

LIMIT OF CRUSHED STONE

EXCAVATION AREA A

LIMIT OF CRUSHED STONE

KING ROAD

LEGEND:

- 29 — MINOR CONTOUR
- 30 — MAJOR CONTOUR
- 28.6 SPOT ELEVATIONS
- LIMIT OF REMEDIATION EXCAVATION
- CRUSHED STONE

0 10 20 Feet

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A NOVEMBER 2022 FIELD SURVEY.
2. SURVEY SUBJECT TO ANY SUBSURFACE CONDITIONS THAT MAY EXIST, IF ANY.
3. UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND BASED ON MAP REFERENCE 1 AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT IMPLY TO CONSTITUTE OR REPRESENT ALL UTILITIES UPON OR ADJACENT TO THE SURVEYED AREA. OTHER UTILITIES MAY EXIST, IF ANY.
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MAP REFERENCES

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NMB
LAND SURVEYING
PLLC
20 TROY AVE. WYNANTSKILL NY, 12198
518-376-4630

NO.	DATE	REVISIONS DESCRIPTION	BY

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STATE OF NEW YORK
NATHAN M. BURROWS
050724
LICENSED LAND SURVEYOR

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

AREA 2 (EXCAVATION AREA A)
TOP OF CRUSHED STONE SURVEY

PHASE 1A REMEDIATION
NYSDEC SITE No. 4-42-029
TROY (WATER ST.) SITE-AREA 2

CITY OF TROY
COUNTY OF RENSSELAER — STATE OF NEW YORK

SURVEYED BY: LBI	CHECKED BY: NMB	DATE: 3-16-2023
DRAWN BY: AJK	JOB No. 4030	DWG No. CRUSHED STONE
SCALE: 1"=10'	SHEET 1 OF 1	



SITE LOCATION MAP

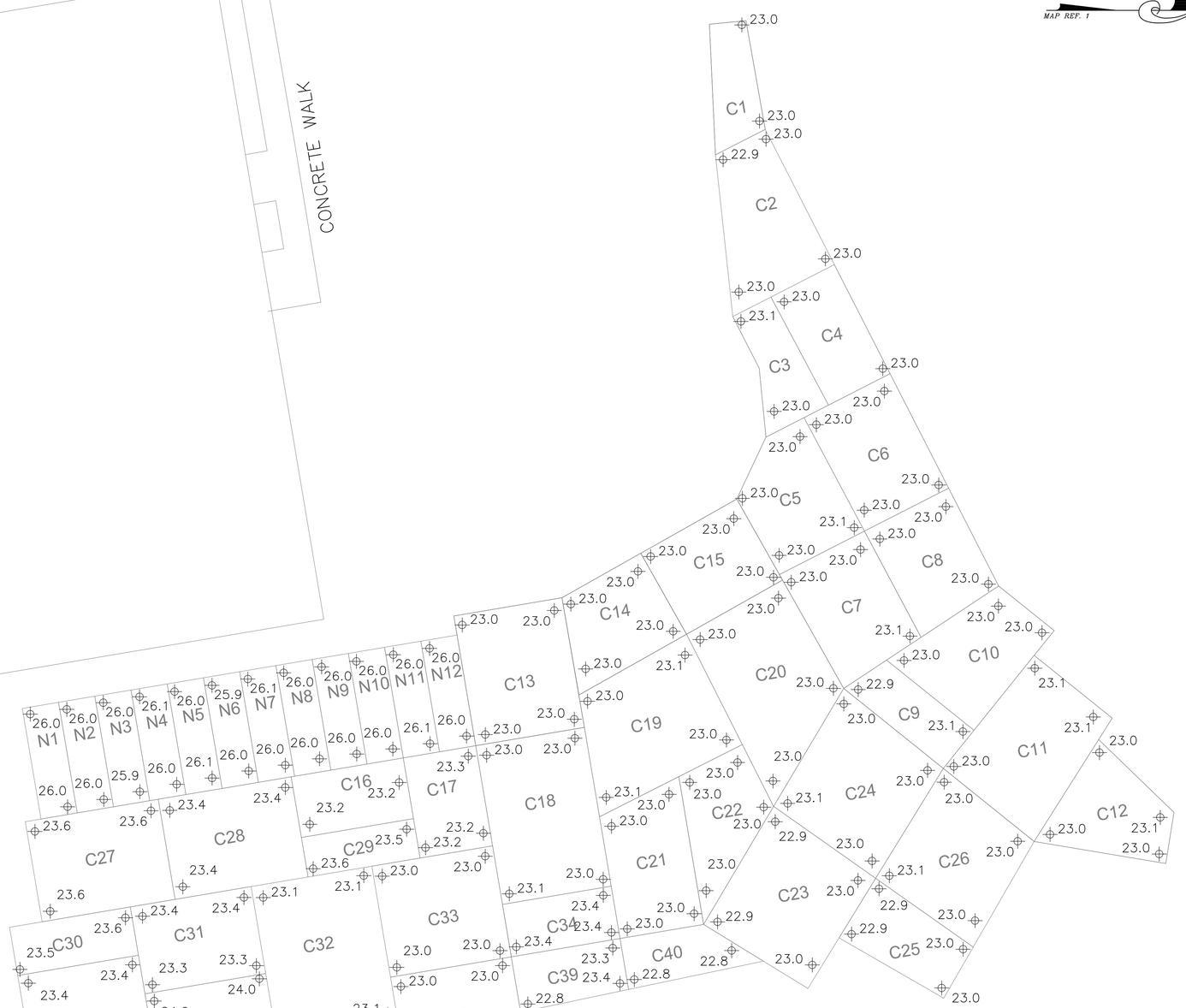
N.T.S.

E-LOT BUILDING
(FORMERLY VELOCITY
EXPRESS)

CONCRETE WALK

KING ROAD

MAP REF. 1



KING ROAD

0 10 20 Feet

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A JULY THROUGH AUGUST 2022 FIELD SURVEY.
2. SURVEY SUBJECT TO ANY SUBSURFACE CONDITIONS THAT MAY EXIST, IF ANY.
3. UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND BASED ON MAP REFERENCE 1 AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT IMPLY TO CONSTITUTE OR REPRESENT ALL UTILITIES UPON OR ADJACENT TO THE SURVEYED AREA. OTHER UTILITIES MAY EXIST, IF ANY.
4. THE HORIZONTAL DATUM USED FOR THIS SURVEY IS NEW YORK STATE PLANE COORDINATE SYSTEM – NEW YORK EAST NAD83.
5. THE VERTICAL DATUM USED FOR THIS SURVEY IS BASED ON NGVD29.

MAP REFERENCES

1. MAP ENTITLED "REMEDIAL ACTION CONSTRUCTION DRAWINGS FOR PHASE 1A REMEDIATION NYSDEC SITE NO. 4-42-029 TROY(WATER STREET) SITE-AREA 2", DATED APRIL 2022 AND PREPARED BY BROWN AND CALDWELL ASSOCIATES.

LEGEND:

23.1 SPOT ELEVATIONS

REVISIONS			
NO.	DATE	DESCRIPTION	BY

UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY MAP IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S EMBOSSED SEAL AND SIGNATURE IN RED SHALL NOT BE CONSIDERED TO BE VALID COPIES. CERTIFICATIONS INDICATED ON THE PLAT HEREON SHALL RUN ONLY TO THE PARTY FOR WHOM THE SURVEY WAS PREPARED AND ON THE DATE OF THE SURVEY. THE CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL PARTIES, OR SUBSEQUENT OWNERS, NOT LISTED HEREON.

STATE OF NEW YORK
LICENSED LAND SURVEYOR
050724

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

NMB
LAND SURVEYING
PLLC
20 TROY AVE. WYNANTSKILL NY, 12198
518-376-4630

AREA 2 (PHASE 1A ISS) ISS PRECUT SURVEY

PHASE 1A REMEDIATION
NYSDEC SITE No. 4-42-029
TROY (WATER ST.) SITE-AREA 2

CITY OF TROY
COUNTY OF RENSSELAER STATE OF NEW YORK

SURVEYED BY: UB	CHECKED BY: NMB	DATE: 3-16-2023
DRAWN BY: AJK	JOB No. 4030	DWG No. ISS PRECUT
SCALE: 1"=10'	SHEET 1 OF 1	



SITE LOCATION MAP

N.T.S.

E-LOT BUILDING
(FORMERLY VELOCITY
EXPRESS)

CONCRETE WALK

KING ROAD

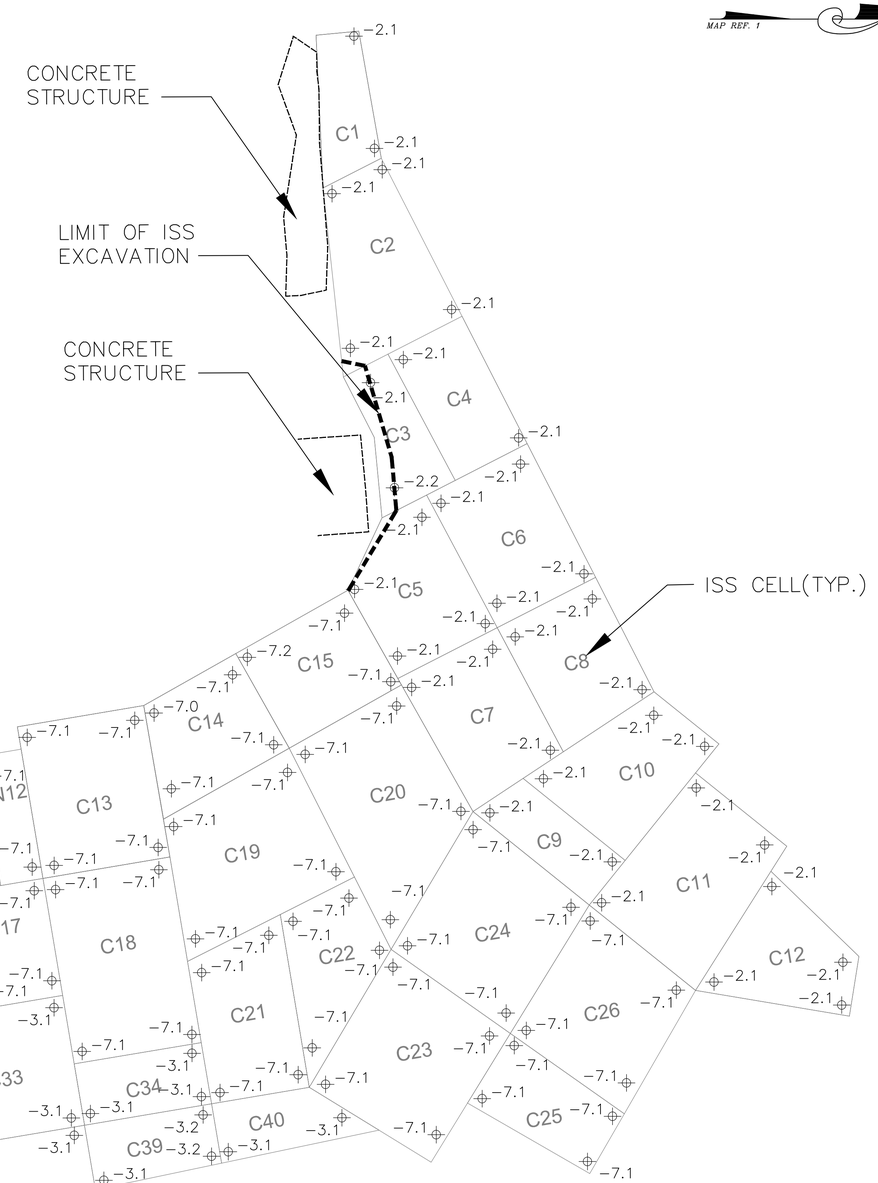
MAP REF. 1

CONCRETE STRUCTURE

LIMIT OF ISS EXCAVATION

CONCRETE STRUCTURE

ISS CELL(TYP.)



KING ROAD

0 10 20 Feet

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A JULY THROUGH AUGUST 2022 FIELD SURVEY.
2. SURVEY SUBJECT TO ANY SUBSURFACE CONDITIONS THAT MAY EXIST, IF ANY.
3. UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND BASED ON MAP REFERENCE 1 AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT IMPLY TO CONSTITUTE OR REPRESENT ALL UTILITIES UPON OR ADJACENT TO THE SURVEYED AREA. OTHER UTILITIES MAY EXIST, IF ANY.
4. THE HORIZONTAL DATUM USED FOR THIS SURVEY IS NEW YORK STATE PLANE COORDINATE SYSTEM – NEW YORK EAST NAD83.
5. THE VERTICAL DATUM USED FOR THIS SURVEY IS BASED ON NGVD29.

MAP REFERENCES

1. MAP ENTITLED "REMEDIAL ACTION CONSTRUCTION DRAWINGS FOR PHASE 1A REMEDIATION NYSDEC SITE NO. 4-42-029 TROY(WATER STREET) SITE-AREA 2", DATED APRIL 2022 AND PREPARED BY BROWN AND CALDWELL ASSOCIATES.

LEGEND:

−7.1 SPOT ELEVATIONS

NMB
LAND SURVEYING
PLLC
20 TROY AVE. WYNANTSKILL NY, 12198
518-376-4630

REVISIONS			
NO.	DATE	DESCRIPTION	BY

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STATE OF NEW YORK
NATHAN M. BURROWS
LICENSED LAND SURVEYOR
050724

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

AREA 2(PHASE 1A ISS) BOTTOM OF ISS SURVEY

PHASE 1A REMEDIATION
NYSDEC SITE No. 4-42-029
TROY (WATER ST.) SITE-AREA 2

CITY OF TROY
COUNTY OF RENSSELAER STATE OF NEW YORK

SURVEYED BY: UBI	CHECKED BY: NMB	DATE: 3-16-2022
DRAWN BY: AJK	JOB No. 4032	DWG No. BOTTOM ISS

SCALE: 1"=10' SHEET 1 OF 1



SITE LOCATION MAP

N.T.S.

E-LOT BUILDING
(FORMERLY VELOCITY
EXPRESS)

CONCRETE WALK

MAP REF. 1

CONCRETE STRUCTURE

LIMIT OF ISS EXCAVATION

CONCRETE STRUCTURE

ISS CELL(TYP.)

EL. -2

EL. -7

EL. -3

EL. +2

KING ROAD

KING ROAD

EL. +2 ISS DESIGN LAYOUT AND TARGET BOTTOM ELEVATIONS FROM NYSDEC-APPROVED REMEDIAL DESIGN REPORT DATED JULY 2018

*DESIGN LAYOUT ADDED TO RECORD DRAWING BY BROWN AND CALDWELL ASSOCIATES.

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A JULY THROUGH AUGUST 2022 FIELD SURVEY.
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4. THE HORIZONTAL DATUM USED FOR THIS SURVEY IS NEW YORK STATE PLANE COORDINATE SYSTEM – NEW YORK EAST NAD83.
5. THE VERTICAL DATUM USED FOR THIS SURVEY IS BASED ON NGVD29.

MAP REFERENCES

1. MAP ENTITLED "REMEDIAL ACTION CONSTRUCTION DRAWINGS FOR PHASE 1A REMEDIATION NYSDEC SITE NO. 4-42-029 TROY(WATER STREET) SITE-AREA 2" DATED APRIL 2022 AND PREPARED BY BROWN AND CALDWELL ASSOCIATES.

LEGEND:

-7.1 SPOT ELEVATIONS

0 10 20 Feet

NMB
LAND SURVEYING
PLLC
20 TROY AVE, WYNANTSKILL NY, 12198
518-376-4630

NO.	DATE	REVISIONS DESCRIPTION	BY

UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY MAP IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY ON A SURVEY MAP BEARING A VALID LICENSED PROFESSIONAL ENGINEER'S OR LAND SURVEYOR'S SEAL. IF AN ITEM BEARING THE SEAL OF THE SURVEYOR IS ALTERED, THE ALTERING SURVEYOR SHALL STAMP THE DOCUMENT BEING ALTERED AND SHALL INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION. COPIES OF THIS SURVEY NOT BEARING THE LICENSED LAND SURVEYOR'S INKED SEAL AND ORIGINAL SIGNATURE SHALL NOT BE CONSIDERED VALID COPIES. CERTIFICATES INDICATED OR IMPLIED HEREON SHALL RUN ONLY TO THE PARTY FOR WHOM THE SURVEY IS PREPARED, AND ON THEIR BEHALF TO THE ADDITIONAL PARTIES LISTED HEREON. CERTIFICATES ARE NOT TRANSFERABLE TO ADDITIONAL PARTIES, OR SUBSEQUENT OWNERS, NOT LISTED HEREON.

STATE OF NEW YORK
NATHAN M. BURROWS
050724
LICENSED LAND SURVEYOR

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

AREA 2(PHASE 1A ISS) BOTTOM OF ISS SURVEY

PHASE 1A REMEDIATION
NYSDEC SITE No. 4-42-029
TROY (WATER ST.) SITE-AREA 2

CITY OF TROY
COUNTY OF RENSSELAER STATE OF NEW YORK

SURVEYED BY: LRI	CHECKED BY: NMB	DATE: 3-16-2022
DRAWN BY: AJK	JOB No. 4030	DWG No. BOTTOM ISS
SCALE: 1"=10'	SHEET 1 OF 1	



SITE LOCATION MAP

N.T.S.

E-LOT BUILDING
(FORMERLY VELOCITY
EXPRESS)

CONCRETE WALK

KING ROAD

MAP REF. 1

KING ROAD

0 10 20 Feet

LEGEND:

— — 29 — — MINOR CONTOUR

— — 30 — — MAJOR CONTOUR

24.3 SPOT ELEVATIONS

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A JULY THROUGH SEPTEMBER 2022 FIELD SURVEY.
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5. THE VERTICAL DATUM USED FOR THIS SURVEY IS BASED ON NGVD29.

MAP REFERENCES

1. MAP ENTITLED "REMEDIAL ACTION CONSTRUCTION DRAWINGS FOR PHASE 1A REMEDIATION NYSDEC SITE NO. 4-42-029 TROY(WATER STREET) SITE-AREA 2", DATED APRIL 2022 AND PREPARED BY BROWN AND CALDWELL ASSOCIATES.

REVISIONS			
NO.	DATE	DESCRIPTION	BY

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NMB
LAND SURVEYING
PLLC
20 TROY AVE. WYNANTSKILL NY, 12198
518-376-4630

STATE OF NEW YORK
NATHAN M. BURROWS
050724
LICENSED LAND SURVEYOR

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

AREA 2(PHASE 1A ISS) POST-ISS SWELL CUT SURVEY

PHASE 1A REMEDIATION
NYSDEC SITE No. 4-42-029
TROY (WATER ST.) SITE-AREA 2

CITY OF TROY
COUNTY OF RENSSELAER STATE OF NEW YORK

SURVEYED BY: LBI	CHECKED BY: NMB	DATE: 3-16-2023
DRAWN BY: AJK	JOB No. 4030	DWG No. ISS SWELL CUT
SCALE: 1"=10'	SHEET 1 OF 1	



SITE LOCATION MAP

N.T.S.

E-LOT BUILDING
(FORMERLY VELOCITY
EXPRESS)

CONCRETE WALK

MAP REF. 1

SAND BACKFILL

25.8
26
26.3
26.2
26.5
26.2
26.1
27
26.8
27.1
27.0
27.3
27.8
27.4
27.5
27.4
27.7
27.5
27.9
27.7
27.6
27.9
28
27.5
27.4
28.7
28.1
28.1
27.9
28.2
27.2
28.0
27.6
29
28.4
28.3
27.7
28.2
28.2

KING ROAD

KING ROAD

0 10 20 Feet

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A JULY THROUGH SEPTEMBER 2022 FIELD SURVEY.
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5. THE VERTICAL DATUM USED FOR THIS SURVEY IS BASED ON NGVD29.

MAP REFERENCES

1. MAP ENTITLED "REMEDIAL ACTION CONSTRUCTION DRAWINGS FOR PHASE 1A REMEDIATION NYSDEC SITE NO. 4-42-029 TROY(WATER STREET) SITE-AREA 2", DATED APRIL 2022 AND PREPARED BY BROWN AND CALDWELL ASSOCIATES.

LEGEND:

— — 27 — — MINOR CONTOUR
27.2 SPOT ELEVATIONS
PLACED SAND

NMB
LAND SURVEYING
PLLC
20 TROY AVE, WYNANTSKILL NY, 12198
518-376-4630

REVISIONS			
NO.	DATE	DESCRIPTION	BY

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STATE OF NEW YORK
NATHAN M. BURROWS
050724
LICENSED LAND SURVEYOR

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

AREA 2(PHASE 1A ISS) SAND BACKFILL SURVEY

PHASE 1A REMEDIATION
NYSDEC SITE No. 4-42-029
TROY (WATER ST.) SITE-AREA 2

CITY OF TROY
COUNTY OF RENSSELAER — STATE OF NEW YORK

SURVEYED BY: LBI	CHECKED BY: NMB	DATE: 4-6-2023
DRAWN BY: AJK	JOB No. 4030	DWG No. SAND

SCALE: 1"=10' — SHEET 1 OF 1



SITE LOCATION MAP

N.T.S.

E-LOT BUILDING
(FORMERLY VELOCITY
EXPRESS)

CONCRETE WALK



MAP REF. 1

KING ROAD

KING ROAD

0 10 20 Feet

LEGEND:

— — 29 — — MINOR CONTOUR

28.4 SPOT ELEVATIONS

CRUSHED STONE

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A NOVEMBER 2022 FIELD SURVEY.
2. SURVEY SUBJECT TO ANY SUBSURFACE CONDITIONS THAT MAY EXIST, IF ANY.
3. UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND BASED ON MAP REFERENCE 1 AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT IMPLY TO CONSTITUTE OR REPRESENT ALL UTILITIES UPON OR ADJACENT TO THE SURVEYED AREA. OTHER UTILITIES MAY EXIST, IF ANY.
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5. THE VERTICAL DATUM USED FOR THIS SURVEY IS BASED ON NGVD29.

MAP REFERENCES

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NO.	DATE	REVISIONS DESCRIPTION	BY

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STATE OF NEW YORK
LICENSED LAND SURVEYOR
050724

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

NMB
LAND SURVEYING
PLLC
20 TROY AVE. WYNANTSKILL NY, 12198
518-376-4630

AREA 2(PHASE 1A ISS)
TOP OF CRUSHED STONE SURVEY

PHASE 1A REMEDIATION
NYSDEC SITE No. 4-42-029
TROY (WATER ST.) SITE-AREA 2

CITY OF TROY
COUNTY OF RENSSELAER STATE OF NEW YORK

SURVEYED BY: LBI	CHECKED BY: NMB	DATE: 3-16-2023
DRAWN BY: AJK	JOB No. 4030	DWG No. CRUSHED STONE
SCALE: 1"=10'	SHEET 1 OF 1	



SITE LOCATION MAP

N.T.S.

LEGEND:

- C — COMUNICATIONS LINE
- W — WATER LINE
- G — DECOMMISSIONED GAS LINE
- OH — OVERHEAD UTILITY LINE
- X — FENCE
- E — ELECTRIC LINE
- LEACH PIPE CAPPED
- UTILITY POLE
- 29 — MINOR CONTOUR
- 30 — MAJOR CONTOUR
- 28.6 — SPOT ELEVATIONS
- CSX RAILROAD TRACKS
- DECOMMISSIONED MONITORING WELLS
- W — WELL

MAP REF. 1

HUDSON RIVER

MEAN HIGH WATERMARK (PER MAP REF. 1)

CONCRETE STRUCTURE

DECOMMISSIONED GAS LINE CUT AND CAPPED

COKE SILOS

ACTIVE GAS REGULATION STATION

GATE

4" LEACH PIPE CAP

CONCRETE WALK

HARDENED CROSSING

GRAVEL PARKING

CONCRETE WALL

CONCRETE LOADING DOCK

E-LOT BUILDING (FORMERLY VELOCITY EXPRESS)

BRICK CONVEYANCE TUNNEL CAPPED

2" WATER LINE

12" ACM PIPE CAP

2 ½" PVC PIPE CAP

BROKEN ASPHALT

4" SEPTIC PIPE

MH RIM=27.61'

36" OLD MGP PROCESSING PIPE

CONCRETE BARRIER

18" OLD MGP PROCESSING PIPE

CAPPED 4" OLD MGP PROCESSING PIPE

KING ROAD (NEW ASPHALT)

EMH RIM=26.78'

GRAVEL

CUT CABLE LINE

ACM PIPE CAP

INACTIVE BRICK STRUCTURE

RIVER ROAD

CB RIM=25.71'

DMH RIM=26.99'

WATER STREET

WATERLINE CAPPED

12" OLD MGP PROCESSING PIPE

CONCRETE PAD

TEMPORARY ROAD (NEW ASPHALT)

BROKEN CONCRETE

WYANTSKILL CREEK

0 50 100 Feet

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A DECEMBER, 2022 FIELD SURVEY PROVIDED BY LAND REMEDIATION INC.
2. SURVEY SUBJECT TO ANY SUBSURFACE CONDITIONS THAT MAY EXIST, IF ANY.
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5. THE VERTICAL DATUM USED FOR THIS SURVEY IS BASED ON NGVD29.

MAP REFERENCES

1. MAP ENTITLED "REMEDIAL ACTION CONSTRUCTION DRAWINGS FOR PHASE 1A REMEDIATION NYSDEC SITE NO. 4-42-029 TROY(WATER STREET) SITE-AREA 2", DATED APRIL 2022 AND PREPARED BY BROWN AND CALDWELL ASSOCIATES.

NMB LAND SURVEYING PLLC
20 TROY AVE. WYNANTSKILL NY, 12198
518-376-4630

REVISIONS			
NO.	DATE	DESCRIPTION	BY

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STATE OF NEW YORK — LICENSED LAND SURVEYOR — 050724

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

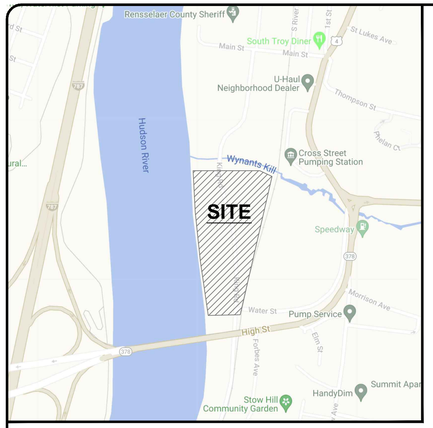
DECOMMISSIONED UTILITIES SURVEY

PHASE 1A REMEDIATION NYSDEC SITE No. 4-42-029 TROY (WATER ST.) SITE-AREA 2

CITY OF TROY

COUNTY OF RENSSELAER — STATE OF NEW YORK

SURVEYED BY: AJK	CHECKED BY: NMB	DATE: 3-16-2023
DRAWN BY: AJK	JOB No. 4030	DWG No. DECOMMISSIONED UTILITIES
SCALE: 1"=50'	SHEET 1 OF 1	



SITE LOCATION MAP
N.T.S.

LEGEND:

- W — WATER LINE
- G — GAS LINE
- OH — OVERHEAD UTILITY LINE
- X — FENCE
- UTILITY POLE
- 29 — MINOR CONTOUR
- 30 — MAJOR CONTOUR
- 28.6 — SPOT ELEVATIONS
- CSX RAILROAD TRACKS
- GRAVEL
- RESTORED ASPHALT PAVEMENT AREA
- RE-USE FILL MATERIAL
- CONSOLIDATED RUBBLE PILE

MAP REF. 1

HUDSON RIVER
MEAN HIGH WATERMARK (PER MAP REF. 1)
CONCRETE STRUCTURE
COKE SILOS
ACTIVE GAS REGULATION STATION
GATE
CONCRETE WALL
CONCRETE LOADING DOCK
CONCRETE WALK
E-LOT BUILDING (FORMERLY VELOCITY EXPRESS)
HARDENED CROSSING
GRAVEL PARKING
BROKEN ASPHALT
CONCRETE BARRIER
KING ROAD (NEW ASPHALT)
GRAVEL PARKING
RIVER ROAD
WATER STREET
CONCRETE PAD
RE-USE FILL MATERIAL
TEMPORARY ROAD (NEW ASPHALT)
GRAVEL
CONSOLIDATED RUBBLE PILE
BROKEN CONCRETE
WYNANTSKILL CREEK
OH

0 50 100 Feet

NOTES:

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5. THE VERTICAL DATUM USED FOR THIS SURVEY IS BASED ON NGVD29.

MAP REFERENCES

1. MAP ENTITLED "REMEDIAL ACTION CONSTRUCTION DRAWINGS FOR PHASE 1A REMEDIATION NYSDEC SITE NO. 4-42-029 TROY(WATER STREET) SITE-AREA 2", DATED APRIL 2022 AND PREPARED BY BROWN AND CALDWELL ASSOCIATES.

NMB LAND SURVEYING PLLC
20 TROY AVE. WYNANTSKILL NY, 12198
518-376-4630

REVISIONS			
NO.	DATE	DESCRIPTION	BY

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STATE OF NEW YORK — NATHAN M. BURROWS — 050724 — LICENSED LAND SURVEYOR

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

AREA 2(PHASE 1A) ROAD
POST CONSTRUCTION SURVEY

PHASE 1A REMEDIATION
NYSDEC SITE No. 4-42-029
TROY (WATER ST.) SITE-AREA 2

CITY OF TROY
COUNTY OF RENSSELAER — STATE OF NEW YORK

SURVEYED BY: AJK	CHECKED BY: NMB	DATE: 3-16-2023
DRAWN BY: AJK	JOB No. 4030	DWG No. POST CONSTRUCTION
SCALE: 1"=50'	SHEET 1 OF 1	

Appendix A-2: Area 2 Volumes

NMB
LAND SURVEYING
PLLC

20 Troy Ave Wynantskill NY, 12198 518-376-4630

Mr. William Lindheimer
Land Remediation, Inc.
74 Hudson River Rd.
Waterford, NY 12188

November 8, 2022

Re: Volume Calculations
Area 2
Phase 1A Remediation
Project
NYSDEC Site No. 4-42-029
Troy – Water St.

Dear Mr. Lindheimer:

Pursuant to a request from Mr. William Lindheimer of Land Remediation, Inc. (LRI), NMB Land Surveying PLLC (NMB) has computed the volume and areas of the excavated and fill material for the Troy (Water St.) Site – Area 2 NYSDEC Site No. 4-42-029.

LRI gathered data at ground elevation of each of the levels needed to compute volumes. NMB periodically performed field checks to verify the data obtained by LRI.

Digital Terrain Models (DTM's) were generated for each level of the excavation. The two corresponding surfaces were compared to determine the amount of volume in cubic yards.

Volumes and areas listed are as of November 1, 2022. Volumes and areas may change due to ongoing construction activities.

Excavation	
Area 2A Excavated Material	5,947± cubic yards
Backfill	
Area 2 Backfill Material	2,714± cubic yards
Area 2A Backfill Material	5,290± cubic yards
Crusher Run	
Area 2A Placed Stone Area	2,355± square yards
ISS & Road	2,909± square yards
C1	
Precut Excavated Material	23± cubic yards
ISS	132± cubic yards
C2	
Precut Excavated Material	53± cubic yards
ISS	316± cubic yards
C3	
Precut Excavated Material	25± cubic yards
ISS	110± cubic yards

C4	
Precut Excavated Material	35± cubic yards
ISS	213± cubic yards
C5	
Precut Excavated Material	53± cubic yards
ISS	273± cubic yards
C6	
Precut Excavated Material	56± cubic yards
ISS	304± cubic yards
C7	
Precut Excavated Material	62± cubic yards
ISS	292± cubic yards
C8	
Precut Excavated Material	56± cubic yards
ISS	267± cubic yards
C9	
Precut Excavated Material	32± cubic yards
ISS	146± cubic yards
C10	
Precut Excavated Material	64± cubic yards
ISS	290± cubic yards
C11	
Precut Excavated Material	83± cubic yards
ISS	390± cubic yards
C12	
Precut Excavated Material	51± cubic yards
ISS	239± cubic yards
C13	
Precut Excavated Material	83± cubic yards
ISS	430± cubic yards
C14	
Precut Excavated Material	54± cubic yards
ISS	296± cubic yards
C15	
Precut Excavated Material	52± cubic yards
ISS	305± cubic yards
C16	
Precut Excavated Material	40± cubic yards
ISS	209± cubic yards
C17	
Precut Excavated Material	43± cubic yards
ISS	223± cubic yards

C18
Precut Excavated Material 105± cubic yards
ISS 527± cubic yards

C19A
Precut Excavated Material 55± cubic yards
ISS 283± cubic yards

C19B
Precut Excavated Material 42± cubic yards
ISS 224± cubic yards

C20
Precut Excavated Material 98± cubic yards
ISS 536± cubic yards

C21
Precut Excavated Material 67± cubic yards
ISS 345± cubic yards

C22
Precut Excavated Material 53± cubic yards
ISS 270± cubic yards

C23
Precut Excavated Material 91± cubic yards
ISS 489± cubic yards

C24
Precut Excavated Material 93± cubic yards
ISS 497± cubic yards

C25
Precut Excavated Material 39± cubic yards
ISS 229± cubic yards

C26
Precut Excavated Material 76± cubic yards
ISS 437± cubic yards

C27
Precut Excavated Material 74± cubic yards
ISS 361± cubic yards

C28
Precut Excavated Material 77± cubic yards
ISS 358± cubic yards

C29
Precut Excavated Material 24± cubic yards
ISS 120± cubic yards

C30
Precut Excavated Material 34± cubic yards
ISS 158± cubic yards

C31
Precut Excavated Material 64± cubic yards
ISS 281± cubic yards

C32	
Precut Excavated Material	115± cubic yards
ISS	499± cubic yards
C33	
Precut Excavated Material	82± cubic yards
ISS	355± cubic yards
C34	
Precut Excavated Material	32± cubic yards
ISS	153± cubic yards
C35	
Precut Excavated Material	64± cubic yards
ISS	296± cubic yards
C36	
Precut Excavated Material	114± cubic yards
ISS	410± cubic yards
C37A	
Precut Excavated Material	38± cubic yards
ISS	158± cubic yards
C37B	
Precut Excavated Material	34± cubic yards
ISS	164± cubic yards
C38	
Precut Excavated Material	29± cubic yards
ISS	130± cubic yards
C39	
Precut Excavated Material	32± cubic yards
ISS	154± cubic yards
C40	
Precut Excavated Material	31± cubic yards
ISS	141± cubic yards
N1	
Precut Excavated Material	12± cubic yards
ISS	135± cubic yards
N2	
Precut Excavated Material	12± cubic yards
ISS	135± cubic yards
N3	
Precut Excavated Material	12± cubic yards
ISS	135± cubic yards
N4	
Precut Excavated Material	12± cubic yards
ISS	135± cubic yards

N5

Precut Excavated Material	11± cubic yards
ISS	135± cubic yards

N6

Precut Excavated Material	12± cubic yards
ISS	134± cubic yards

N7

Precut Excavated Material	11± cubic yards
ISS	135± cubic yards

N8

Precut Excavated Material	12± cubic yards
ISS	135± cubic yards

N9

Precut Excavated Material	12± cubic yards
ISS	135± cubic yards

N10

Precut Excavated Material	12± cubic yards
ISS	114± cubic yards

N11

Precut Excavated Material	12± cubic yards
ISS	115± cubic yards

N12

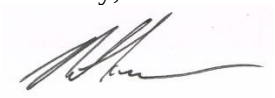
Precut Excavated Material	12± cubic yards
ISS	135± cubic yards

Monolith Swell Cut

Excavated Material	1,390± cubic yards

Should you have any questions regarding the volume and area computations, please contact our office.

Sincerely,



Nathan M. Burrows

Appendix A-3: Area 3 Volumes

NMB
LAND SURVEYING
PLLC

20 Troy Ave Wynantskill NY, 12198 518-376-4630

Mr. William Lindheimer
Land Remediation, Inc.
74 Hudson River Rd.
Waterford, NY 12188

July 6, 2022

Re: Volume Calculations
Area 3
Phase 1A Remediation
Project
NYSDEC Site No.
4-42-029 Troy – Water St.

Dear Mr. Lindheimer:

Pursuant to a request from Mr. William Lindheimer of Land Remediation, Inc. (LRI), NMB Land Surveying PLLC (NMB) has computed the volume and areas of the excavated and fill material for the Troy (Water St.) Site – Area 3 NYSDEC Site No. 4-42-029.

LRI gathered data at ground elevation of each of the levels needed to compute volumes. NMB periodically performed field checks to verify the data obtained by LRI.

Digital Terrain Models (DTM's) were generated for each level of the excavation. The two corresponding surfaces were compared to determine the amount of volume in cubic yards.

Volumes and areas listed are as of June 29, 2022. Volumes and areas may change due to ongoing construction activities.

Area 3 - Excavation
Excavated Material 1,850± cubic yards

Area 3 - Backfill
Backfill Material 1,212± cubic yards

Area 3 – Crusher Run Surface
Placed Crushed Stone 1,251± cubic yards

Should you have any questions regarding the volume and area computations, please contact our office.

Sincerely,

Nathan M. Burrows

Appendix B: Photograph Log

Appendix B-1: Area 2 Photograph Log

Appendix B-2: Area 3 Photograph Log

Appendix B-1: Area 2 Photograph Log



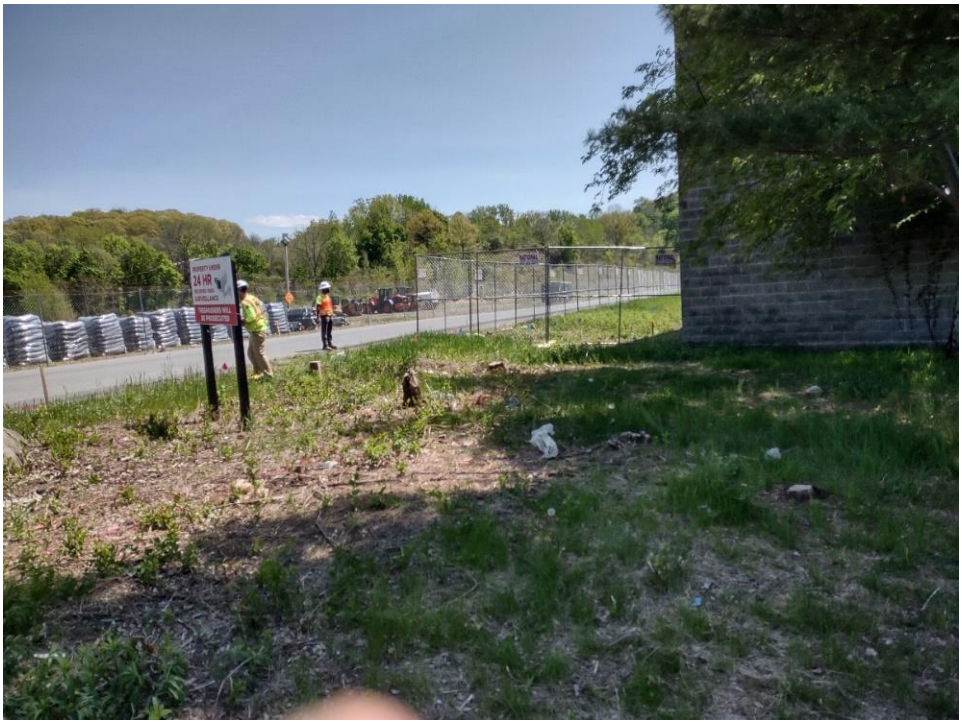
Photograph #1 – View from the northern portion of Area 2 facing west showing site preparation and tree and shrub clearing activities. (Photo Taken 5/9/2022)



Photograph #2 – View from King Road facing east showing collection of trees and shrubs for wood chipping. (Photo Taken 5/10/2022)



Photograph #3 – View from the northern portion of Area 2 facing north showing tree and shrub clearing activities prior to temporary bridge installation. Photo taken (5/11/2022)



Photograph #4 – View from the northern portion of Area 2 facing southeast showing GPRS locating utilities. Photo taken (5/12/2022)



Photograph #5 – View from the northern portion of Area 2 facing east showing construction of the temporary construction entrance using #3 stone. Photo taken (5/13/2022)



Photograph #6 – View from the northern portion of Area 2 facing north showing opening of a fence for the Temporary Detour Road east of King Road. Photo taken (5/16/2022)



Photograph #7 – View from the northern portion of Area 2 facing north showing installation of erosion control silt socks. Photo taken (5/17/2022)



Photograph #8 – View from the northern portion of Area 2 facing west showing unloading of one half of the 70' temporary bridge. Photo taken (5/18/2022)



Photograph #9 – View from the northern portion of Area 2 facing north showing delivery of a construction trailer. Photo taken (5/18/2022)



Photograph #10 – View from the eastern portion of Area 2 facing south showing loading of existing debris (owned by the City of Troy) into a dump truck to be relocated to the temporary staging area. Photo taken (5/19/2022)



Photograph #11 – View from the eastern portion of Area 2 facing south showing progress of the Temporary Detour Road. Photo taken (5/20/2022)



Photograph #12 – View from the central portion of Area 2 facing south showing the end of the Temporary Detour Road before passing under overhead wires. In the background, delivery of concrete Jersey barriers. Photo taken (5/23/2022)



Photograph #13 – View from the central portion of Area 2 facing east showing grout-in-place decommissioning of monitoring well, PZ-21. Photo taken (5/24/2022)



Photograph #14 – View from the northern portion of Area 2 facing west showing over-drill decommissioning of monitoring well, PZ-17a. Photo taken (5/25/2022)



Photograph #15 – View from the northern portion of Area 2 facing north showing compaction testing of the Temporary Detour Road. Photo taken (5/25/2022)



Photograph #16 – View from the northern portion of Area 2 facing west showing the southern abutment for the temporary bridge over the Wynantskill Creek. Photo taken (6/2/2022)



Photograph #17 – View from the northern portion of Area 2 facing north showing the northern abutment for the temporary bridge over the Wynantskill Creek. Photo taken (6/3/2022)



Photograph #18 – View from the northern portion of Area 2 facing north showing setting of the temporary bridge over the Wynantskill Creek. Photo taken (6/6/2022)



Photograph #19 – View from the northern portion of Area 2 facing northwest showing the temporary access road north of the temporary bridge. Photo taken (6/7/2022)



Photograph #20 – View from the northern portion of Area 2 facing southwest showing Badger Daylighting personnel performing vacuum excavation to locate utilities near the E-Lot building. Photo taken (6/7/2022)



Photograph #21 – View from the northern portion of Area 2 facing east showing placement of concrete storage silos onto the grout plant pad. Photo taken (6/9/2022)



Photograph #22 – View from the northern portion of Area 2, on the east side of the E-Lot building, facing south showing cutting and capping of underground utilities. Photo taken (6/9/2022)



Photograph #23 – View from the northern portion of Area 2 facing north showing the temporary bridge and the goal posts installed under the overhead lines. Photo taken (6/10/2022)



Photograph #24 – View from King Road facing northwest showing collection of waste characterization samples from on-Site temporary waste staging areas. Photo taken (6/15/2022)



Photograph #25 – View from the northern portion of Area 2 facing south showing Averill Park Septic Service personnel emptying the contents of the septic tank just east of the E-Lot building and a settlement monitor on the east face of the E-Lot building. Photo taken (6/16/2022)



Photograph #26 – View from King Road facing east showing a concrete structure encountered during pre-ISS excavation in ISS start-up cell C-38. Photo taken (6/17/2022)



Photograph #27 – View from the northern portion of Area 2 facing south showing demolished steel casings encountered during pre-ISS excavation in ISS start-up cell C-38. Photo taken (6/20/2022)



Photograph #28 – View from the northern portion of Area 2 facing south showing sampling of ISS start-up cell C-38 to 15 feet below ground surface. Photo taken (6/21/2022)



Photograph #29 – View from the northern portion of Area 2 facing west showing soil mixing in ISS cell C-39 and application of Rusmar foam for vapor suppression. Photo taken (6/22/2022)



Photograph #30 – View from Area 2 showing abandoned water line that was cut and capped just outside of the northern limit of Excavation Area A. Photo taken (6/23/2022)



Photograph #31 – View from Area 2 facing north showing an unknown, subsurface 30" steel pipe and subsurface concrete structures. Photo taken (6/29/2022)



Photograph #32 – View from the northern portion of Area 2 facing north showing subsurface utilities and foundations located within the ISS footprint. Photo taken (6/30/2022)



Photograph #33 – View from the northern portion of Area 2 facing south showing asbestos abatement. (Photo Taken 7/1/2022)



Photograph #34 – View from the western portion of Excavation Area A facing south showing two unknown utilities cut and capped. (Photo Taken 7/5/2022)



Photograph #35 – View showing runs 3 and 4 of ISS-CORE-1. Photo taken (7/5/2022)



Photograph #36 – View from the central portion of Area 2 facing south showing the temporary construction road. Photo taken (7/6/2022)



Photograph #37 – View from King Road facing north showing ISS sampling. Photo taken (7/6/2022)



Photograph #38 – View from the northern portion of Area 2 facing south showing a trench from utility locating and Former Sump 4 located within the ISS footprint. Photo taken (7/7/2022)



Photograph #39 – View from the western portion of Area 2 facing east showing concrete foundations in Excavation Area A in the foreground and staging of soil into a stockpile for off-Site disposal at Green Ridge Landfill in the background. Photo taken (7/8/2022)



Photograph #40 – View from the central portion of Area 2 facing north showing segregated soils containing NAPL-like impacts from Excavation Area A. Photo taken (7/11/2022)



Photograph #41 – View from the central portion of Area 2 facing north showing concrete structures in Excavation Area A in the foreground and load out of excavated soil from Excavation Area A in the background. Photo taken (7/12/2022)



Photograph #42 – View from the central portion of Area 2 facing east showing the Temporary Waste Containment Area for NAPL-impacted soil. Photo taken (7/15/2022)



Photograph #43 – View from King Road facing southwest showing ISS cell C-15 (approximate) and the northeastern corner of Former Sump 4. The cut end of the brick tunnel is shown at the bottom of the excavation. The tunnel within the Phase 1A ISS Area was demolished in-place (remediated by ISS) and the remaining portion to the south was plugged. Photo taken (7/21/2022)



Photograph #44 – View from the central portion of Area 2 facing north showing Excavation Area A in the foreground and load out of excavated soil into lined trailer beds for off-Site disposal to Green Ridge Landfill in the background. Photo taken (7/25/2022)



Photograph #45 – View from the central portion of Area 2 facing west showing backfilling of common fill on top of orange geotextile fabric in Excavation Area A (later spread and compacted in lifts). Photo taken (8/1/2022)



Photograph #46 – View from the northern portion of Area 2 facing west showing the drilling rig drilling ISS cores. Photo taken (8/3/2022)



Photograph #47 – View from the central portion of Area 2 facing east showing backfilling Excavation Area A with common fill. Photo taken (8/3/2022)



Photograph #48 – View from the northern portion of Area 2 facing west showing soil mixing in ISS cell C-10. Photo taken (8/4/2022)



Photograph #49 – View showing a section of run 2 of ISS-CORE-3. Photo taken (8/4/2022)



Photograph #50 – View from the central portion of Area 2 facing southwest showing concrete-filled steel piles placed horizontally at the bottom of Excavation Area A. Photo taken (8/8/2022)



Photograph #51 – View from the northern portion of Area 2 facing southwest showing soil mixing of ISS cell C-19A. Photo taken (8/8/2022)



Photograph #52 – View from the central portion of Area 2 facing east showing compaction of common fill and demolition of a concrete cooler tower foundation in Excavation Area A. Photo taken (8/8/2022)



Photograph #53 – View from the northern portion of Area 2 facing south showing soil mixing of ISS cell C-1. Photo taken (8/9/2022)



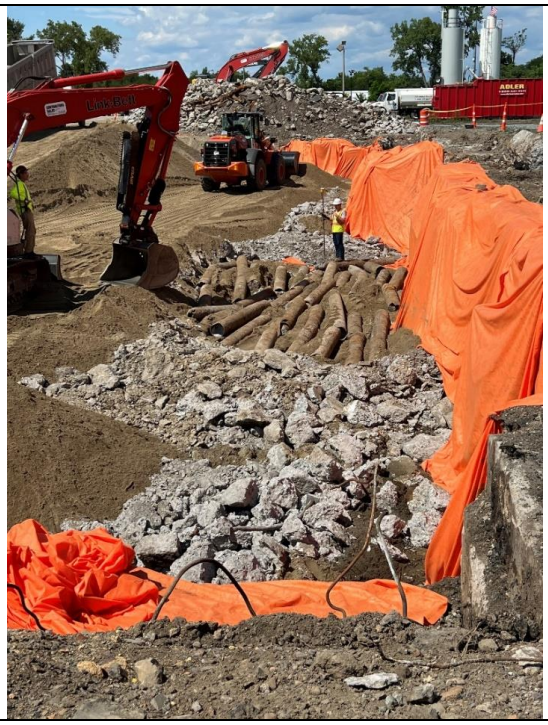
Photograph #54 – View from Excavation Area A facing east showing excavation of soil from beneath the former concrete cooler tower foundation. Photo taken (8/10/2022)



Photograph #55 – View from the northern portion of Area 2 facing west showing collection of waste characterization samples from ISS swell. Photo taken (8/10/2022)



Photograph #56 – View from the northern portion of Area 2 facing west showing soil mixing in ISS cell C-20. Photo taken (8/11/2022)



Photograph #57 – View from the northern portion of Area 2 facing south showing placement of concrete-filled steel piles and demolished concrete (both approved for re-use as backfill) in Excavation Area A. Photo taken (8/11/2022)



Photograph #58 – View from Excavation Area A facing south showing the southeast corner after the removal of concrete wall/foundation containing visible NAPL impacts. The sidewalls of this corner of the excavation were observed by BC and NYSDEC and approved to remain in-place. Photo taken (8/11/2022)



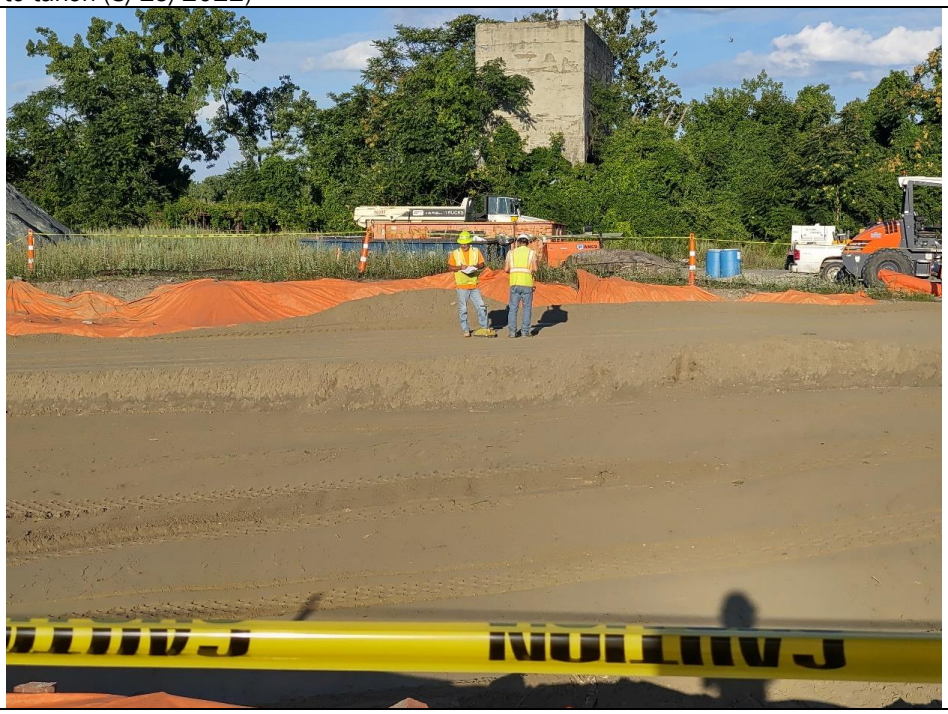
Photograph #59 – View from the central portion of Area 2 facing south showing backfilling of Excavation Area A. Photo taken (8/12/2022)



Photograph #60 – View from the northern portion of Area 2 facing north showing soil mixing in ISS cell N-8. Photo taken (8/12/2022)



Photograph #61 – View from the northern portion of Area 2 facing west showing the load out of excavated soils into lined trailer beds for off-site disposal at Green Ridge Landfill. Photo taken (8/15/2022)



Photograph #62 – View from the central portion of Area 2 facing west showing Land's subcontractor, Construction Tech, performing compaction testing on the common fill in Excavation Area A. Photo taken (8/15/2022)



Photograph #63 – View from the northern portion of Area 2 facing west showing ISS cell C-26 after being completely mixed. Photo taken (8/23/2022)



Photograph #64 – View from the northern portion of Area 2 facing north showing ISS soil mixing of ISS cell N-6. Photo taken (8/26/2022)



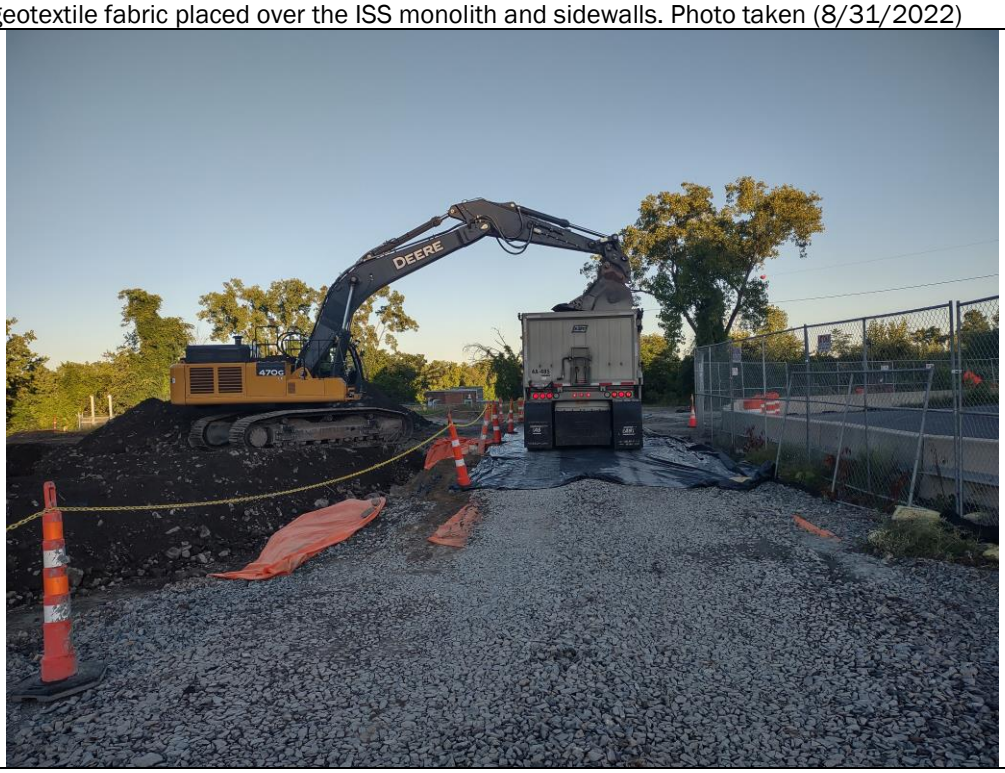
Photograph #65 – View from the northern portion of Area 2 facing west showing ISS soil mixing of ISS cell C-12. Photo taken (8/30/2022)



Photograph #66 – View from the northern portion of Area 2 facing southwest showing the ISS monolith. Photo taken (8/31/2022)



Photograph #67 – View from the northern portion of Area 2 facing north showing orange geotextile fabric placed over the ISS monolith and sidewalls. Photo taken (8/31/2022)



Photograph #68 – View from the northern portion of Area 2 facing west showing the load out of excavated soils into lined trailer beds for off-site disposal at Green Ridge Landfill. (Photo Taken 9/1/2022)



Photograph #69 – View from the northern portion of Area 2 facing southwest showing placement of imported common fill over the orange geotextile fabric. (Photo Taken 9/2/2022)



Photograph #70 – View from the northern portion of Area 2 facing west showing placement of orange geotextile fabric in the ISS area. Photo taken (9/6/2022)



Photograph #71 – View from the northern portion of Area 2 facing southwest showing compaction of imported common fill in the ISS area. Photo taken (9/7/2022)



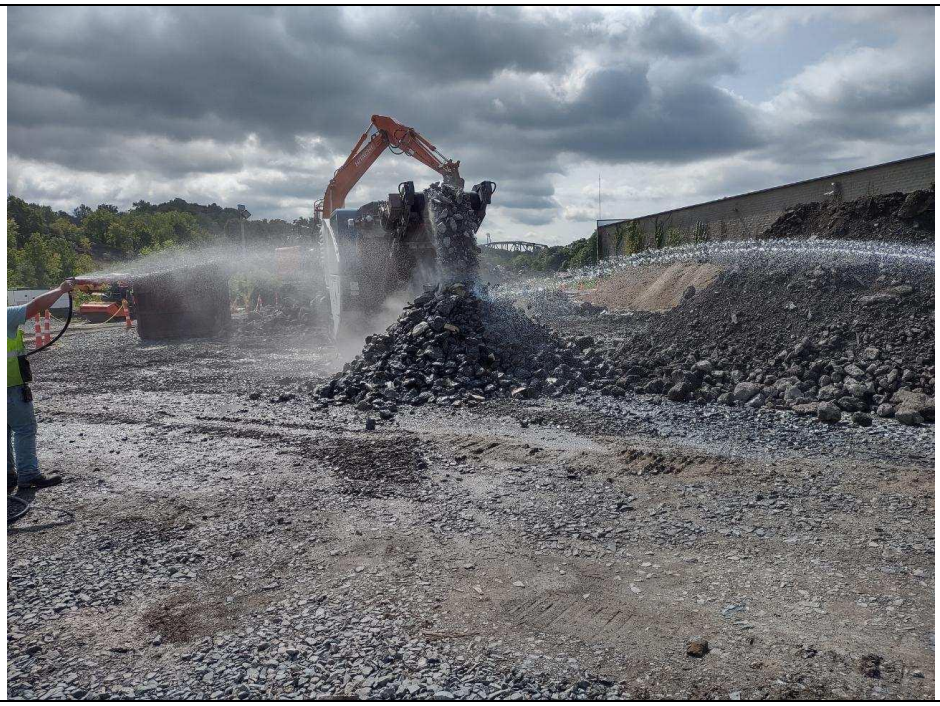
Photograph #72 – View from the central portion of Area 2 facing south showing rebar and other metal debris placed into a roll-off after being segregated from concrete. Photo taken (9/8/2022)



Photograph #73 – View from the central portion of Area 2 facing north showing placement of orange geotextile fabric and Type II Subbase Course in Excavation Area A. Photo taken (9/12/2022)



Photograph #74 – View from the central portion of Area 2 facing north showing NYSDOT Type II Subbase Course placed and compacted in Excavation Area A. Photo taken (9/13/2022)



Photograph #75 – View from the northern portion of Area 2 facing south showing resized concrete exiting the mobile concrete crusher. Photo taken (9/14/2022)



Photograph #76 – View from the central portion of Area 2 facing east showing processed concrete debris staged for load out. Photo taken (9/21/2022)



Photograph #77 – View from the central portion of Area 2 facing south showing quality control check of base grades along King Road before asphalt pavement (performed at a later date). Photo taken (9/26/2022)



Photograph #78 – View from the central portion of Area 2 facing east showing one of the material silos being lowered to the ground with a crane and an excavator before demobilization from the site. Photo taken (9/28/2022)



Photograph #79 – View from the western portion of Area 2 facing north showing construction of a hardened crossing over the new PL E-20 gas line. Photo taken (9/29/2022)



Photograph #80 – View from the western portion of Area 2 facing west showing placement of NYSDOT Type II Subbase Course over the hardened crossing. Photo taken (9/30/2022)



Photograph #81 – View from the northern portion of Area 2 facing southwest showing compaction of common fill in the ISS area in preparation of King Road restoration. Photo taken (10/4/2022)



Photograph #82 – View from the northern portion of Area 2 facing west showing placement of orange geotextile fabric in the ISS area as the site cover demarcation layer. Photo taken (10/6/2022)



Photograph #83 – View from the northern portion of Area 2 facing southwest showing delivery of a load of NYSDOT Type II Subbase Course placed as subbase for King Road. Photo taken (10/6/2022)



Photograph #84 – View from the eastern portion of Area 2 facing east showing loading of existing debris into a tracked dump truck. Photo taken (10/6/2022)



Photograph #85 – View from the northern portion of Area 2 facing west showing compaction testing being performed on Type II Subbase Course in preparation for King Road restoration. Photo taken (10/10/2022)



Photograph #86 – View from the central portion of Area 2 facing southwest showing grading asphalt subbase for King Road restoration. Photo taken (10/11/2022)



Photograph #87 – View from the northern portion of Area 2 facing northwest showing the compaction asphalt subbase in preparation for asphalt pavement restoration. Photo taken (10/12/2022)



Photograph #88 – View from the eastern portion of Area 2 facing south showing cleared area after debris was removed. Photo taken (10/12/2022)



Photograph #89 – View from the northern portion of Area 2 facing east showing removal of staged construction water (collected during construction activities) for off-site disposal. Photo taken (10/12/2022)



Photograph #90 – View from the northern portion of Area 2 west showing compaction of and compaction testing of the asphalt pavement. Photo taken (10/14/2022)



Photograph #91 – View from King Road facing south showing new asphalt pavement installed to restore King Road. Photo taken (10/14/2022)



Photograph #92 – View from the central portion of Area 2 facing south showing defective asphalt and underlying subbase removed from King Road. Photo taken (10/20/2022)



Photograph #93 – View from King Road facing south showing asphalt pavement restoration installed where defective asphalt pavement was previously removed. Photo taken (10/21/2022)



Photograph #94 – View from the central portion of Area 2 facing east showing the stockpile of common fill delivered from the Cohoes (Linden Street) Site for future re-use during future phases of work at the Site. Photo taken (10/26/2022)



Photograph #95 – View from the northern portion of Area 2 facing south showing fencing and Jersey barriers along King Road. Photo taken (10/28/2022)



Photograph #96 – View from the northern portion of Area 2 facing east showing fence removal along the Temporary Detour Road. Photo taken (10/31/2022)



Photograph #97 – View from the northern portion of Area 2 facing east showing the consolidation of existing debris on the northern part of the site. Photo taken (11/1/2022)



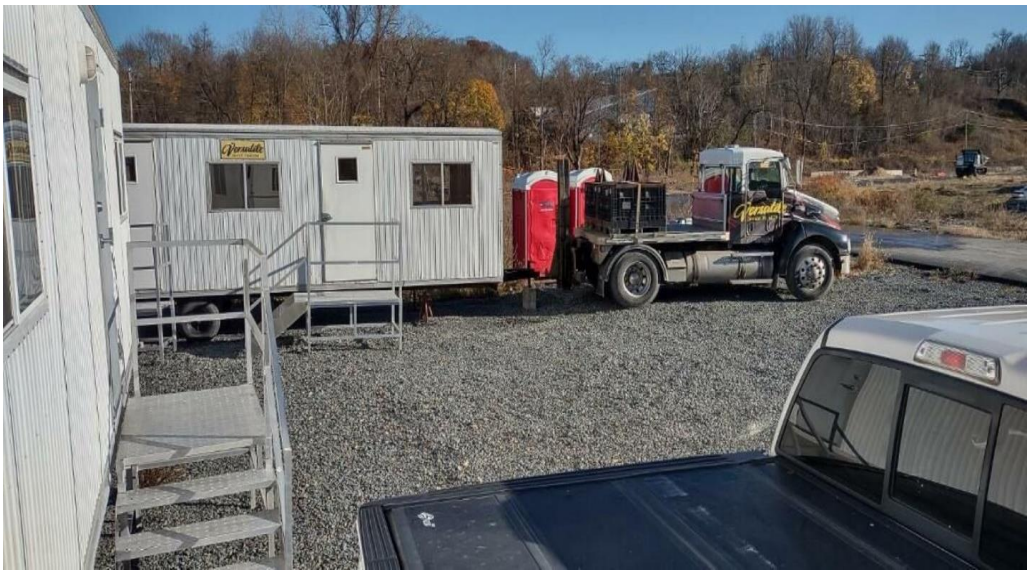
Photograph #98 – View from the central portion of Area 2 facing north showing the area between the former E-Lot building and King Road that was seeded and covered with hay for restoration. Photo taken (11/3/2022)



Photograph #99 – View from the northern portion of Area 2 facing southwest showing the surveillance sign posted outside of the former E-Lot building. Photo taken (11/4/2022)



Photograph #100 – View from the northern portion of Area 2 facing northwest showing the Verizon communication conduit being replaced for future use. Photo taken (11/7/2022)



Photograph #101 – View from the northern portion of Area 2 facing east showing demobilization of a temporary construction trailer. Photo taken (11/8/2022)



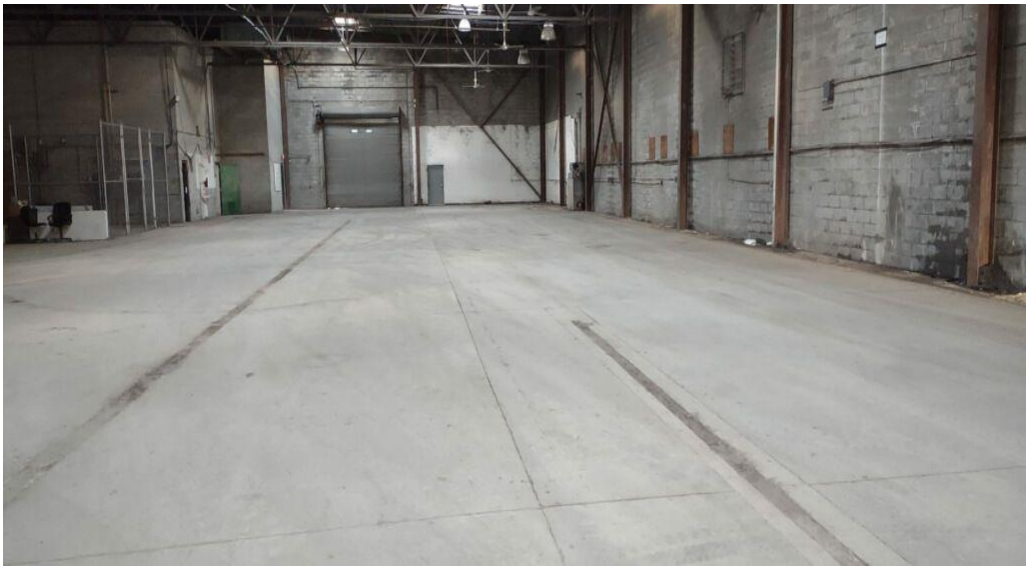
Photograph #102 – View from the northern portion of Area 2 facing south showing Jersey barriers and fencing added to secure the northern end of the temporary bridge. Photo taken (11/9/2022)



Photograph #103 – View from the northern portion of Area 2 facing north showing Jersey barriers and fencing added to secure the southern end of the temporary bridge. Photo taken (11/9/2022)



Photograph #104 – View from the northern portion of Area 2 facing northeast showing the entrance in the temporary fencing to access the area north of the former E-Lot building and to access the National Grid gas regulator station. Photo taken (11/17/2022)



Photograph #105 – View from the E-Lot building facing north showing the inside. Photo taken (11/18/2022)



Photograph #106 – View from the central portion of Area 2 facing northwest showing common fill from the Cohoes (Linden Street) Site staged and secured in place. Photo taken (11/18/2022)



Photograph #107 – View from the Temporary Detour Road facing south showing final site conditions. Photo taken (11/18/2022)



Photograph #108 – View from the Temporary Detour Road facing southeast showing final site conditions. Photo taken (11/18/2022)

Appendix B-2: Area 3 Photograph Log



Photograph #1 – View from the eastern portion of Area 3 facing west showing Badger Daylighting vacuum excavating to locate utilities. (Photo taken 5/26/2022)



Photograph #2 – View from the central portion of Area 3 facing northeast showing backfilling potholes from utility locating. (Photo Taken 5/27/2022)



Photograph #3 – View from the eastern portion of Area 3 facing north showing Badger Daylighting vacuum excavating to locate utilities. (Photo taken 5/31/2022)



Photograph #4 – View from the eastern portion of Area 3 facing north showing use of Rusmar foam sprayed as odor control on excavated soils from utility locating. (Photo Taken 6/1/2022)



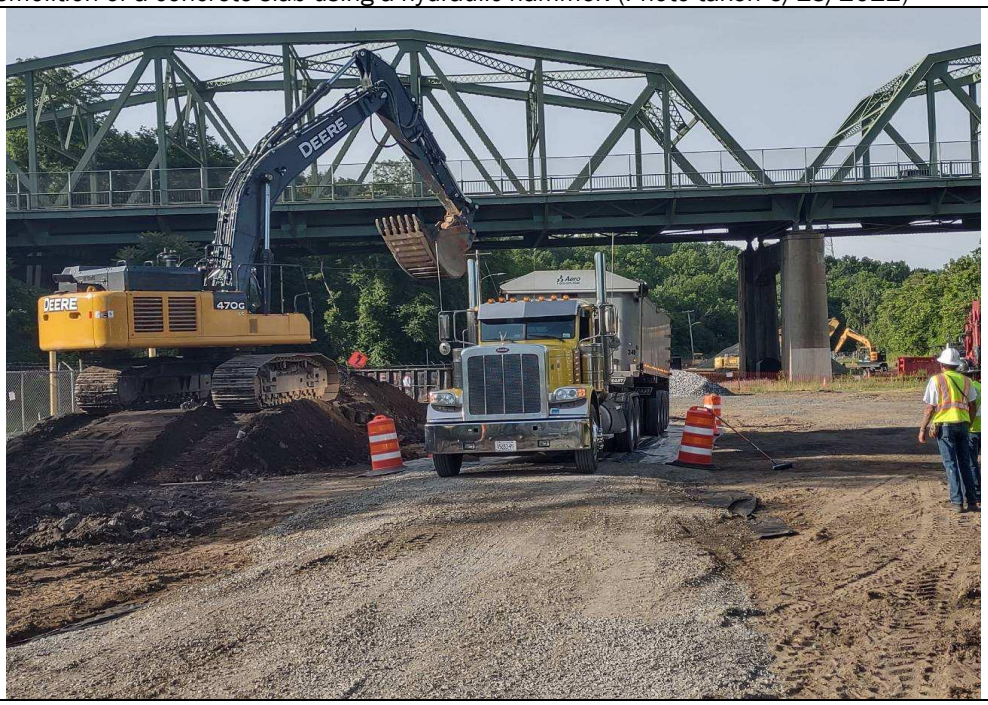
Photograph #5 – View from the eastern portion of Area 3 facing north showing pipes with asbestos containment material (ACM) (suspected former MGP process pipes) exposed prior to cutting and capping. (Photo taken 6/8/2022)



Photograph #6 – View from the eastern portion of Area 3 facing south showing the trench following removal of pipes with ACM (foreground) and the roll-off open top containing the wrapped pipes (background). (Photo Taken 6/10/2022)



Photograph #7 – View from the eastern portion of Area 3 facing northwest showing demolition of a concrete slab using a hydraulic hammer. (Photo taken 6/13/2022)



Photograph #8 – View from the central portion of Area 3 facing south showing loading of excavated soils into a trailer bed for off-Site disposal. (Photo Taken 6/14/2022)



Photograph #9 – View from the central portion of Area 3 facing south showing demolition of excavated concrete structures. (Photo taken 6/15/2022)



Photograph #10 – View from the central portion of Area 3 facing east showing excavation to 1 foot below grade and excavation to EL. 20 (center of photograph). (Photo Taken 6/16/2022)



Photograph #11 – View from the southern portion of Area 3 facing north showing excavation to EL. 20 (center) and one-foot excavation for surface cover (left and right of the deeper area). (Photo taken 6/17/2022)



Photograph #12 – View from the central portion of Area 3 facing south showing loading excavated soils into a trailer bed for off-Site disposal. (Photo taken 6/20/2022)



Photograph #13 – View from Area 3 facing east showing the unknown, hollow brick conveyance structure (believed to be a former stormwater tunnel). (Photo taken 6/22/2022)



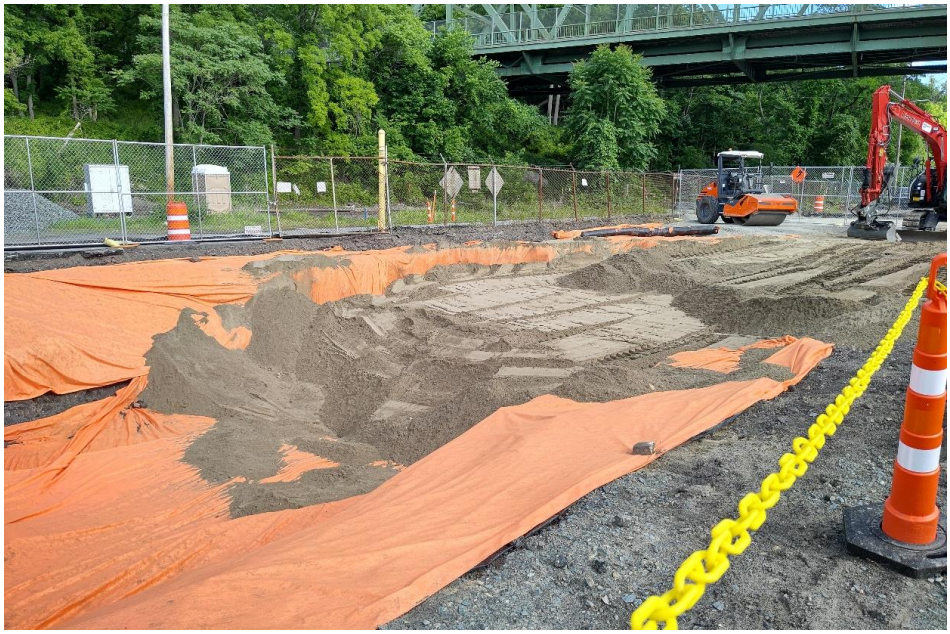
Photograph #14 – View from Area 3 facing west showing the hollow, brick conveyance structure (believed to be a former stormwater tunnel) bricked up (capped). (Photo taken 6/23/2022)



Photograph #15 – View from the central portion of Area 3 facing south showing orange geotextile fabric installed in the southern portion of the excavation. (Photo taken 6/24/2022)



Photograph #16 – View from the central portion of Area 3 facing south showing placement of common fill on top of orange geotextile fabric in the southern portion of the excavation. (Photo taken 6/27/2022)



Photograph #17 – View from the northern portion of Area 3 facing southeast showing common fill backfilled on top of orange geotextile fabric in the middle portion of the excavation. (Photo taken 6/28/2022)



Photograph #18 – View from the northern portion of Area 3 facing east showing compaction of common fill in the northern portion of the excavation. (Photo taken 6/30/2022)



Photograph #19 – View from the southern portion of Area 3 facing north showing common fill backfilled to base grade. (Photo taken 6/29/2022)



Photograph #20 – View from the northern portion of Area 3 facing south showing placement of imported crusher run to construct final cover in this area. (Photo taken 7/1/2022)



Photograph #21 – View from the northern portion of Area 2 facing east showing resizing and staging concrete debris from structures demolished in Area 2 and Area 3. (Photo taken 9/20/2022)



Photograph #22 – View from the northwestern portion of Area 3 facing southeast showing hardened tar and NAPL-impacted soil being mixed with soil before loadout from the site. (Photo taken 10/3/2022)



Photograph #23 – View from the southern portion of Area 2 facing southeast showing installation of new fence along the Area 2 and Area 3 boundary. (Photograph taken 11/14/2022)



Photograph #24 – View from King Road facing south showing the new fence installed around Area 3 and the new entry gate (background). (Photo taken 11/14/2022)

Appendix C: Permit Documentation

TROY

CITY OF TROY
BUREAU OF CODE ENFORCEMENT

[ ]

Permit Expires: 05/10/2023 **Permit No.** PRB20220257

WORK PERMIT

Permission is hereby granted to proceed with the construction, alteration, installation, repair, demolition and/or use of property as described herein, on the express condition that all methods and materials used on said work, and any use of the property, shall conform in all respects to applicable codes, ordinances and regulations of the City of Troy.

Location of Work: 7990-8000 MAIN ST

Description of Work: Building Permit for remediation of former MGP site, temp roadway construction. Excavation of 12,600 CY of impacted material. In-situ soil stabilization of 14,510 CY. Backfill and compaction of 8,600 CY of imported clean fill. Restoration of roadway at the end of the project. See plans for scope of work. Approved by Andrew K. and Steve S.

Permit Includes:

			Troy License	"B" Lic
[ ] No	[ ] Yes	Work in City right-of-way		
[ ] No	[ ] Yes	Plumbing, by _____	# _____	☐
[ ] No	[ ] Yes	Electrical, by _____	# _____	☐

Owner: Troy Local Development Corp. Contractor: Land Remediation Inc. &

Certificate of Occupancy: **No**
[ ] Required prior to occupying building
[ ] Not required

Eric Giffi — 05/10/2022

(Authorized Signature) (Date)

POST IN CONSPICUOUS PLACE ON PREMISES HEREIN DESCRIBED

(See reverse side for restrictions and regulations)

Appendix D: Material/Product Information

Appendix D-1: Non-Woven Geotextile Demarcation Fabric

Appendix D-2: Asphalt Product Data

Appendix D-3: Fencing Shop Drawing

Appendix D-4: Temporary Woven Demarcation Fabric

Appendix D-1: Non-Woven Geotextile Demarcation Fabric

TENCATE GEOSYNTHETICS
Americas

Mirafi® 140NL/O

Drainage

Mirafi® 140NL/O is an orange nonwoven geotextile composed of polypropylene fibers, which are formed into a stable network such that the fibers retain their relative position. Mirafi® 140NL/O is inert to biological degradation and resists naturally encountered chemicals, alkalis, and acids.

TenCate Geosynthetics Americas Laboratories are accredited by Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP).

Mechanical Properties	Test Method	Unit	Typical Value[1]	
			MD	CD
Grab Tensile Strength	ASTM D4632	lbs (N)	100 (445)	100 (445)
Grab Tensile Elongation	ASTM D4632	%	75	75
Trapezoid Tear Strength	ASTM D4533	lbs (N)	50 (223)	50 (223)
CBR Puncture Strength	ASTM D6241	lbs (N)	310 (1380)	
Permittivity	ASTM D4491	sec^{-1}	2.4	
Flow Rate	ASTM D4491	gal/min/ft² (l/min/m²)	175 (7130)	
UV Resistance (at 500 hours)[1]	ASTM D4355	% strength retained	70	

Physical Properties	Unit	Typical Value[2]
Weight (ASTM D5161)	oz/yd² (g/m²)	3.8 (129)
Thickness (ASTM D5199)	mils (mm)	35 (0.9)
Roll Dimensions (width x length)	ft (m)	15 x 360 (4.5 x 110)
Roll Area	yd² (m²)	600 (502)
Estimated Roll Weight	lb (kg)	157 (71)

Mirafi® 140NL/O orange polypropylene nonwoven is not manufactured with any heavy metals contents. The regulated metals – lead, mercury, cadmium, and hexavalent chromium are not intentionally added to any component in this product during the manufacturing process.

[2] ASTM D4439 Standard Terminology for Geosynthetics: typical value, *n—for geosynthetics,* the mean value calculated from documented manufacturing quality control test results for a defined population obtained from one test method associated with on specific property.

Disclaimer: TenCate assumes no liability for the accuracy or completeness of this information or for the ultimate use by the purchaser. TenCate disclaims any and all express, implied, or statutory standards, warranties or guarantees, including without limitation any implied warranty as to merchantability or fitness for a particular purpose or arising from a course of dealing or usage of trade as to any equipment, materials, or information furnished herewith. This document should not be construed as engineering advice.

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Pendergrass, GA 30567

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Fax 706 693 4400
www.tencate.com

FGS000664
ETQR10

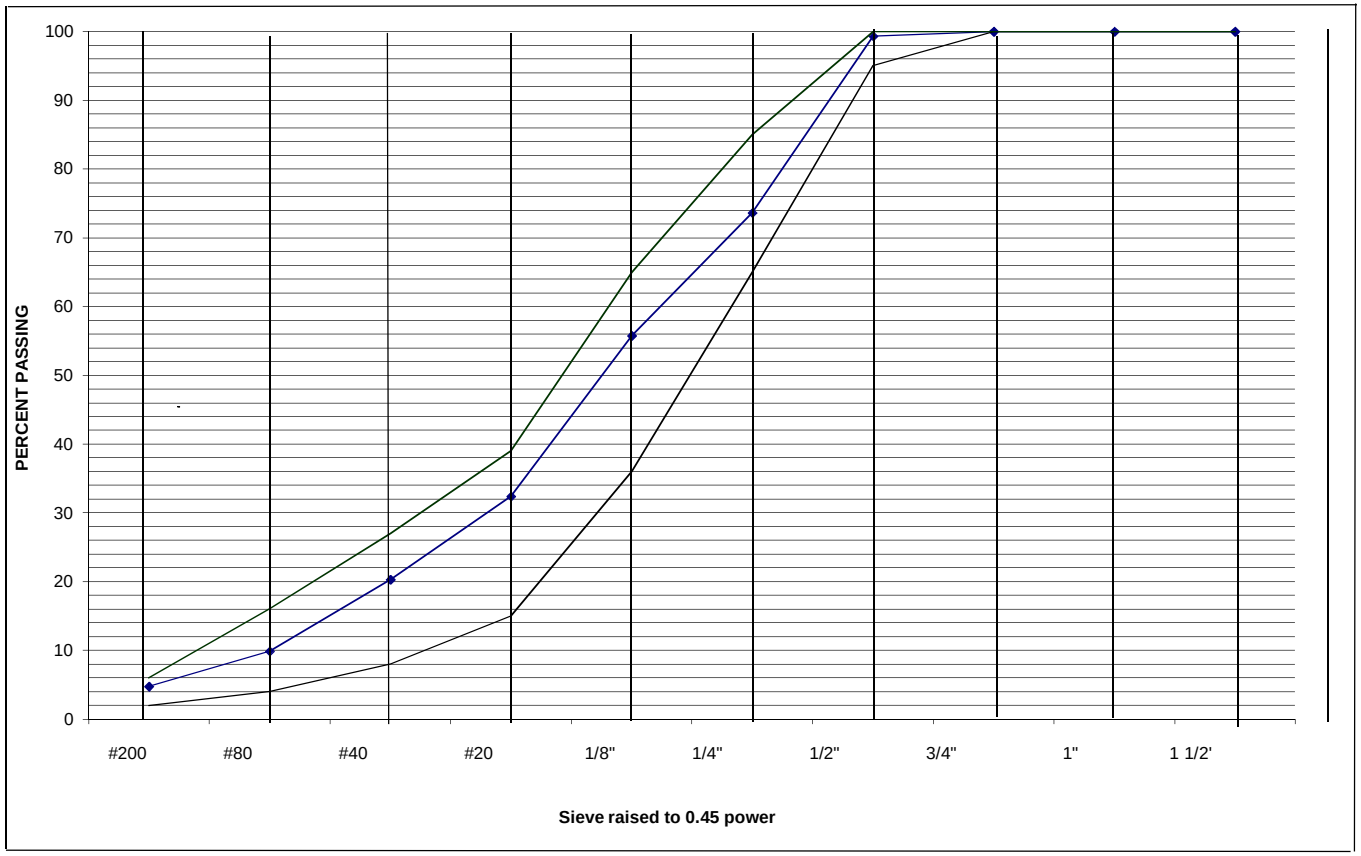
GAI-LAP-25-97

Appendix D-2: Asphalt Product Data

PRODUCER
New Castle Asphalt
LOCATION
Rensselaer, NY

New Castle Asphalt
230 Riverside Ave.
Rensselaer, NY 12144
TYPE 6 Top Job Mix Formula

NYSDOT Type 6 Top



Aggregates		Source Number	Blend %
Course	No. 3 stone		
	No. 2 stone		
	No. 1 stone		
	No. 1 NC stone	1-48r	26.0
	No. 1A stone		
	No. 1A NC stone	1-48r	10.0
Fine	Manufactured	1-48r	14.0
	Nat. Sand	1-151f	20.0
	Mineral Filler		
	RAP		30.0

Sieve Size (mm)		#200	#80	#40	#20	1/8"	1/4"	1/2"	3/4"	1"	1 1/2"	% PGB	Binder Grade
% Passing	General Limits	2-6	4-16	8-27	15-39	36-65	65-85	95-100	100	100	100		PG 64S-22
	JMF Range	3-6	6-14	13-27	25-39	49-63	67-81	95-100	100	100	100	5.4-5.8	
	Target Value	5	10	20	32	56	74	99	100	100	100	5.4	

Revised

Submitted for Review by: Michael McGrath Date: 7/18/2018

BR 256 (7/2019)

DESIGN ESAL LEVEL
< 30

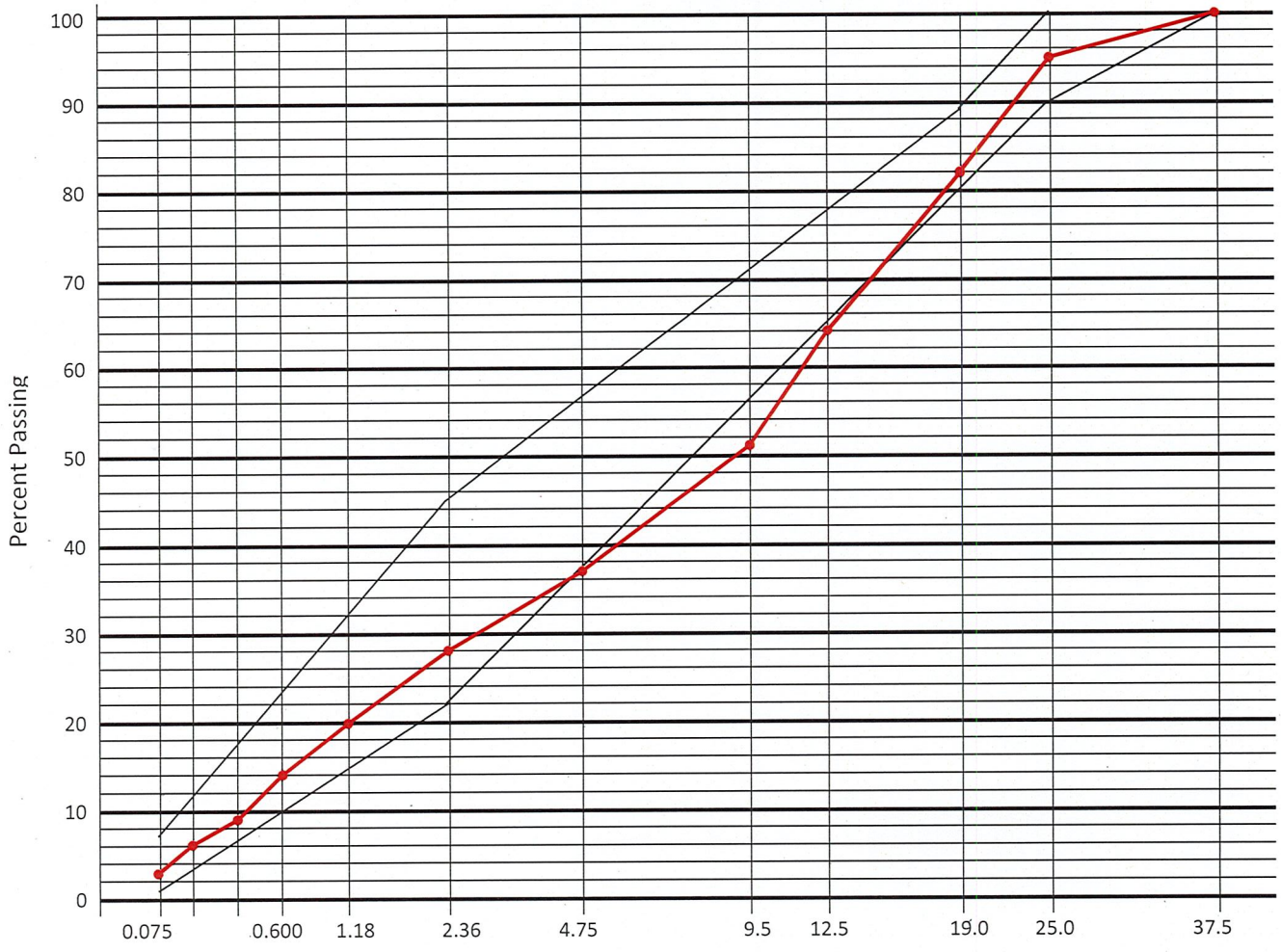
NEW YORK STATE OF OPPORTUNITY. Department of Transportation

MATERIALS BUREAU

SUPERPAVE Job Mix Formula

25.0 mm Nominal Maximum Size

REGION	JMF No.
1	H040222006
PRODUCER	Troy Sand & Gravel
LOCATION	West Sand Lake NY



Aggregates		Source #	Blend %
Coarse	No. 2 Stone	1-7R	36
	No. 1 Stone	1-7R	15
	No. 1A Stone	1-7R	8
Fine	Manufactured		
	Natural Sand	1-29F	21
	Mineral Filler		
	RAP	Plant	20

Aggregates		Blend Limits to Maintain C.A.P.s		
		C.A.A.	F.A.A.	Flat/El.
Coarse	No. 2 Stone	98/95		6
	No. 1 Stone	98/95		6
	No. 1A Stone	98/95		6
Fine	Manufactured			
	Natural Sand		48	
	RAP			

Sieve Size (mm)		0.075	0.150	0.300	0.600	1.18	2.36	4.75	9.5	12.5	19.0	25.0	37.5	50.0	% PGB	Binder Grade
% Passing	General Limits	1 - 7					22 - 45				< 90	90 - 100	100			
	JMF Range	1-7	1-11	4-14	9-19	15-25	23-33	32-42	46-56	59-69	77-87	90-100	100			**PG 64S-22**
	Target Value	3.5	6	9	14	20	28	37	51	64	82	95	100		4.3	

Submitted by: Allison Ezequelle Date: 4/6/22

Verification/Production accepted by: Kris Mellon Date: 4/12/22

New Castle Asphalt LLC

SUBMITTAL COVERSHEET

Customer: RDM Asphalt

Attention: Ronnie Mariani

Job Name: JSC Motorsports

Job #:

Submittal #:

Spec. Section:

Sub-Section:

Description: Type 3 Binder
Type 6 Top
Type 1 Base

Subcontractor/ Supplier: New Castle Asphalt LLC
Rensselaer, NY

Engineer Stamp

☐ APPROVED ☐ REJECTED

☐ APPROVED AS NOTED

☐ REVISE AND RESUBMIT

☐ NO ACTION TAKEN, INFORMATIONAL DATA

Checking is only for conformance with the design concept of the project and compliance with the information given in the Contract Documents. Contractor is responsible for dimensions to be confirmed and correlated at the job site for information that pertains solely to the fabrication processes or to techniques of construction and for the coordination of the work of all trades.

BY:

DATE:

Remarks:

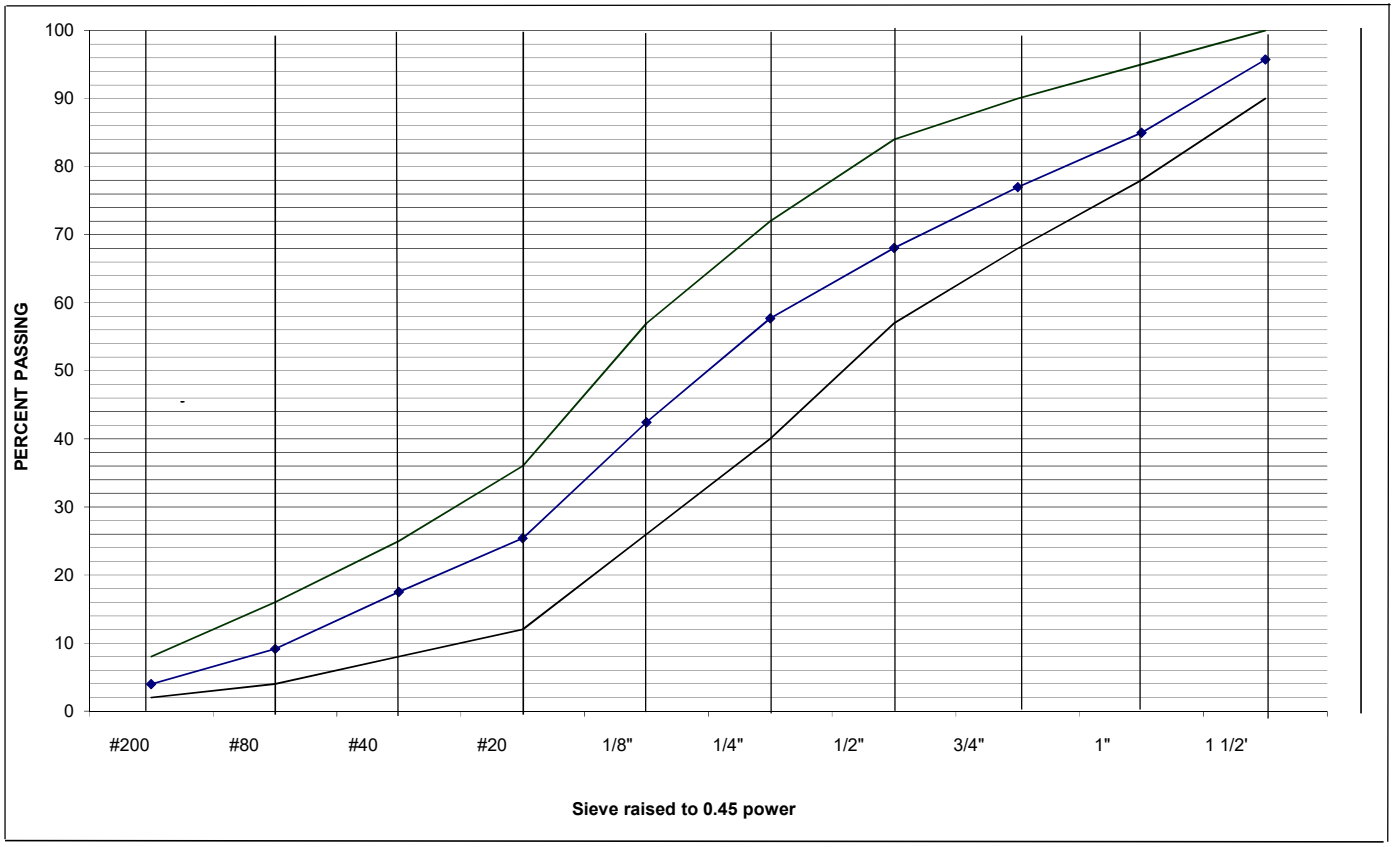
BY: Michael McGrath DATE: May 24th, 2022

This sheet to be completed and attached to each copy of a submittal

PRODUCER
New Castle Asphalt
LOCATION
Rensselaer, NY

New Castle Asphalt
230 Riverside Ave.
Rensselaer, NY 12144
TYPE 1 Base Job Mix Formula

NYSDOT Type 1 Base



Aggregates		Source Number	Blend %
Course	No. 3 stone	1-48r	16.0
	No. 2 stone	1-48r	18.0
	No. 1 stone		
	No. 1 NC stone	1-48r	14.0
	No. 1A stone		
	No. 1A NC	1-48r	
Fine	Manufactured	1-48r	11.0
	Nat. Sand	1-103f	11.0
	Mineral Filler		
	RAP		30.0

Sieve Size (mm)		#200	#80	#40	#20	1/8"	1/4"	1/2"	3/4"	1"	1 1/2"	% PGB	Binder Grade
% Passing	General Limits	2-8	4-16	8-25	12-36	26-57	40-72	57-84	---	78-95	90-100	4.0-6.0	PG 64S-22
	JMF Range	2-6	5-13	11-25	18-32	35-49	51-65	62-74	---	80-90	100	4.0-4.4	
	Target Value	4	9	18	25	42	58	68	77	85	96	4.2	

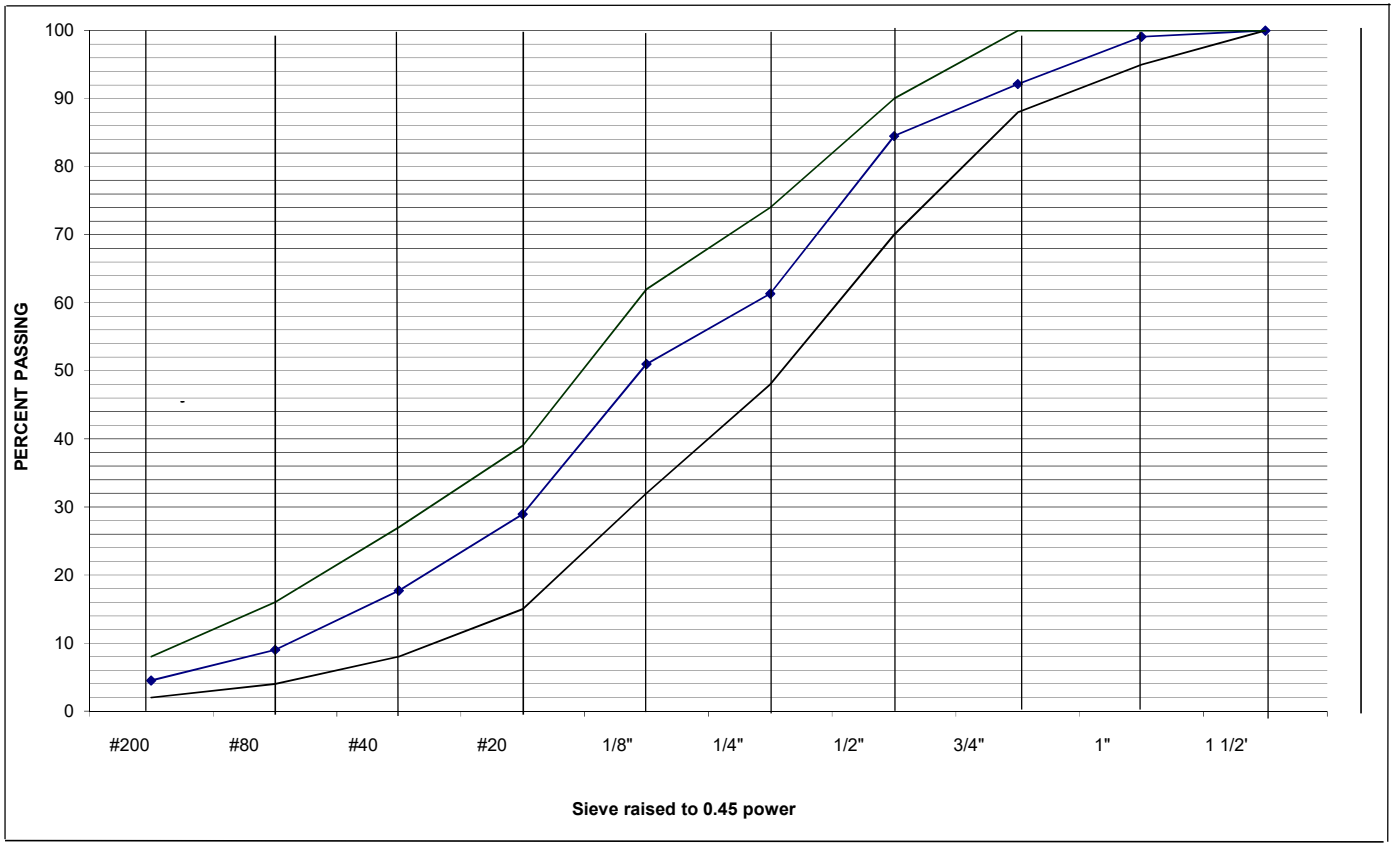
Revised

Submitted for Review by: Michael McGrath Date: 9/24/2019

PRODUCER
New Castle Asphalt
LOCATION
Rensselaer, NY

New Castle Asphalt
230 Riverside Ave.
Rensselaer, NY 12144
TYPE 3 Binder Job Mix Formula

NYSDOT Type 3 Binder



Aggregates		Source Number	Blend %
Course	No. 3 stone		
	No. 2 stone	1-48r	16.0
	No. 1 stone		
	No. 1 NC stone	1-48r	23.0
	No. 1A stone		
	No. 1A NC stone		
Fine	Manufactured	1-48r	14.0
	Nat. Sand	1-103f	17.0
	Mineral Filler		
	RAP		30.0

Sieve Size (mm)		#200	#80	#40	#20	1/8"	1/4"	1/2"	3/4"	1"	1 1/2"	% PGB	Binder Grade
% Passing	General Limits	2-8	4-16	8-27	15-39	32-62	48-74	70-90	---	95-100	100		PG 64S-22
	JMF Range	3-7	5-13	11-25	22-36	44-58	54-68	78-90	---	95-100	100	4.5-4.9	
	Target Value	5	9	18	29	51	61	84	92	99	100	4.7	

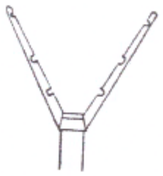
Revised

Submitted for Review by: Michael McGrath Date: 9/1/2019

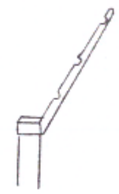
Appendix D-3: Fencing Shop Drawing

SS 40 pipe

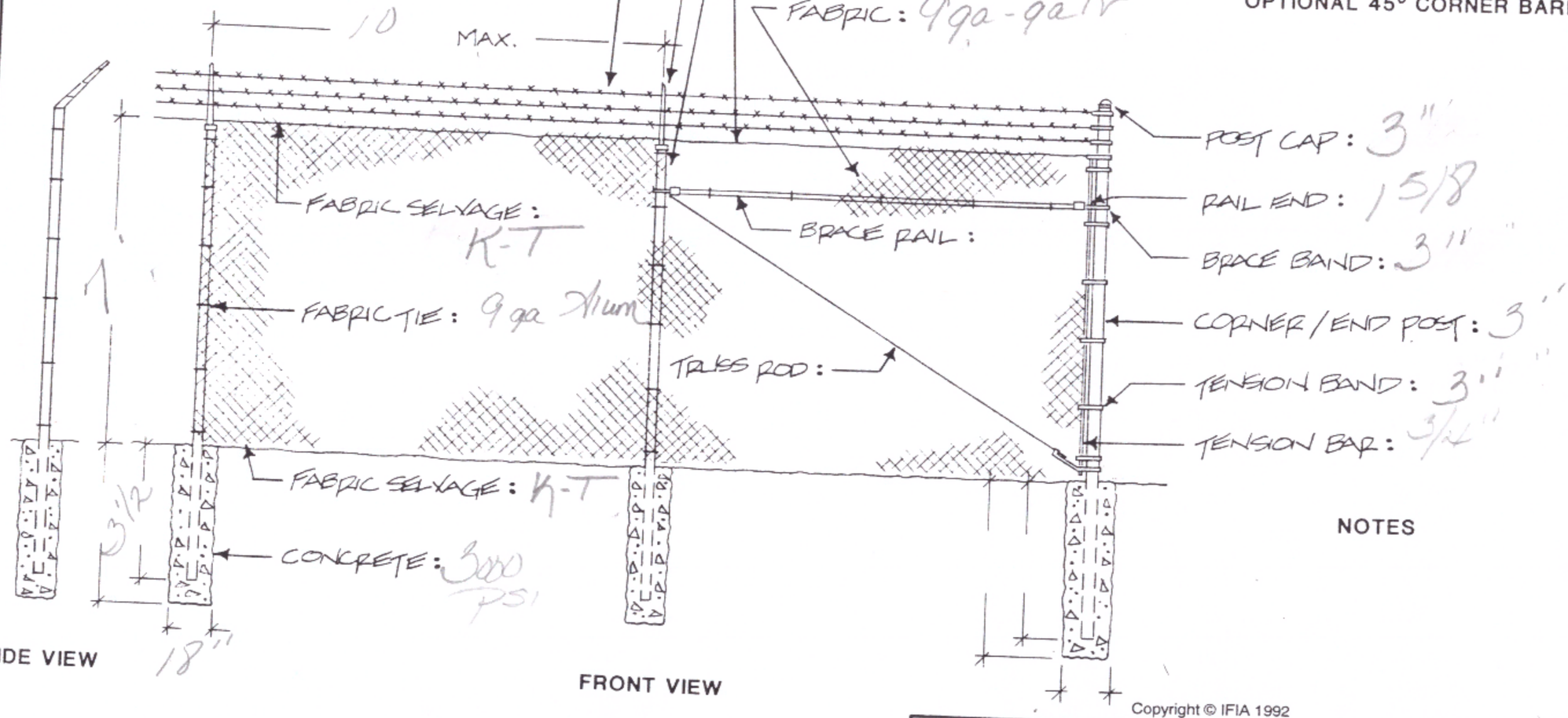
International Fence Industry Association



OPTIONAL V BARB ARM



OPTIONAL 45° CORNER BARB ARM



SIDE VIEW

FRONT VIEW

NOTES

Copyright © IFIA 1992

6'– 8' CHAIN LINK FENCING DETAIL

STYLE: TOP TENSION WIRE WITH BRACE UNIT, 3 STRANDS BARBED WIRE

NTS

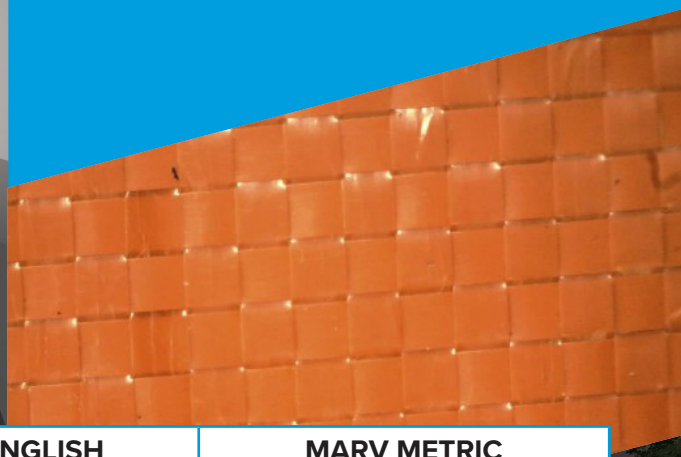
PROJECT: 8000 Main St Troy		
OWNER / GEN. CON.: Land Remediation		
SUBMITTED BY: Morris Fence		
DRAWING NO.	DATE 11/30/22	CL-12

Appendix D-4: Temporary Woven Demarcation Fabric

WINFAB®

REINFORCING SUCCESS

PRODUCT DATA SHEET
WINFAB 3150



WINFAB 3150 is manufactured using high tenacity orange polypropylene yarns that are woven to form a dimensionally stable network, which allows the yarns to maintain their relative position.

WINFAB 3150 resists ultraviolet deterioration, rotting, and biological degradation and is inert to commonly encountered soil chemicals.

PROPERTY	TEST METHOD	MARV ENGLISH	MARV METRIC
Tensile Strength (Grab)	ASTM D4632	150 x 150 lbs	667.5 x 667.5 N
Elongation (Grab)	ASTM D4632	15% x 15%	15% x 15%
Trapezoidal Tear Strength	ASTM D4533	65 x 65 lbs	289.3 x 289.3 N
CBR Puncture	ASTM D6241	450 lbs	2,002.5 N
UV Resistance (500 hrs)	ASTM D4355	70%	70%
Apparent Opening Size*	ASTM D4751	40 US Std. Sieve	0.425 mm
Permittivity	ASTM D4491	.05 sec^{-1}	.05 sec^{-1}
Water Flow Rate	ASTM D4491	4 gpm/ft^2	163 lpm/m^2

***Maximum Average Roll Valve**

PROPERTY	TEST METHOD	TYPICAL ENGLISH	TYPICAL METRIC
Roll Dimensions	Measured	12 ft x 300 ft	3.65 x 91.5 m
Roll Area	Measured	400 yd^2	418 m^2

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Ph: (912) 534-5757 • Fax: (912) 534-5533

GMA Geosynthetic Materials Association

GAI-LAP
Initials: GK # : 87
Date: 2016

Appendix E: Monitoring Well Decommissioning Records

Appendix E-1: Area 2 Monitoring Well Decommissioning Records

Appendix E-2: Area 3 Monitoring Well Decommissioning Records

Appendix E-1: Area 2 Monitoring Well Decommissioning Records

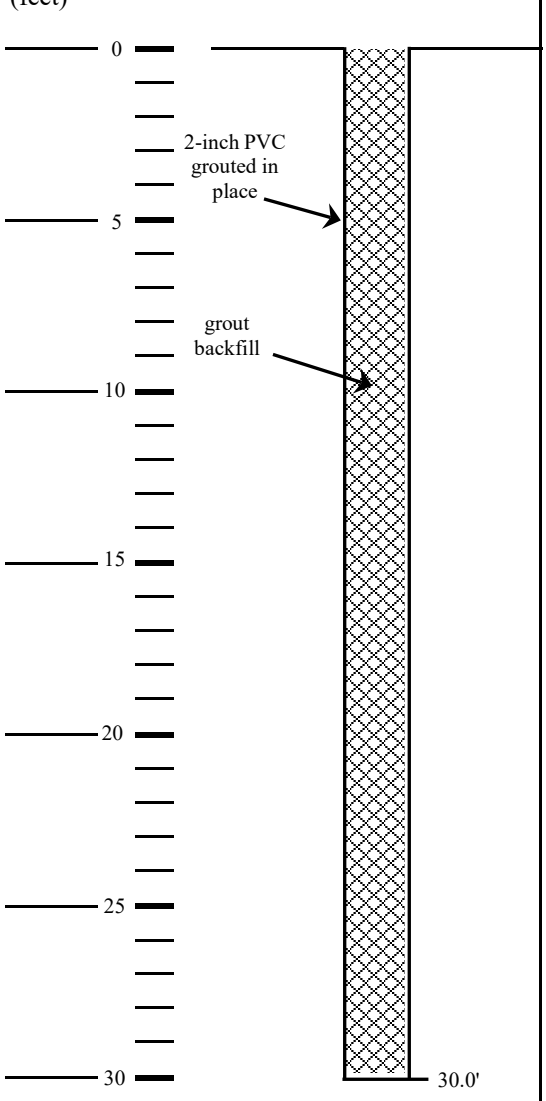
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **MW-21**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 30'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	15

WELL SCHEMATIC*



COMMENTS:

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

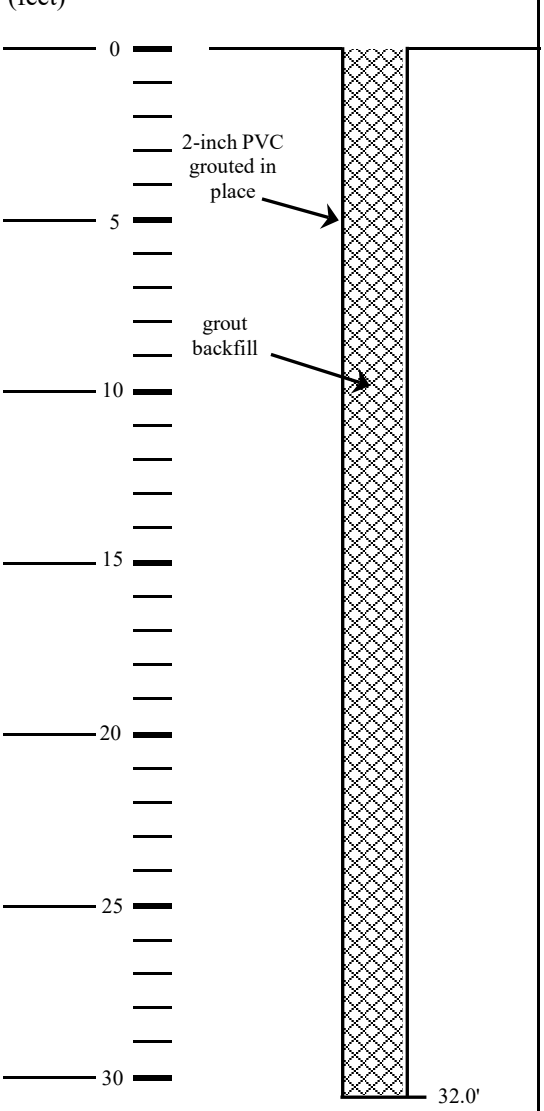
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **MW-16**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 32'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	15

WELL SCHEMATIC*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

COMMENTS:

Drilling Contractor

Department Representative

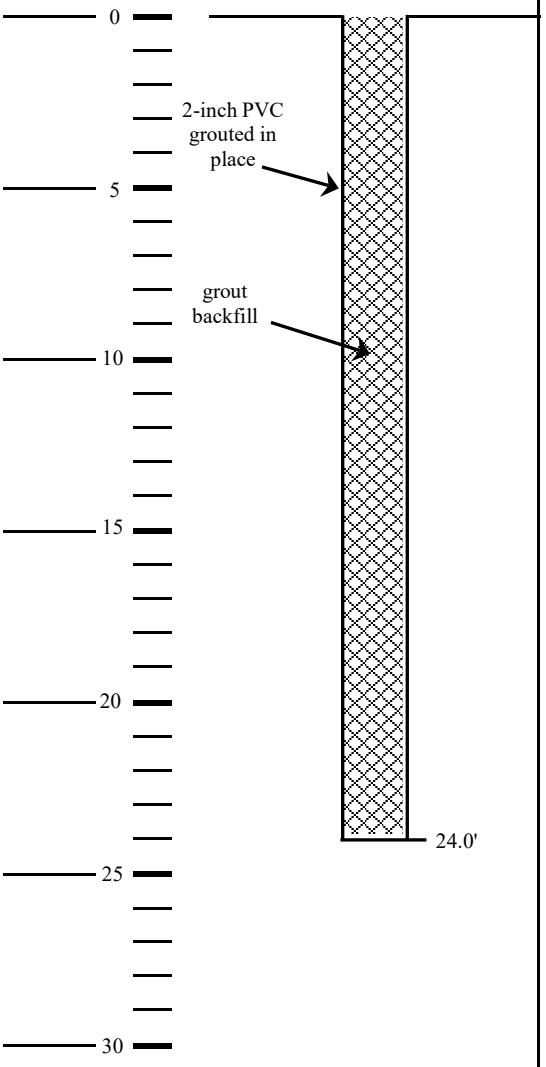
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **MW-18**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 24'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	10

WELL SCHEMATIC*



COMMENTS:

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

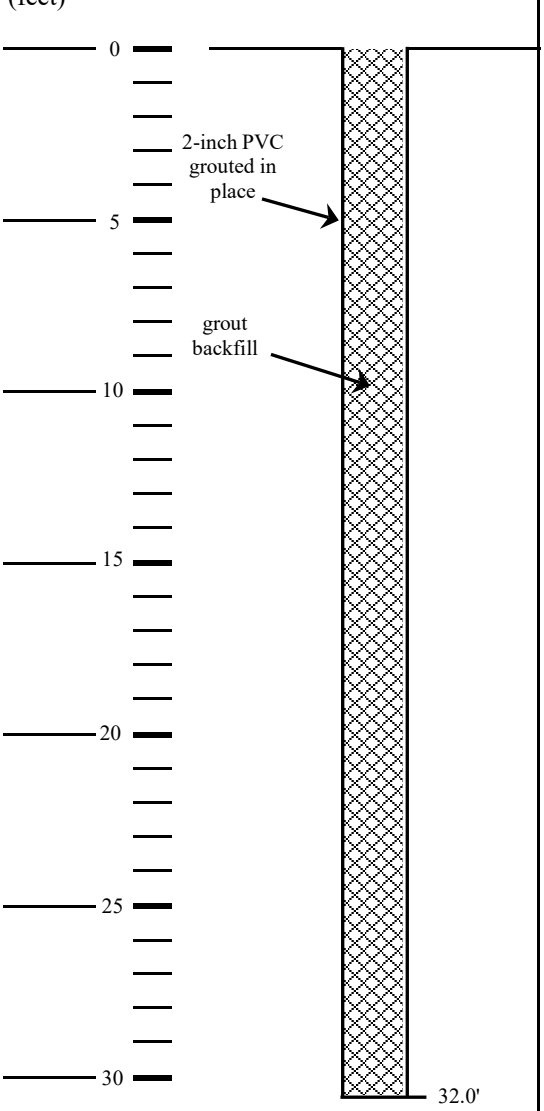
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **MW-19**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 32'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	15

WELL SCHEMATIC*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

COMMENTS:

Drilling Contractor

Department Representative

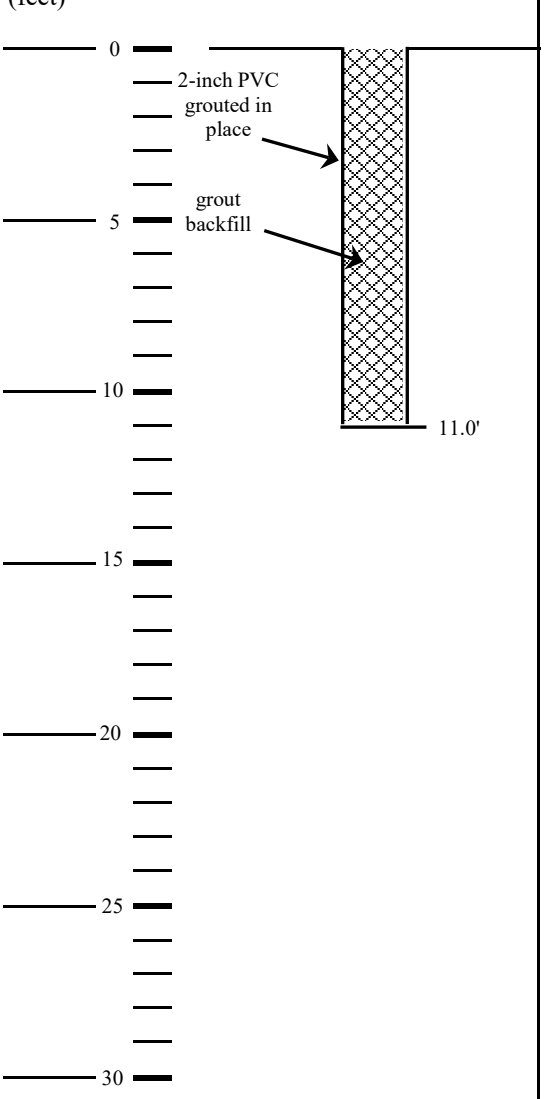
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **MW-20**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 11'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	5

WELL SCHEMATIC*



COMMENTS:

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

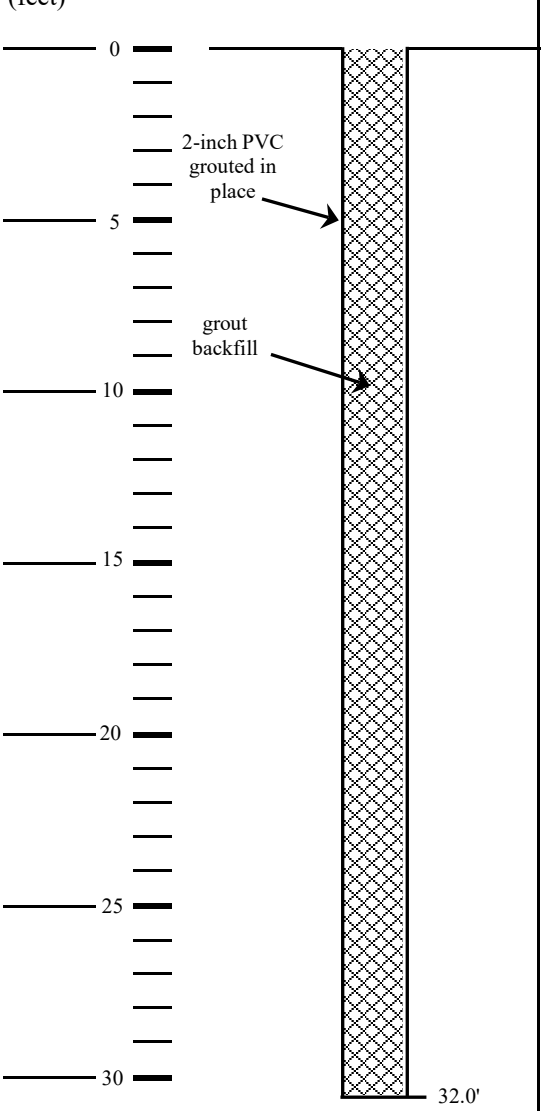
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **MW-32**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 32'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	15

WELL SCHEMATIC*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

COMMENTS:

Drilling Contractor

Department Representative

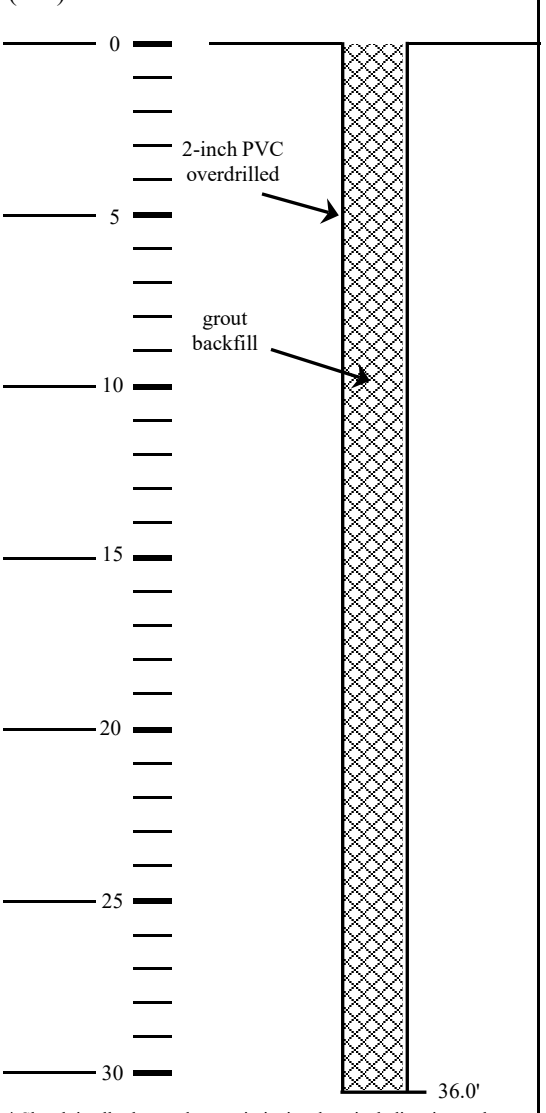
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **MW-34**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **6/1/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	0 - 36'
Drilling Method(s)	HSA
Borehole Dia. (in.)	8.25"
Temporary Casing Installed? (y/n)	N
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 36'
# of batches prepared	2
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	80
Volume of grout used (gal.)	50

WELL SCHEMATIC*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

COMMENTS:

Drilling Contractor

Department Representative

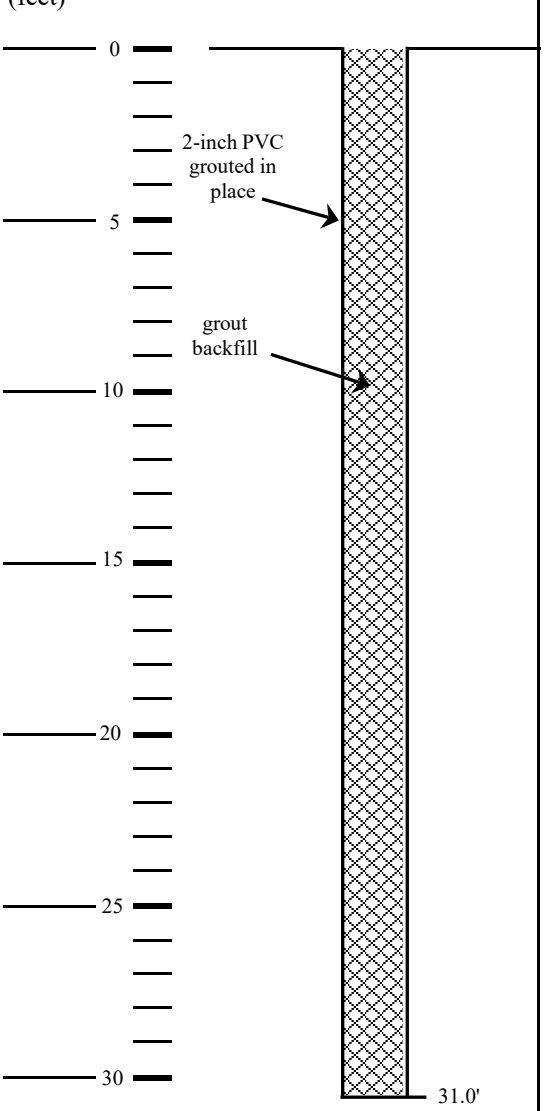
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **PZ-1**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 31'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	15

WELL SCHEMATIC*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

COMMENTS:

Drilling Contractor

Department Representative

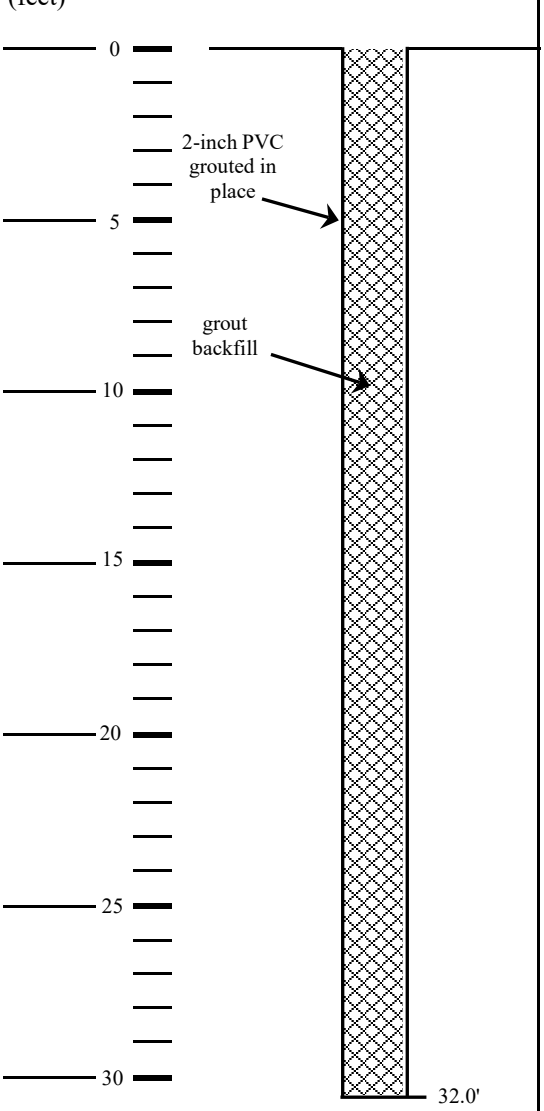
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **PZ-7**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 32'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	15

WELL SCHEMATIC*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

COMMENTS:

Drilling Contractor

Department Representative

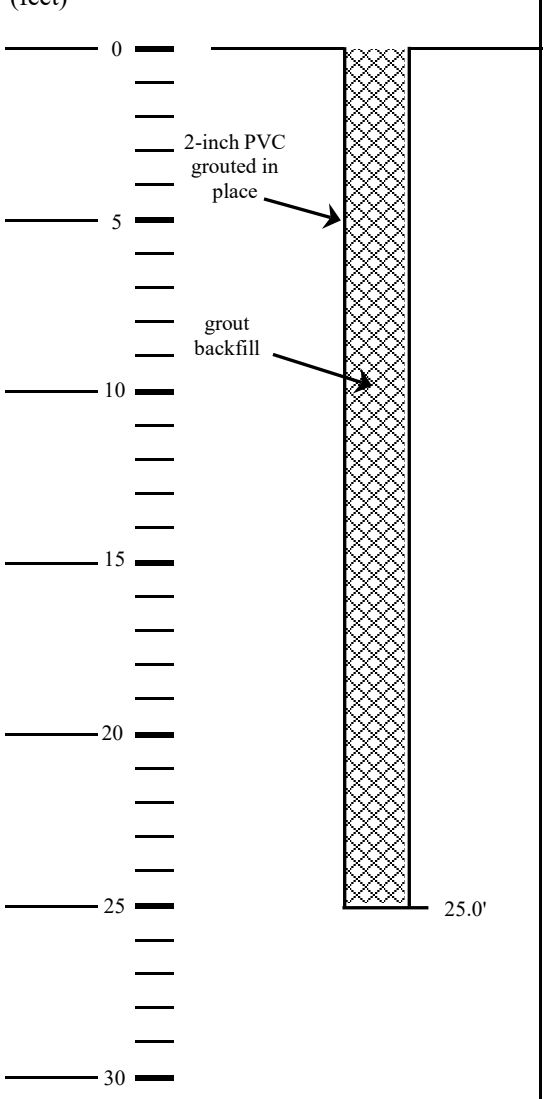
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **PZ-15a**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 25'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	10

WELL SCHEMATIC*



COMMENTS:

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

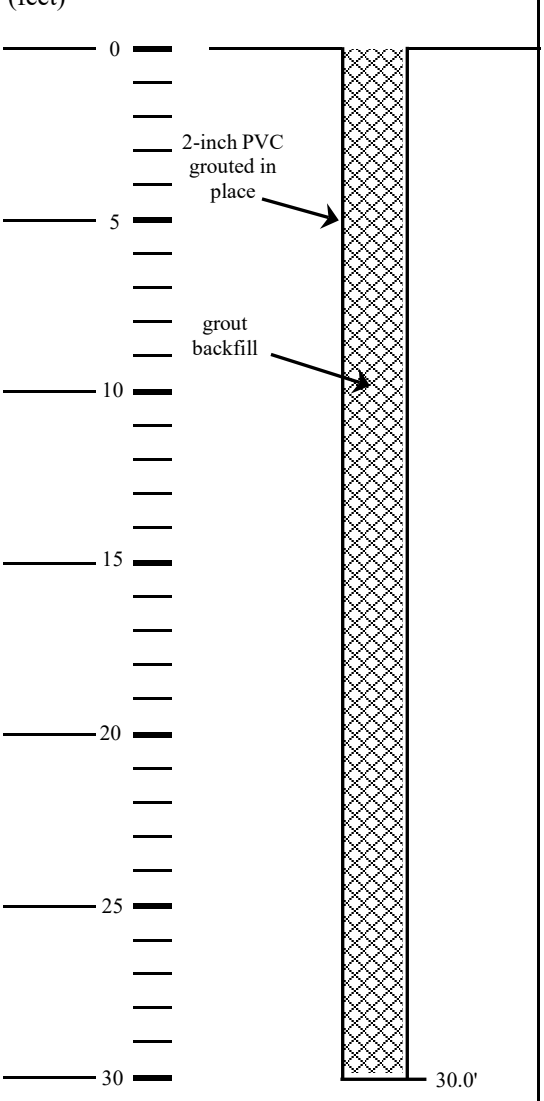
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **PZ-15b**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 30'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	15

WELL SCHEMATIC*



COMMENTS:

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

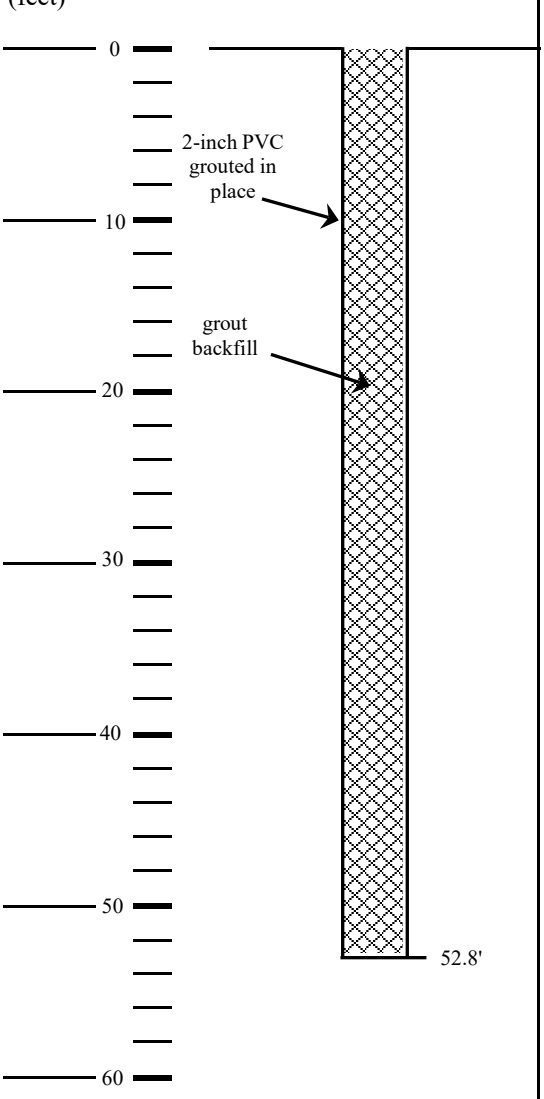
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **PZ-15c**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 52.8'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	10

WELL SCHEMATIC*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

COMMENTS:

Drilling Contractor

Department Representative

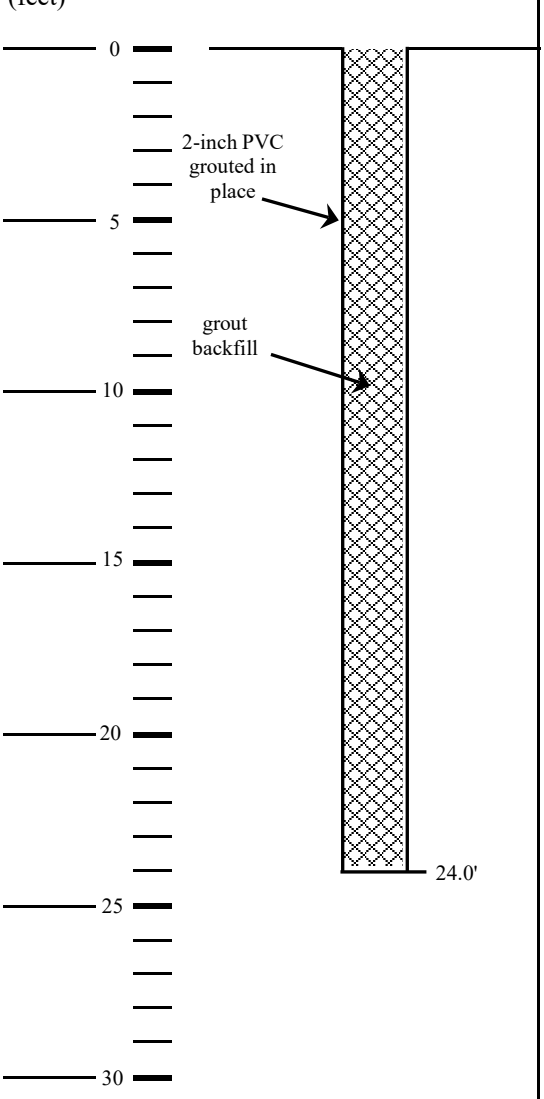
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **PZ-16a**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **6/3/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 24'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	10

WELL SCHEMATIC*



COMMENTS:

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

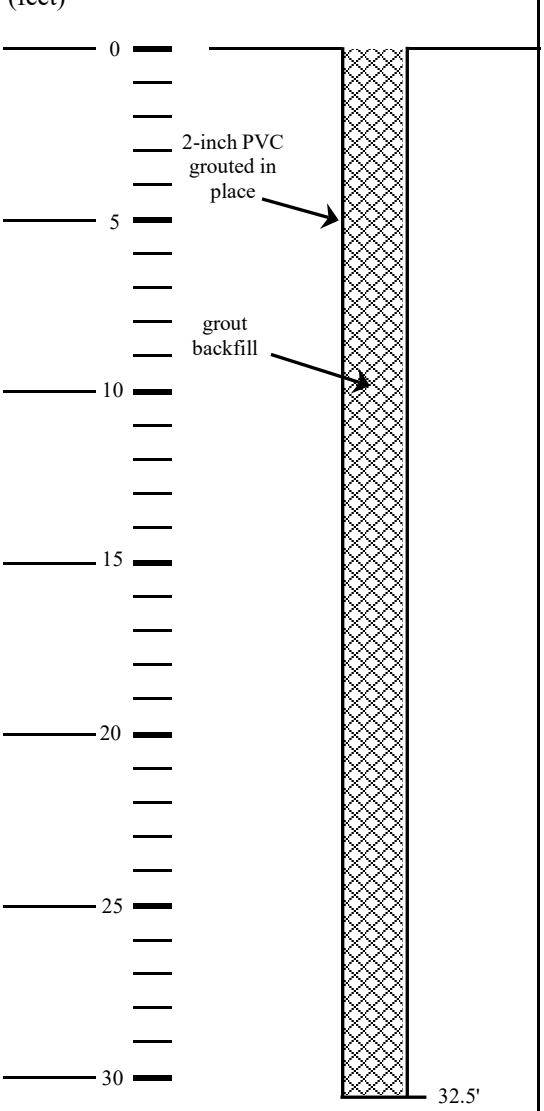
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **PZ-16b**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **6/3/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 32.5'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	15

WELL SCHEMATIC*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

COMMENTS:

Drilling Contractor

Department Representative

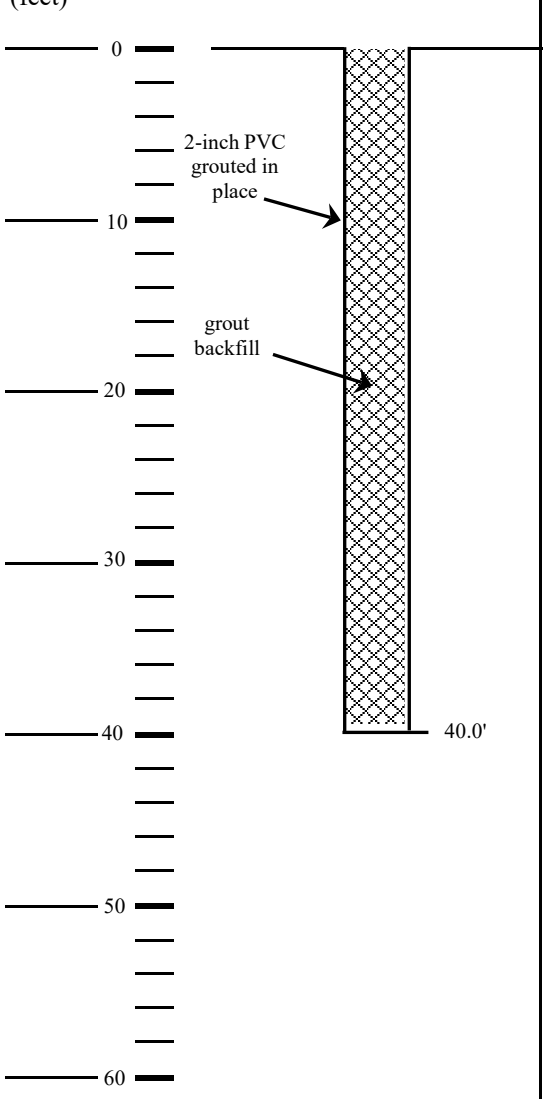
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **PZ-16c**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **6/3/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 40'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	20

WELL SCHEMATIC*



COMMENTS:

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

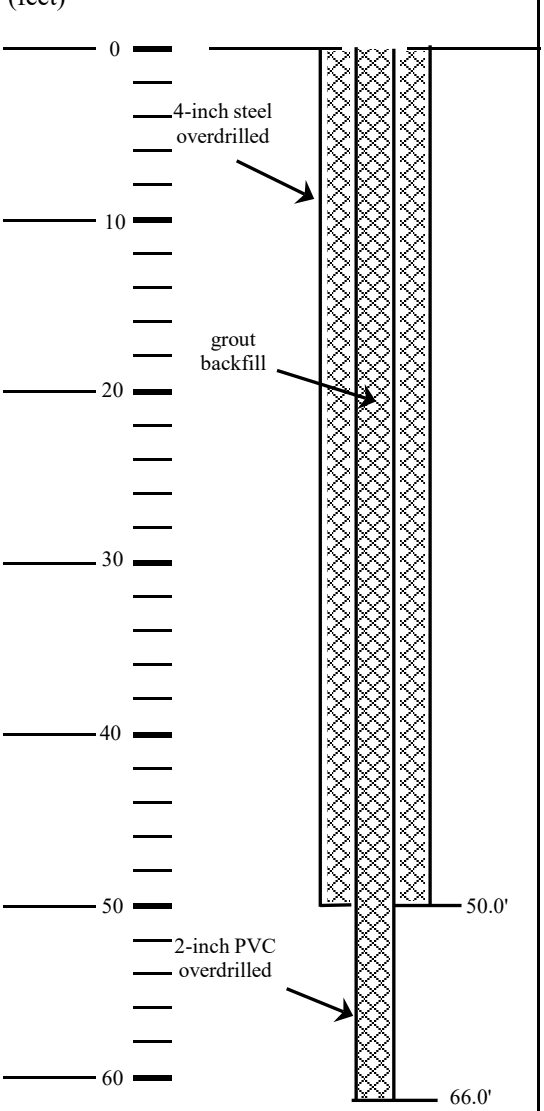
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **PZ-16d**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **6/2/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	0 - 66'
Drilling Method(s)	FR / HSA
Borehole Dia. (in.)	3.8" / 10.25"
Temporary Casing Installed? (y/n)	N
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	Pull
Casing retrieved (feet)	50.0'
Casing type/dia. (in)	Steel / 4"
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 66'
# of batches prepared	2
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	80
Volume of grout used (gal.)	80

WELL SCHEMATIC*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

COMMENTS:

Drilling Contractor

Department Representative

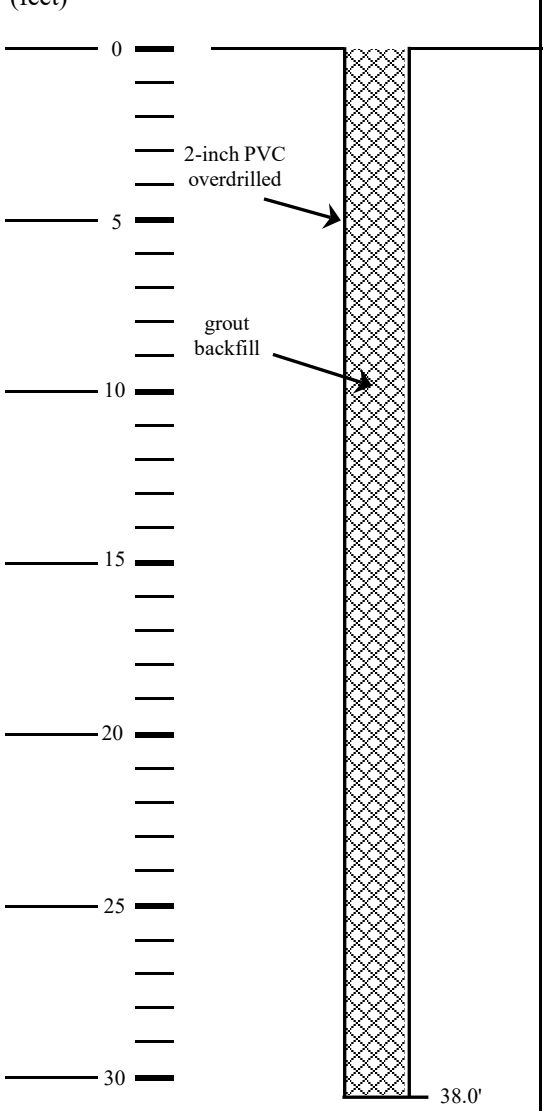
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **PZ-17a**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/25/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	0 - 38'
Drilling Method(s)	HSA
Borehole Dia. (in.)	8.25"
Temporary Casing Installed? (y/n)	N
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 38'
# of batches prepared	2
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	80
Volume of grout used (gal.)	40

WELL SCHEMATIC*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

COMMENTS:

Drilling Contractor

Department Representative

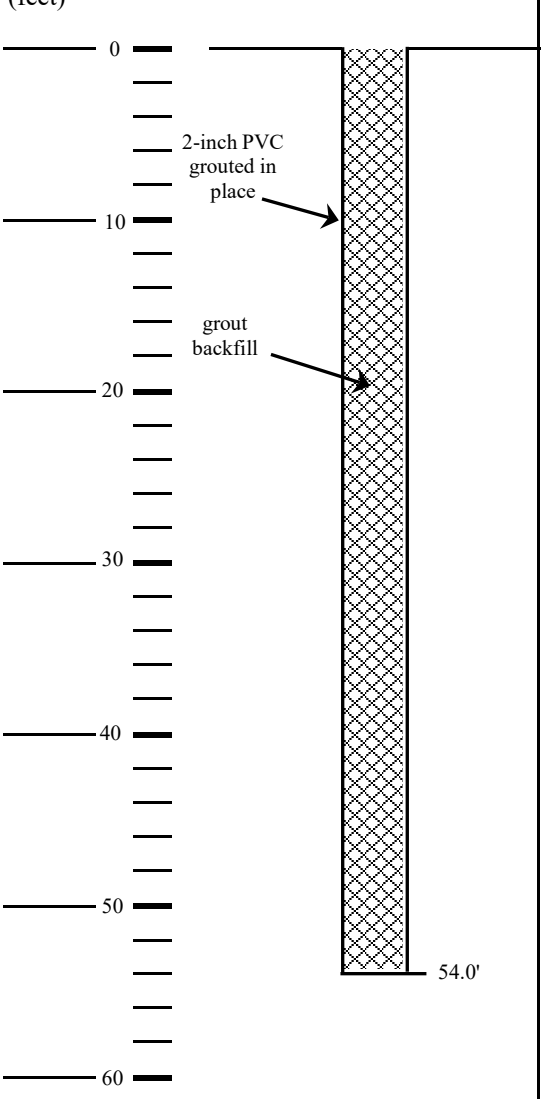
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **PZ-17b**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/25/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 54'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	20

WELL SCHEMATIC*



COMMENTS:

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

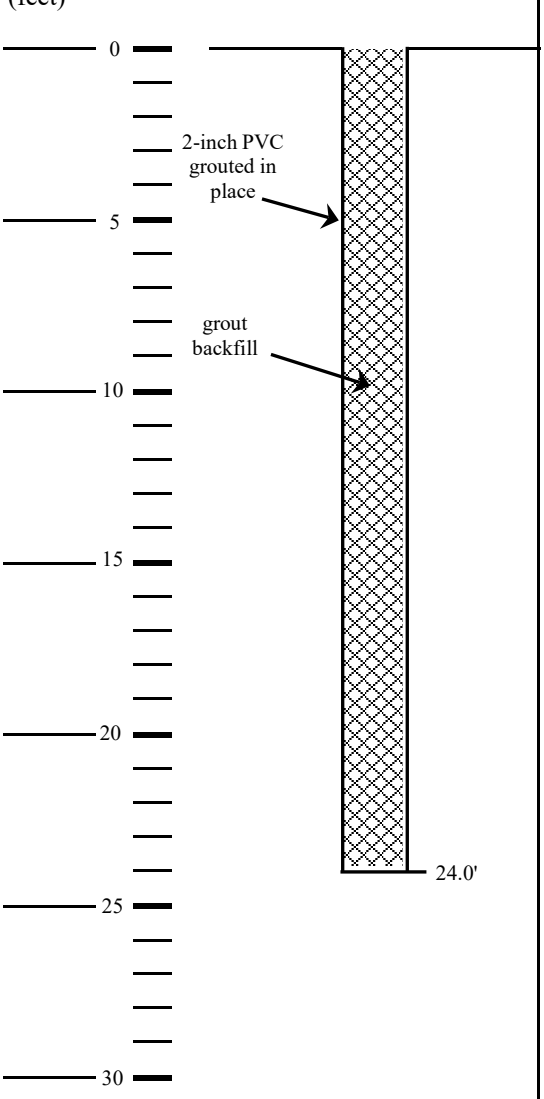
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **PZ-20**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 24'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	15

WELL SCHEMATIC*



COMMENTS:

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

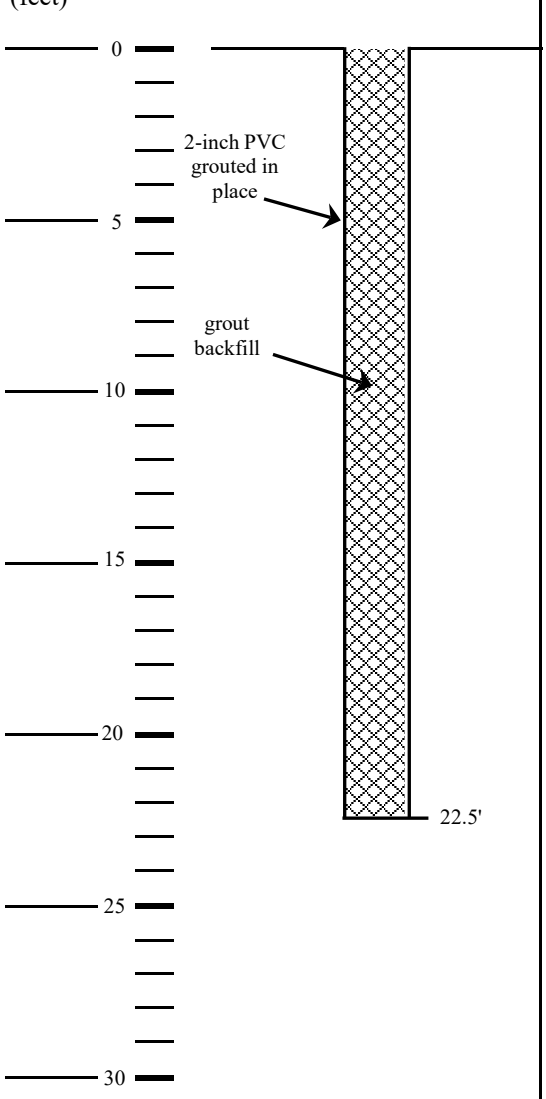
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **PZ-21**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 22.5'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	10

WELL SCHEMATIC*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

COMMENTS:

Drilling Contractor

Department Representative

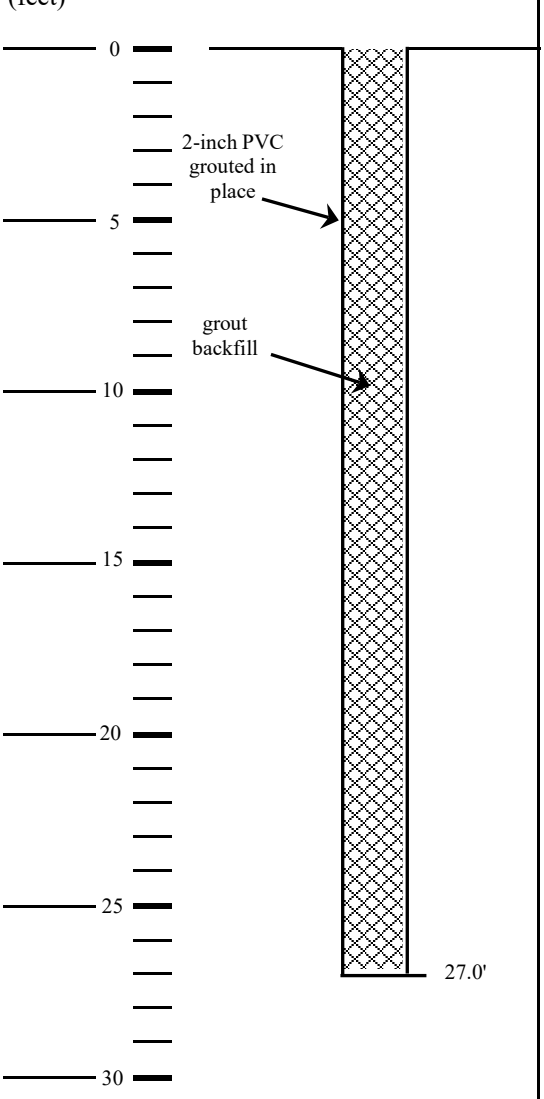
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **PZ-22a**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 27'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	12

WELL SCHEMATIC*



COMMENTS:

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

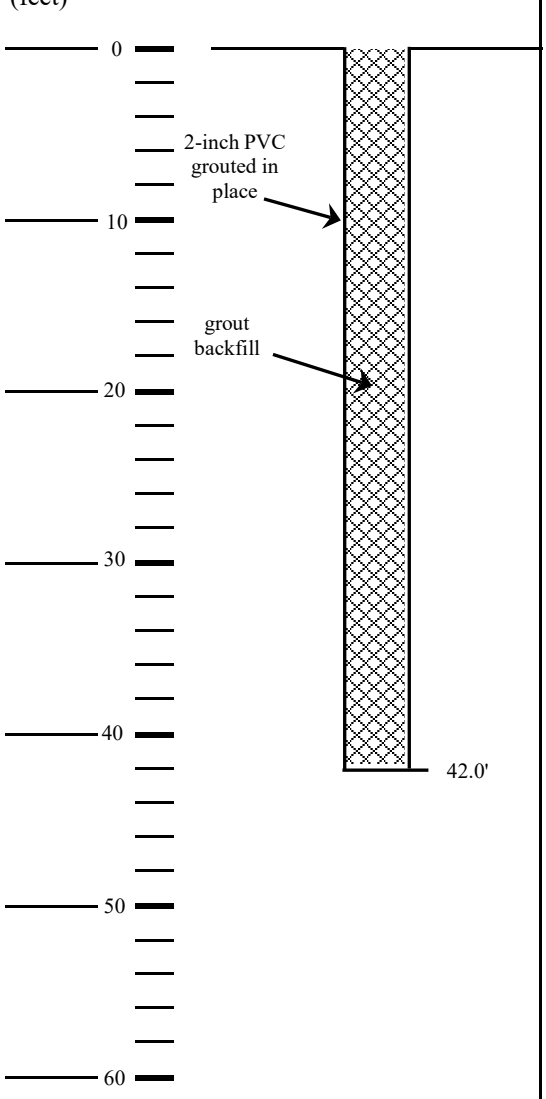
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **PZ-22b**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 42'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	20

WELL SCHEMATIC*



COMMENTS:

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

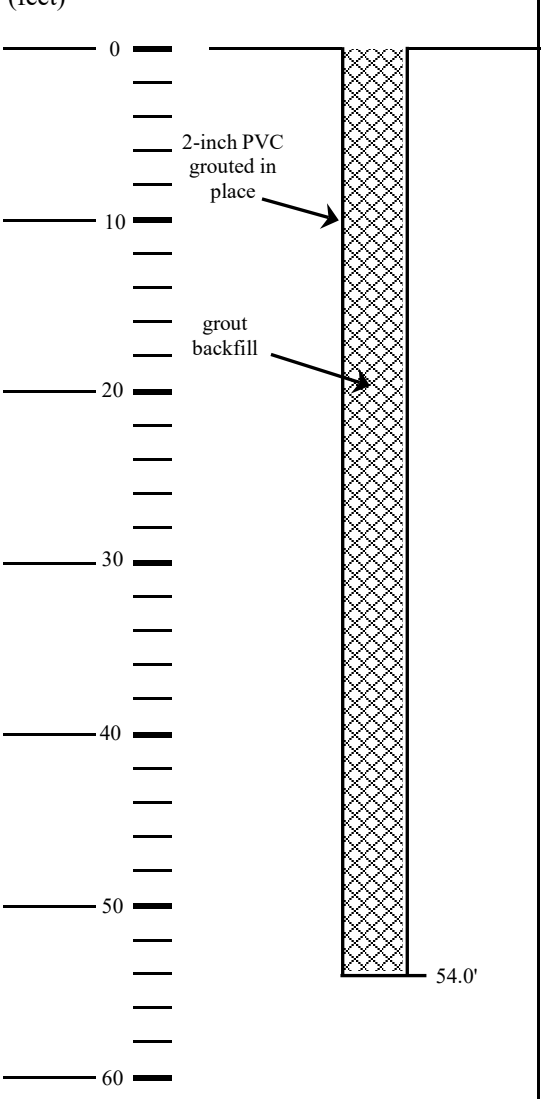
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **PZ-22c**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 54'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	25

WELL SCHEMATIC*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

COMMENTS:

Drilling Contractor

Department Representative

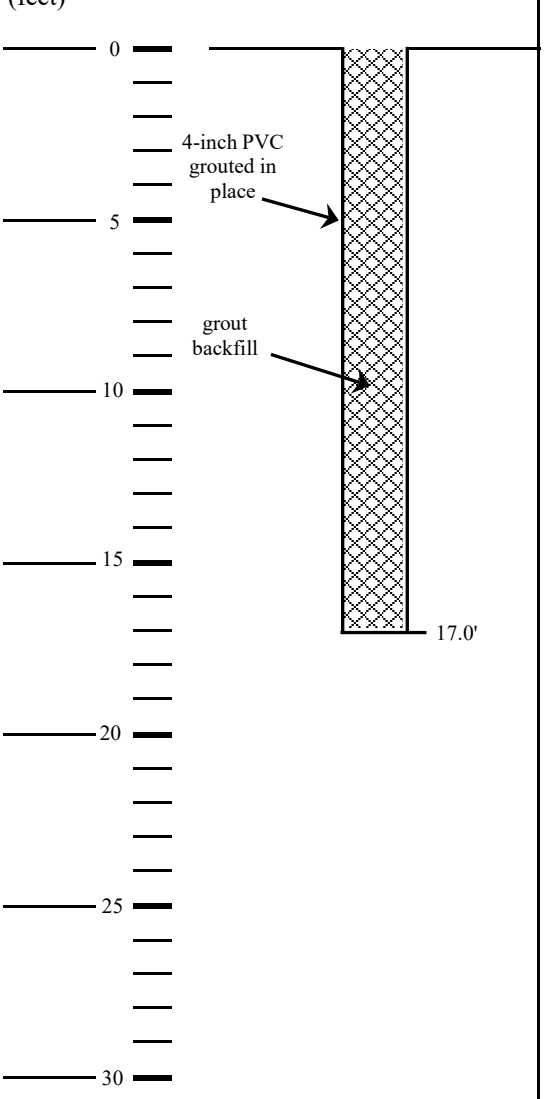
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **RW-1**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **5/24/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	NA
Drilling Method(s)	NA
Borehole Dia. (in.)	NA
Temporary Casing Installed? (y/n)	NA
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 17'
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	40
Volume of grout used (gal.)	15

WELL SCHEMATIC*



COMMENTS:

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

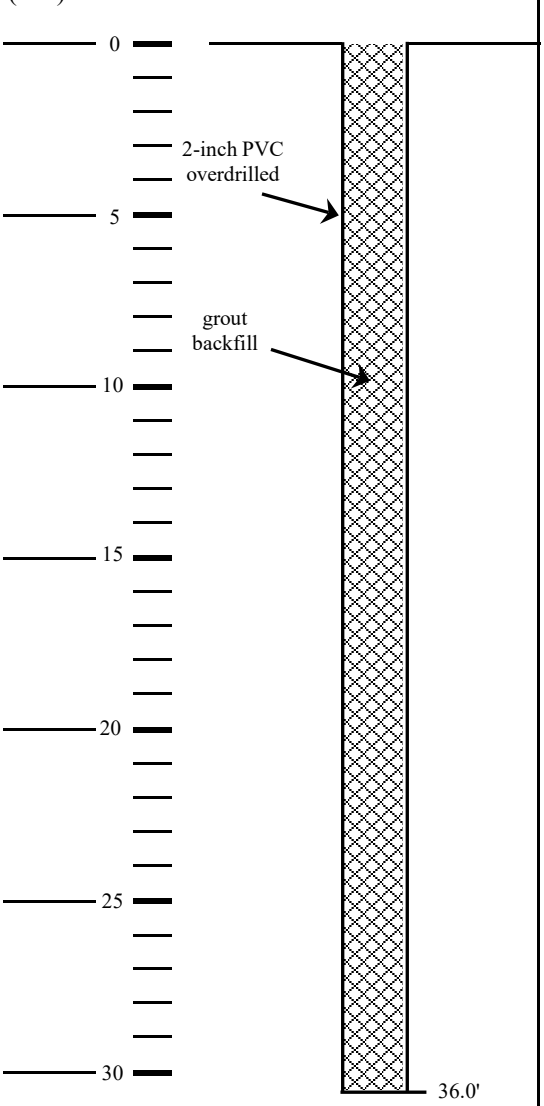
FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: **Troy (Water Street) MGP Site**	Well I.D.: **MW-33**
Site Location: **Troy, New York**	Driller: **Jolaan Price**
Drilling Co.: **Parratt-Wolff, Inc.**	Inspector:
	Date: **6/3/22**

DECOMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	0 - 36'
Drilling Method(s)	HSA
Borehole Dia. (in.)	8.25"
Temporary Casing Installed? (y/n)	N
Depth temporary casing installed	NA
Casing type/dia. (in.)	NA
Method of installing	NA
CASING PULLING	
Method employed	NA
Casing retrieved (feet)	NA
Casing type/dia. (in)	NA
CASING PERFORATING	
Equipment used	NA
Number of perforations/foot	NA
Size of perforations	NA
Interval perforated	NA
GROUTING	
Interval grouted (FBLS)	0 - 36'
# of batches prepared	2
For each batch record:	
Quantity of water used (gal.)	32
Quantity of cement used (lbs.)	376
Cement type	Portland I/II
Quantity of bentonite used (lbs.)	16
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	80
Volume of grout used (gal.)	54

WELL SCHEMATIC*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

COMMENTS:

Drilling Contractor

Department Representative

Appendix E-2: Area 3 Monitoring Well Decommissioning Records

Attachment A

SITE NAME:

SITE ID.: _____
INSPECTOR: _____
DATE/TIME: 10/21/21
WELL ID.: MW-1S

MONITORING WELL FIELD INSPECTION LOG
NYSDEC WELL DECOMMISSIONING PROGRAM

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL: _____

	YES	NO
SURFACE SEAL PRESENT?	X	
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)	X	
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED: 0
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable): Stickup 2'1"
PROTECTIVE CASING MATERIAL TYPE: Steel
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): 5"

	YES	NO
LOCK PRESENT?	X	
LOCK FUNCTIONAL?	X	
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes,describe below)		X
WELL MEASURING POINT VISIBLE?	X	

MEASURE WELL DEPTH FROM MEASURING POINT (Feet): 20.05
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet): N/A
MEASURE WELL DIAMETER (Inches): 2
WELL CASING MATERIAL: PVC
PHYSICAL CONDITION OF VISIBLE WELL CASING: Good. Bent.
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE: N/A
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES: 10' south of Sewer

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.

Private open lot, fence surrounds lot, Key needed for access

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.

Private open lot

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):

located on M&P site

REMARKS:

Attachment B

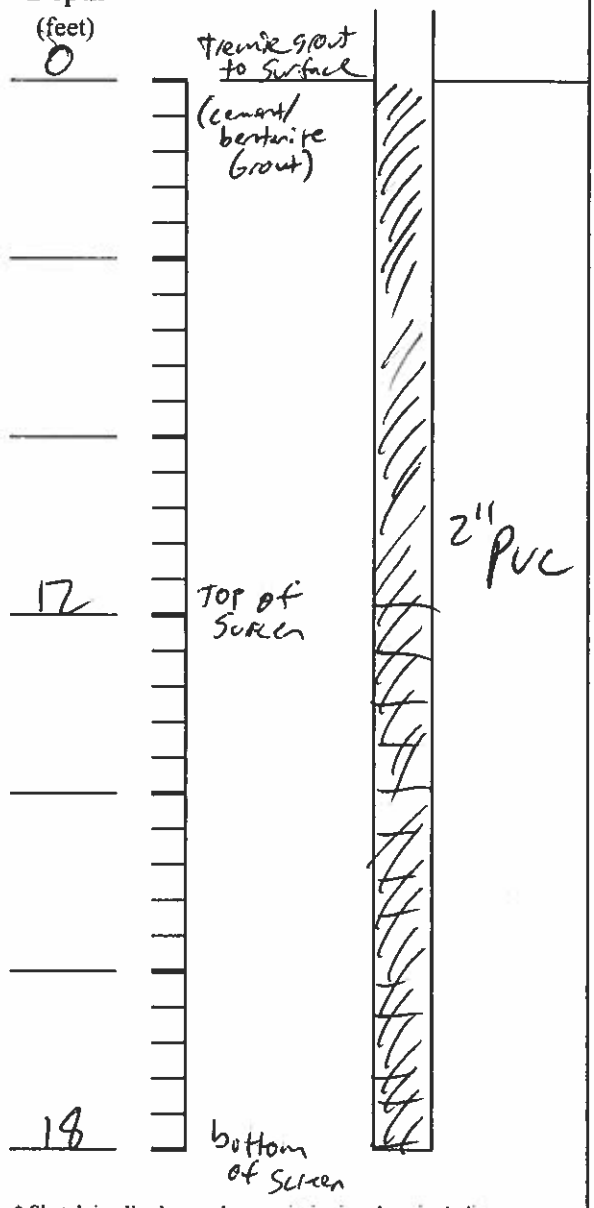
WELL DECOMMISSIONING RECORD

Site Name: NG Troy	Well I.D.: MW-1S
Site Location: Troy NY	Driller: Ian Grassie
Drilling Co.: Parratt Wolff	Inspector: Patrick Price (BC)
	Date: 10/21/21

DECOMMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	
Drilling Method(s)	
Borehole Dia. (in.)	
Temporary Casing Installed? (y/n)	
Depth temporary casing installed	
Casing type/dia. (in.)	
Method of installing	
CASING PULLING	
Method employed	Excavator
Casing retrieved (feet)	5'
Casing type/dia. (in)	2" PVC
CASING PERFORATING	
Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	
GROUTING	
Interval grouted (FBLS)	18-0
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	6
Quantity of cement used (lbs.)	79
Cement type	Portland
Quantity of bentonite used (lbs.)	3
Quantity of calcium chloride used (lbs.)	N/A
Volume of grout prepared (gal.)	8
Volume of grout used (gal.)	8

WELL SCHEMATIC*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

COMMENTS: Tremie Grout in place
2" PVC

PW INC.

Drilling Contractor

Department Representative

Attachment A

SITE NAME:

SITE ID.:
INSPECTOR:
DATE/TIME: 10/21/11
WELL ID.: MW-15 REP

MONITORING WELL FIELD INSPECTION LOG
NYSDEC WELL DECOMMISSIONING PROGRAM

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL:

	YES	NO
SURFACE SEAL PRESENT?	X	
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)	X	
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED: 0
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable): Stick up 2'4"
PROTECTIVE CASING MATERIAL TYPE: Galvanized Steel
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): 4

	YES	NO
LOCK PRESENT?	X	
LOCK FUNCTIONAL?	X	
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes,describe below)		X
WELL MEASURING POINT VISIBLE?	X	

MEASURE WELL DEPTH FROM MEASURING POINT (Feet): 25.07
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet): 21.07
MEASURE WELL DIAMETER (Inches): 2
WELL CASING MATERIAL: PVC
PHYSICAL CONDITION OF VISIBLE WELL CASING: Good
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE: N/A
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES: ~~N/A~~ 20' South of Sewer line

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.
Private open lot. Fencing surrounds lot. Key needed for access

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.
Private open lot

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):
located on MGP site

REMARKS:

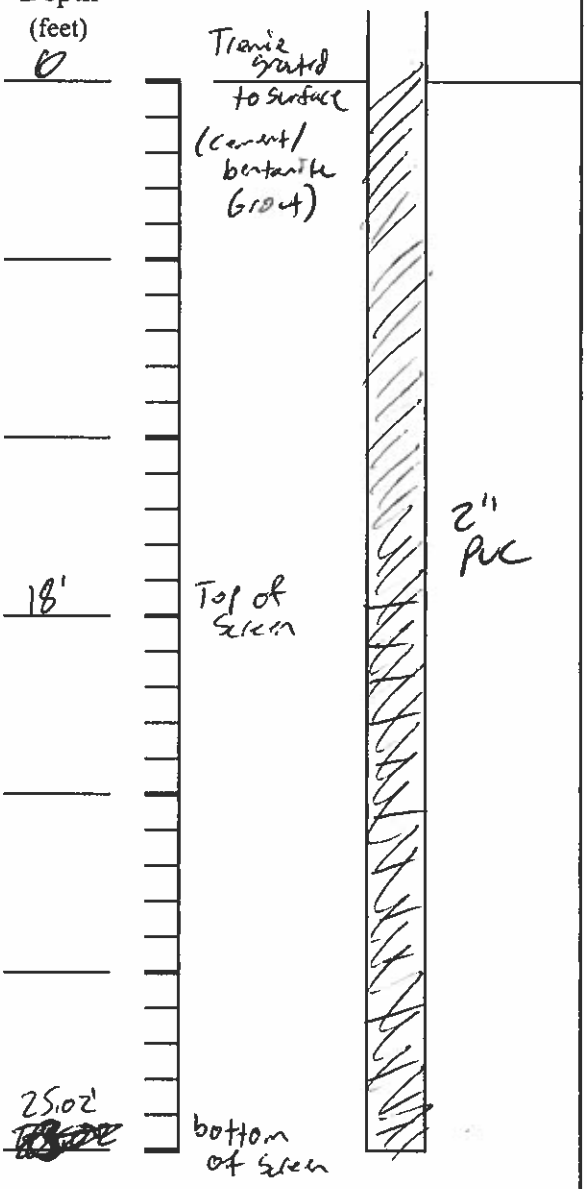
WELL DECOMMISSIONING RECORD

Site Name: NG Troy	Well I.D.: MW-15 REP
Site Location: Troy NY	Driller: IAN Grassie
Drilling Co.: Parratt Wolff	Inspector: Patrick Price (BC)
	Date: 10/21/21

DECOMMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	
Drilling Method(s)	
Borehole Dia. (in.)	
Temporary Casing Installed? (y/n)	
Depth temporary casing installed	
Casing type/dia. (in.)	
Method of installing	
CASING PULLING	
Method employed	Excavator
Casing retrieved (feet)	5'
Casing type/dia. (in)	2" PVC
CASING PERFORATING	
Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	
GROUTING	
Interval grouted (FBLS)	25.02 - 0
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	6
Quantity of cement used (lbs.)	94
Cement type	Portland
Quantity of bentonite used (lbs.)	3
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	10
Volume of grout used (gal.)	10

WELL SCHEMATIC*



COMMENTS: Tremie Grout in Place 2" PVC

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor PW Inc.

Department Representative

Attachment A

SITE NAME:

SITE ID.: _____
INSPECTOR: _____
DATE/TIME: 10/21/21
WELL ID.: MW-10

MONITORING WELL FIELD INSPECTION LOG
NYSDEC WELL DECOMMISSIONING PROGRAM

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL: _____

	YES	NO
SURFACE SEAL PRESENT?	X	
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)	X	
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED	0
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable)	Stickup 2' 11"
PROTECTIVE CASING MATERIAL TYPE:	Steel
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches):	5"

	YES	NO
LOCK PRESENT?	X	
LOCK FUNCTIONAL?	X	
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes,describe below)		X
WELL MEASURING POINT VISIBLE?	X	

MEASURE WELL DEPTH FROM MEASURING POINT (Feet):	31.62
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet):	21.2
MEASURE WELL DIAMETER (Inches):	2
WELL CASING MATERIAL:	PVC
PHYSICAL CONDITION OF VISIBLE WELL CASING:	Good
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE	NA
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES	20' south from sewer

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.

Private open lot. Fence surrounding lot requires Key for access

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.

Private open lot

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):

located on MGP site

REMARKS:

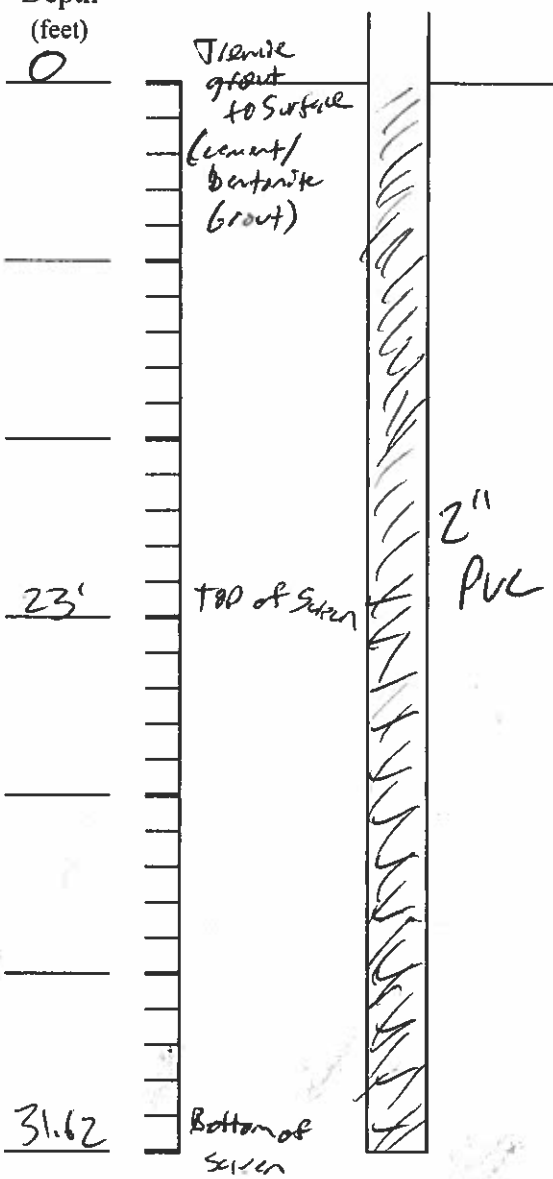
WELL DECOMMISSIONING RECORD

Site Name: NG Troy	Well I.D.: MW-1D
Site Location: Troy NY	Driller: Ian Grassie
Drilling Co.: Parratt Wolff	Inspector: Patrick Price
	Date: 10/21/21

DECOMMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	
Drilling Method(s)	
Borehole Dia. (in.)	
Temporary Casing Installed? (y/n)	
Depth temporary casing installed	
Casing type/dia. (in.)	
Method of installing	
CASING PULLING	
Method employed	Excavator
Casing retrieved (feet)	5'
Casing type/dia. (in)	2" PVC
CASING PERFORATING	
Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	
GROUTING	
Interval grouted (FBLS)	31.62 - 0
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	6
Quantity of cement used (lbs.)	94
Cement type	Portland
Quantity of bentonite used (lbs.)	3
Quantity of calcium chloride used (lbs.)	NA
Volume of grout prepared (gal.)	10
Volume of grout used (gal.)	10

WELL SCHEMATIC*



COMMENTS: Tremie Grout in Place
2" PVC

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

P.W. Inc.

Drilling Contractor

Department Representative

Attachment A

SITE NAME:

SITE ID.: _____
INSPECTOR: _____
DATE/TIME: 10/21/24
WELL ID.: MW-4

MONITORING WELL FIELD INSPECTION LOG
NYSDEC WELL DECOMMISSIONING PROGRAM

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL: _____

	YES	NO
SURFACE SEAL PRESENT?	X	
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)	X	
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED	0
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable)	8" Steel Stickup
PROTECTIVE CASING MATERIAL TYPE:	Steel
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches):	7"

	YES	NO
LOCK PRESENT?	X	
LOCK FUNCTIONAL?	X	
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes,describe below)		X
WELL MEASURING POINT VISIBLE?	X	

MEASURE WELL DEPTH FROM MEASURING POINT (Feet):	24.4
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet):	19.7
MEASURE WELL DIAMETER (Inches):	4
WELL CASING MATERIAL:	PVC
PHYSICAL CONDITION OF VISIBLE WELL CASING:	Good
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE	N/A
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES	Sewer 10' South

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.

Private open lot, Fence surrounding lot, Key needed for access

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.

Private open lot

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):

located on MGP site

REMARKS:

Attachment B

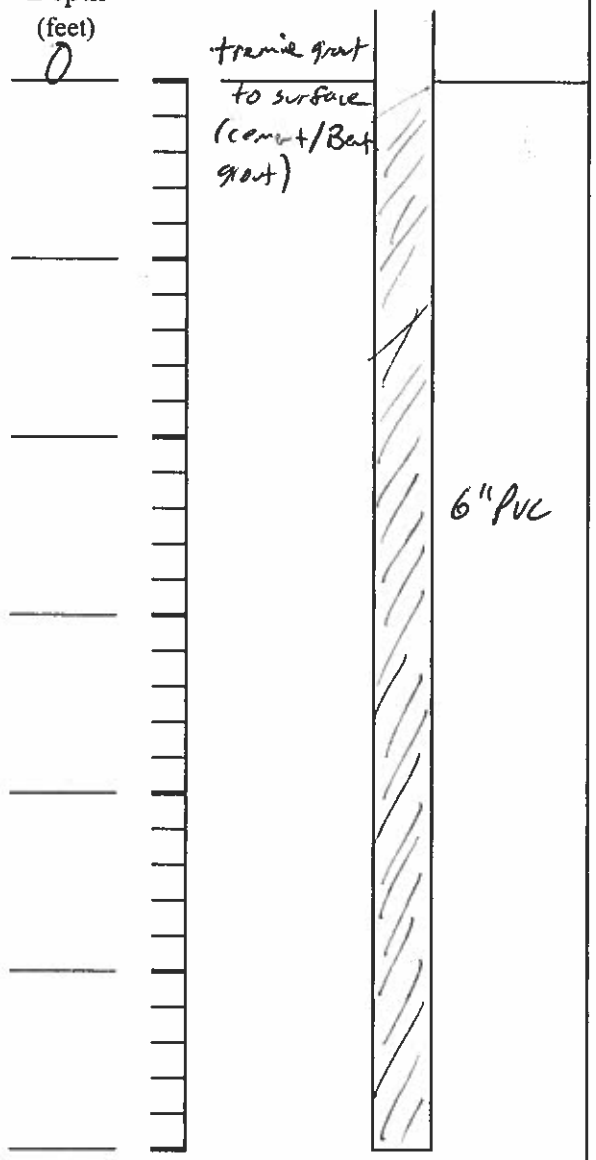
WELL DECOMMISSIONING RECORD

Site Name: NG Troy	Well I.D.: MW-4
Site Location: Troy NY	Driller: Ian Grassie
Drilling Co.: Prucatt Wolf	Inspector: Patrick Price CBC
	Date: 10/21/21

DECOMMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	
Drilling Method(s)	
Borehole Dia. (in.)	
Temporary Casing Installed? (y/n)	
Depth temporary casing installed	
Casing type/dia. (in.)	
Method of installing	
CASING PULLING	
Method employed	Excavator
Casing retrieved (feet)	5'
Casing type/dia. (in)	6" PVC
CASING PERFORATING	
Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	
GROUTING	
Interval grouted (FBLS)	24.5'-0
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	12
Quantity of cement used (lbs.)	188
Cement type	5# Portland
Quantity of bentonite used (lbs.)	5
Quantity of calcium chloride used (lbs.)	N/A
Volume of grout prepared (gal.)	23gal
Volume of grout used (gal.)	23

WELL SCHEMATIC*



COMMENTS: Tremie Grout in Place
6" PVC

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

PW INC.

Drilling Contractor

Department Representative

Attachment A

SITE NAME:

SITE ID.:
INSPECTOR:
DATE/TIME: 10/21/21
WEll ID.: MW-5s

MONITORING WELL FIELD INSPECTION LOG
NYSDEC WELL DECOMMISSIONING PROGRAM

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL:

	YES	NO
SURFACE SEAL PRESENT?	X	
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)	X	
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED: 7 ppm miniRAE 3000
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable): Stick up 2.05'
PROTECTIVE CASING MATERIAL TYPE: Galvanized Steel
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches):

	YES	NO
LOCK PRESENT?	X	
LOCK FUNCTIONAL?	X	
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes,describe below)		X
WELL MEASURING POINT VISIBLE?	X	

MEASURE WELL DEPTH FROM MEASURING POINT (Feet):	25.4
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet):	20
MEASURE WELL DIAMETER (Inches):	2
WELL CASING MATERIAL:	PVC
PHYSICAL CONDITION OF VISIBLE WELL CASING:	Good
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE	N/A
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES	N/A

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.
Private open lot. Fencing surrounds lot. Key required for entry.

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.
Private open lot

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):
located on MGP site

REMARKS:

Attachment B

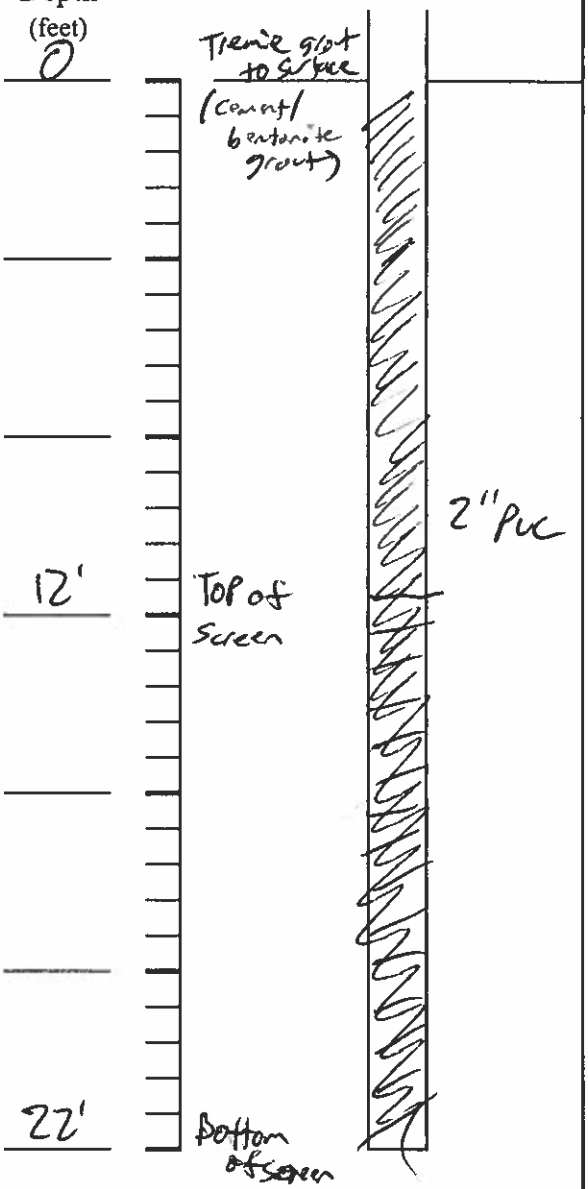
WELL DECOMMISSIONING RECORD

Site Name: NG Troy	Well I.D.: MW-5S
Site Location: Troy NY	Driller: Ian Grassie
Drilling Co.: Pratt Wolff	Inspector: Patrick Price (BC)
	Date: 10/21/21

DECOMMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	
Drilling Method(s)	
Borehole Dia. (in.)	
Temporary Casing Installed? (y/n)	
Depth temporary casing installed	
Casing type/dia. (in.)	
Method of installing	
CASING PULLING	
Method employed	Excavator
Casing retrieved (feet)	5'
Casing type/dia. (in)	PVC 2"
CASING PERFORATING	
Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	
GROUTING	
Interval grouted (FBLS)	25.4-0
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	4
Quantity of cement used (lbs.)	62
Cement type	Portland
Quantity of bentonite used (lbs.)	4
Quantity of calcium chloride used (lbs.)	N/A
Volume of grout prepared (gal.)	6 gal
Volume of grout used (gal.)	6 gal

WELL SCHEMATIC*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

COMMENTS: Tremie Grout in place
2" PVC

P.W. Inc.
Drilling Contractor

Department Representative

Attachment A

SITE NAME:

SITE ID.:
INSPECTOR:
DATE/TIME: 10/21/2(
WELL ID.: MW-SD

MONITORING WELL FIELD INSPECTION LOG
NYSDEC WELL DECOMMISSIONING PROGRAM

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL:

	YES	NO
SURFACE SEAL PRESENT?	X	
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)	X	
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED: MiniRAE 3000 0ppm
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable): 2'3" Galvanized Steel Stickup
PROTECTIVE CASING MATERIAL TYPE: Galvanized Steel
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches):

	YES	NO
LOCK PRESENT?	X	
LOCK FUNCTIONAL?	X	
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes,describe below)		X
WELL MEASURING POINT VISIBLE?	X	

MEASURE WELL DEPTH FROM MEASURING POINT (Feet): 40.65
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet): 25.64
MEASURE WELL DIAMETER (Inches): 2
WELL CASING MATERIAL: PVC
PHYSICAL CONDITION OF VISIBLE WELL CASING: Good
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE: N/A
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES: N/A

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.
Private open lot. Fencing surrounds lot.

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.
Private open lot

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):
located on MGP site

REMARKS:

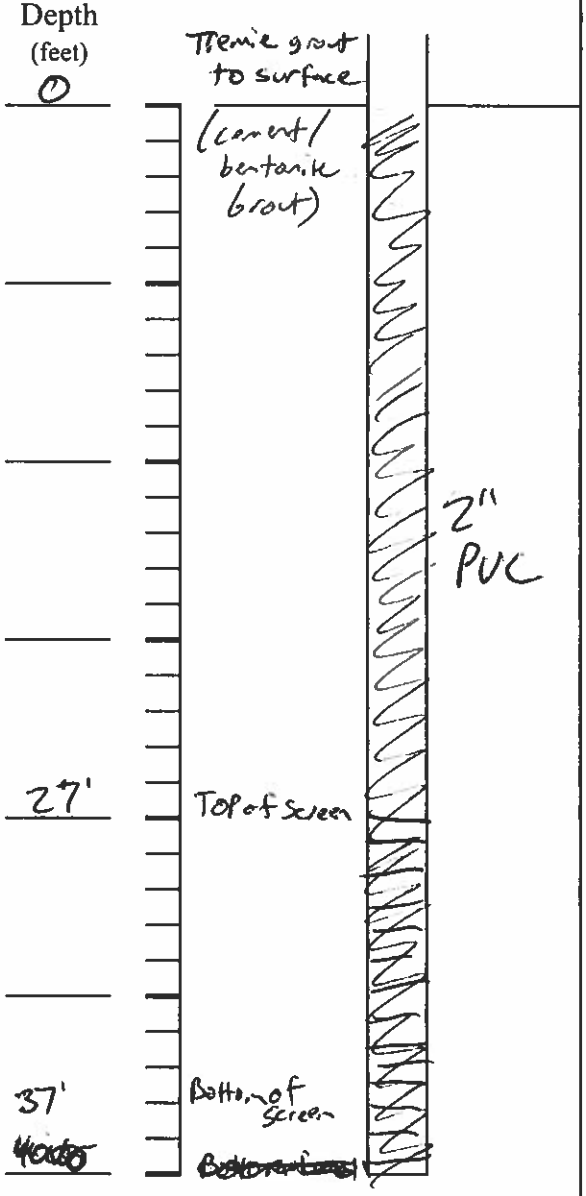
WELL DECOMMISSIONING RECORD

Site Name: NG Troy	Well I.D.: MW-5D
Site Location: Troy NY	Driller: Jan Grassie
Drilling Co.: Parratt Wolff	Inspector: Patrick Price (BC)
	Date: 10/21/11

DECOMMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	
Drilling Method(s)	
Borehole Dia. (in.)	
Temporary Casing Installed? (y/n)	
Depth temporary casing installed	
Casing type/dia. (in.)	
Method of installing	
CASING PULLING	
Method employed	Excavator
Casing retrieved (feet)	5'
Casing type/dia. (in)	2" PVC
CASING PERFORATING	
Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	
GROUTING	
Interval grouted (FBLS)	37-0
# of batches prepared	1
For each batch record:	
Quantity of water used (gal.)	6
Quantity of cement used (lbs.)	94
Cement type	Portland
Quantity of bentonite used (lbs.)	3
Quantity of calcium chloride used (lbs.)	N/A
Volume of grout prepared (gal.)	10.0 gal
Volume of grout used (gal.)	10 gal

WELL SCHEMATIC*



COMMENTS:	Tremie grout in Place
	2" PVC

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor: PW. INC.

Department Representative

Appendix F: Community Air Monitoring Reports and Data (submitted as separate files)

Appendix G: Vibration, Settlement, and Crack Monitoring Reports (submitted as separate files)

Appendix G-1: Pre-Construction Assessment

Appendix G-2: Existing Site Damages

Appendix G-3: Post Construction Assessment

Appendix G-4: Vibration Monitoring Results

Appendix G-5: Settlement Monitoring Results

Appendix G-6: Crack Monitoring Logs

Appendix H: Fill Material Documentation (submitted as separate files)

Appendix H-1: Area 2 Imported Fill Summary Table
Appendix H-2: Area 3 Imported Fill Summary Table
Appendix H-3: Common Fill Request to Import Round 1
Appendix H-4: Common Fill Request to Import Round 2
Appendix H-5: Common Fill Delivery Tickets
Appendix H-6: No. 2 Crushed Stone Request to Import
Appendix H-7: No. 2 Crushed Stone Delivery Tickets
Appendix H-8: No. 3 Crushed Stone Request to Import Round 1
Appendix H-9: No. 3 Crushed Stone Request to Import Round 2
Appendix H-10: No. 3 Crushed Stene Delivery Tickets
Appendix H-11: Subbase Stone (Crusher Run) Request to Import Round 1
Appendix H-12: Subbase Stone (Crusher Run) Request to Import Round 1
Appendix H-13: Subbase Stone (Crusher Run) Delivery Tickets

Appendix I: Waste Characterization Results (submitted as separate files)

Appendix I-1: 06/01/2022 Area 3

Appendix I-2: 06/15/2022 Area 2 and Area 3

Appendix I-3: 07/22/2022 Area 2

Appendix I-4: 08/10/2022 Area 2

Appendix I-5: 08/12/2022 Area 2 Tar Blend 1

Appendix I-6: 08/12/2022 Area 2 Tar Blend 2

Appendix I-7: 09/02/2022 Area 2

Appendix I-8: 09/19/2022 Area 2

Appendix I-9: 09/22/2022 Area 2 and Area 3 Construction Water

Appendix J: In Situ Solidification Documentation

Appendix J-1: ISS Performance Sample Testing Summary

Appendix J-2: ISS Daily Reports

Appendix J-3: Hydraulic Conductivity Results

Appendix J-4: ISS Unconfined Compressive Strength Results

Appendix J-1: ISS Performance Sample Testing Summary

UNCONFINED COMPRESSIVE STRENGTH AND HYDRAULIC CONDUCTIVITY SUMMARY TABLE:

Arithmetic Mean 28-day UCS	Geometric Mean 28-day Hydraulic Conductivity
422	3.14E-07

	CAST SAMPLE						Unconfined Compressive Srength (UCS)						Hydraulic Conductivity			
CELL	DATE	TIME	LOCATION	Portland/Slag	Benotnite	ELEVATION	4 DAY	7 DAY	14 DAY	28 DAY BREAK 1	28 DAY BREAK 2	28 DAY AVERAGE	7 DAY	14 DAY	28 DAY	COMMENTS
		HH:MM	DESCRIPTION	%	%	FT	PSI	PSI	PSI	PSI	PSI	PSI	CM/SEC	CM/SEC	CM/SEC	
C-38	6/21/2022	12:10	Middle of Cell 15ft below Swell	9.00%	0.90%	10.80	NA	170	450	570	480	525	1.82E-07	NA	1.19E-07	Mixed at 1:1 with 9.9% dry reagent mix
C-37A	6/21/2022	17:15	Middle of Cell 5ft below Swell	8.00%	0.80%	20.00	NA	160	300	430	450	440	6.01E-08	NA	1.19E-07	Mixed at 1:1 with 8.8% dry reagent mix
C-39	6/22/2022	15:30	Middle of Cell 20ft below Swell	10.00%	0.00%	6.10	NA	170	330	450	390	420	9.85E-07	NA	4.57E-07	Mixed at 1.25/1 with 10% dry reagent mix
C-39	6/22/2022	16:30	Middle of Cell 20ft below Swell	12.00%	0.00%	6.10	NA	200	390	390	450	420	5.89E-07	NA	6.11E-07	Mixed at 1:25/1 with 12% dry reagent mix
C-37B	7/5/2022	15:35	Middle of Cell 20ft below Swell	10.00%	0.25%	6.30	NA	230	300	490	500	495	2.38E-07	NA	2.49E-07	Mixed at 1.25/1 with 10.25% dry reagent mix
C-35	7/6/2022	16:30	Middle of Cell 16ft below Swell	10.00%	0.25%	9.20	NA	160	300	360	480	420	5.87E-07	NA	2.27E-07	Mixed at 1.25/1 with 10.25% dry reagent mix
C-36	7/7/2022	16:40	Middle of Cell 15ft below Swell	10.00%	0.25%	11.35	NA	180	230	370	400	385	2.36E-06	3.33E-07	5.15E-07	Mixed at 1.25/1 with 10.25% dry reagent mix
C-40	7/8/2022	13:00	Middle of Cell 15ft below Swell	10.00%	0.25%	9.90	NA	80	260	410	380	395	5.99E-07	NA	5.01E-07	Mixed at 1.25/1 with 10.25% dry reagent mix
C-30	7/11/2022	13:30	Middle of Cell 20ft below Swell	10.00%	0.25%	5.10	NA	110	240	410	340	375	6.55E-07	NA	1.24E-07	Mixed at 1.25/1 with 10.25% dry reagent mix
C-32	7/12/2022	18:10	Middle of Cell 10ft below Swell	10.00%	0.25%	14.90	NA	180	270	360	340	350	8.20E-07	NA	2.62E-07	Mixed at 1.25/1 with 10.25% dry reagent mix
C-27	7/13/2022	15:15	Middle of Cell 20ft below Swell	10.00%	0.15%	6.70	NA	160	250	340	310	325	8.27E-07	NA	3.85E-07	Mixed at 1.25/1 with 10.15% dry reagent mix
C-33	7/14/2022	15:35	Middle of Cell 20ft below Swell	10.00%	0.10%	5.80	NA	330	350	440	490	465	1.19E-07	NA	1.18E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-31	7/15/2022	13:00	Middle of Cell 20ft below Swell	10.00%	0.10%	5.70	NA	260	310	370	390	380	6.88E-07	NA	4.94E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-28	7/18/2022	16:35	Middle of Cell 18ft below Swell	10.00%	0.10%	8.45	NA	220	300	370	330	350	3.89E-07	NA	5.50E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-34	7/19/2022	10:50	Middle of Cell 17ft below Swell	10.00%	0.10%	8.50	NA	240	350	480	470	475	2.58E-07	NA	8.99E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-16	7/20/2022	12:40	Middle of Cell 15ft below Swell	10.00%	0.10%	11.00	NA	180	250	360	330	345	8.46E-07	NA	1.19E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-17	7/21/2022	12:30	Middle of Cell 17ft below Swell	10.00%	0.10%	9.20	NA	200	250	330	320	325	5.11E-07	NA	4.08E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-14	7/22/2022	13:30	Middle of Cell 15ft below Swell	10.00%	0.10%	9.55	NA	360	410	740	690	715	2.55E-07	NA	1.22E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-15	7/25/2022	17:30	Middle of Cell 15ft below Swell	10.00%	0.10%	9.65	NA	230	390	460	470	465	9.42E-07	NA	6.50E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-22	7/26/2022	13:50	Middle of Cell 12ft below Swell	10.00%	0.10%	10.50	NA	290	440	560	520	540	6.17E-07	NA	1.27E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-21	7/27/2022	17:40	Middle of Cell 18ft below Swell	10.00%	0.10%	5.60	NA	220	340	410	380	395	9.91E-07	NA	6.57E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-13	7/28/2022	17:30	Middle of Cell 17ft below Swell	10.00%	0.10%	7.00	NA	470	340	560	550	555	2.55E-07	NA	6.83E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-7	7/29/2022	13:30	Middle of Cell 16ft below Swell	10.00%	0.10%	7.35	NA	330	350	460	500	480	2.75E-07	NA	2.54E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-8	8/1/2022	14:40	Middle of Cell 15ft below Swell	10.00%	0.10%	10.15	NA	240	380	480	490	485	6.21E-07	NA	2.62E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-18	8/2/2022	18:10	Middle of Cell 18ft below Swell	10.00%	0.10%	5.50	NA	210	300	440	390	415	NA	NA	6.29E-07	Mixed at 1.25/1 with 10.10% dry reagent mix

UNCONFINED COMPRESSIVE STRENGTH AND HYDRAULIC CONDUCTIVITY SUMMARY TABLE:

Arithmetic Mean 28-day UCS	Geometric Mean 28-day Hydraulic Conductivity
422	3.14E-07

	CAST SAMPLE						Unconfined Compressive Srength (UCS)						Hydraulic Conductivity			
CELL	DATE	TIME	LOCATION	Portland/Slag	Benotnite	ELEVATION	4 DAY	7 DAY	14 DAY	28 DAY BREAK 1	28 DAY BREAK 2	28 DAY AVERAGE	7 DAY	14 DAY	28 DAY	COMMENTS
		HH:MM	DESCRIPTION	%	%	FT	PSI	PSI	PSI	PSI	PSI	PSI	CM/SEC	CM/SEC	CM/SEC	
C-6	8/3/2022	14:45	Middle of Cell 16ft below Swell	10.00%	0.10%	9.25	NA	150	280	380	350	365	NA	NA	2.49E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-9	8/4/2022	16:40	Middle of Cell 15ft below Swell	10.00%	0.10%	10.15	NA	300	300	460	450	455	NA	NA	2.53E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-19A	8/8/2022	16:00	Middle of Cell 15ft below Swell	10.00%	0.10%	10.50	NA	160	240	330	270	300	NA	NA	5.17E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-19B	8/9/2022	12:55	Middle of Cell 12ft below Swell	10.00%	0.10%	13.25	NA	190	250	350	340	345	NA	NA	2.46E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-5	8/10/2022	14:45	Middle of Cell 15ft below Swell	10.00%	0.10%	9.70	NA	210	310	440	430	435	NA	NA	3.95E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-20	8/11/2022	17:10	Middle of Cell 18ft below Swell	10.00%	0.10%	6.75	NA	230	280	370	370	370	NA	NA	1.30E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
N-8	8/12/2022	14:10	Middle of Cell 18ft below Swell	10.00%	0.10%	7.45	NA	300	290	360	380	370	NA	NA	5.31E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-4	8/15/2022	15:35	Middle of Cell 18ft below Swell	10.00%	0.10%	8.65	NA	200	330	420	430	425	NA	NA	2.47E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-23	8/16/2022	17:10	Middle of Cell 18ft below Swell	10.00%	0.10%	6.75	NA	210	330	540	500	520	NA	NA	1.29E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-2	8/17/2022	13:30	Middle of Cell 12ft below Swell	10.00%	0.10%	14.20	NA	160	270	550	600	575	NA	NA	2.60E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-24	8/18/2022	17:25	Middle of Cell 20ft below Swell	10.00%	0.10%	5.10	NA	310	310	410	420	415	NA	NA	3.52E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
N-7	8/19/2022	12:50	Middle of Cell 15ft below Swell	10.00%	0.10%	11.25	NA	310	320	470	460	465	NA	NA	3.69E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-25	8/22/2022	13:20	Middle of Cell 18ft below Swell	10.00%	0.10%	6.70	NA	250	340	370	390	380	NA	NA	4.86E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-26	8/23/2022	13:30	Middle of Cell 15ft below Swell	10.00%	0.10%	9.25	NA	160	220	320	320	320	NA	NA	4.98E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
N-6	8/24/2022	14:40	Middle of Cell 18ft below Swell	10.00%	0.10%	7.20	NA	190	330	470	450	460	NA	NA	4.14E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
N-1	8/25/2022	14:50	Middle of Cell 17ft below Swell	10.00%	0.10%	8.15	NA	310	370	380	420	400	NA	NA	3.80E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
N-3	8/26/2022	10:40	Middle of Cell 15ft below Swell	10.00%	0.10%	11.40	NA	310	380	400	470	435	NA	NA	2.56E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-11	8/29/2022	16:45	Middle of Cell 16ft below Swell	10.00%	0.10%	8.40	NA	180	230	320	320	320	NA	NA	3.70E-07	Mixed at 1.25/1 with 10.10% dry reagent mix
C-12	8/30/2022	15:00	Middle of Cell 18ft below Swell	10.00%	0.10%	6.85	NA	140	220	250	270	260	NA	NA	4.45E-07	Mixed at 1.25/1 with 10.10% dry reagent mix

Appendix J-2: ISS Daily Reports

DATE:	6/21/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	276.1	CY	276.1	CY
MASS ISS TREATED:	969,284.0	LBS	969,284.0	LBS
GROUT DELIVERED:	16,587.0	GAL	16,587.0	GAL
PC USED:	49,191.7	LBS	49,191.7	LBS
GGBFS USED:	32,793.8	LBS	32,793.8	LBS
BENTONITE USED:	8,196.8	LBS	8,196.8	LBS
DRY RE-AGENT MIX	41.0	TONS	41.0	TONS
WATER USED:	97,251.4	LBS	97,251.4	LBS
WATER USED:	11,660.8	GAL	11,660.8	GAL
% PC / MASS TREATED:	5.08%	%	5.08%	%
% GGBFS / MASS TREATED:	3.38%	%	3.38%	%
% BENTONITE/ MASS TREATED:	0.85%	%	0.85%	%
% WATER / MASS TREATED	10.03%	%	10.03%	%
WATER RATIO:	1.08	RATIO	1.08	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	2	353
TOTAL CELLS COMPLETED TO DATE	2	353
CELLS REMAINING	51	13,283
TOTAL CELLS	53	13,636
% COMPLETE	3.8%	2.6%

DAILY CELLS TREATED:

C38	C37A			

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Partly Cloudy, 78 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-38 @ 15ft below swell. Secondary samples were collected from the center of C-38 @ 15ft below swell. Primary samples were collected from the center of C-37A @ 5ft below swell. Secondary samples were collected from the center of C-37A @ 5ft below swell for 4, 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silo's with Bentonite Sllo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES														
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	21.1	353.3	276.1	969,284.0	7:23	16:14	475	16,587	92.06	12.30	59.96	49,191.7	5.08%	32,793.8	3.38%	8,196.8	0.85%	97,251.4	11,660.8	10.03%	1.19
C38	5.0	21.0	160.0	124.4	436,745.4	7:23	11:10	227	7,707	92.38	12.34	59.91	23,596.1	5.40%	15,727.8	3.60%	3,915.4	0.90%	44,310.7	5,313.0	10.15%	1.02
C37A	5.0	21.2	193.3	151.7	532,538.6	12:06	16:14	248	8,880	91.75	12.26	60.00	25,595.7	4.81%	17,066.0	3.20%	4,281.4	0.80%	52,940.7	6,347.8	9.94%	1.13

MIXING NOTES:

C38

1 Batched from 7:23-11:10, 40 batches, 1/1 water to reagent ratio, 9% reagent addition with 0.9% Bentonite. Ave OG elev 28.71ft, ave pre-cut elev 23.71ft, bottom of ISS elev 2.71ft, swell elev 25.80ft, 21.0ft of ISS.
2 OG to elev.19.0 Course Sand/Ash Product/Concrete Wall, elev. 19.0 to elev. 10.0 Fine Sand/Slag, elev. 10.0 to Bottom of ISS sand silt/clay/product
3 Very Thick Mix, Primary sample was taken at 12:10 15ft below swell (Elev. 10.8) Secondary sample was taken at 12:20 15ft below swell (Elev. 10.8).

C37A

1 Batched from 12:06-16:14, 44 batches, 1/1 water to reagent ratio, 8% reagent addition with 0.8% Bentonite. Ave OG elev 29.43ft, ave pre-cut elev 24.42ft, bottom of ISS elev 2.82 ft, swell elev 25.0ft, 21.60ft of ISS.
2 OG to elev.19.0 Course Sand/Ash Product/Concrete Wall, elev. 19.0 to elev. 10.0 Fine Sand/Slag, elev. 10.0 to Bottom of ISS sand silt/clay/product
3 Very Thick Mix, Primary sample was taken at 17:15 5ft below swell (Elev. 20.0). Secondary sample was taken at 17:25 5ft below swell (Elev. 20.0).

DATE:	6/22/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	152.2	CY	428.4	CY
MASS ISS TREATED:	534,344.2	LBS	1,503,628.2	LBS
GROUT DELIVERED:	12,623.0	GAL	29,210.0	GAL
PC USED:	38,468.5	LBS	87,660.2	LBS
GGBFS USED:	25,637.6	LBS	58,431.3	LBS
BENTONITE USED:	-	LBS	8,196.8	LBS
DRY RE-AGENT MIX	32.1	TONS	73.0	TONS
WATER USED:	80,149.1	LBS	177,400.4	LBS
WATER USED:	9,610.2	GAL	21,271.0	GAL
% PC / MASS TREATED:	7.20%	%	5.83%	%
% GGBFS / MASS TREATED:	4.80%	%	3.89%	%
% BENTONITE/ MASS TREATED:	0.00%	%	0.55%	%
% WATER / MASS TREATED	15.00%	%	11.80%	%
WATER RATIO:	1.25	RATIO	1.15	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	158
TOTAL CELLS COMPLETED TO DATE	3	511
CELLS REMAINING	50	13,125
TOTAL CELLS	53	13,636
% COMPLETE	5.7%	3.8%

DAILY CELLS TREATED:

C39				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Partly Cloudy, 80 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-39 @ 20ft below swell. Secondary samples were collected from the center of C-39 @ 20ft below swell. Samples were collected for 4, 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silo's with Bentonite Sllo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS: No Bentonite was used for this mix ratio

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES														
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	26.0	158.1	152.2	534,344.2	9:12	14:56	344	12,623	88.63	11.84	29.83	38,468.5	7.20%	25,637.6	4.80%	-	0.00%	80,149.1	9,610.2	15.00%	1.25
C39	5.0	26.0	158.1	152.2	534,344.2	9:12	14:56	344	12,623	88.63	11.84	29.83	38,468.5	7.20%	25,637.6	4.80%	-	0.00%	80,149.1	9,610.2	15.00%	1.25

MIXING NOTES:

C39

1 Batched from 7:22-12:20, 62 batches, 1.25/1 water to reagent ratio, 10% reagent addition and 12% reagent with no Bentonite. Ave OG elev 32.42ft, ave pre-cut elev 28.39ft, bedrock elev 15.69ft, swell elev 32.00ft, 12.70ft of ISS.
2 OG to elev. 16.0 Course Sand/Ash Product/Concrete Wall, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 (10%) Optimum mix, Primary sample was taken at 15:30 20ft below swell (Elev. 6.1). Secondary sample was taken at 15:45 20ft below swell (Elev. 6.1). (12%) Optimum mix, Primary sample was taken at 16:30 20ft below swell (Elev. 6.1). Secondary sample was taken at 16:45 20ft below swell (Elev. 6.1)

DATE: 7/5/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	151.1	CY	579.5	CY
MASS ISS TREATED:	530,276.8	LBS	2,033,905.0	LBS
GROUT DELIVERED:	11,787.0	GAL	40,997.0	GAL
PC USED:	31,559.2	LBS	119,219.4	LBS
GGBFS USED:	21,234.9	LBS	79,666.2	LBS
BENTONITE USED:	1,095.7	LBS	9,292.5	LBS
DRY RE-AGENT MIX	26.4	TONS	99.4	TONS
WATER USED:	69,507.3	LBS	246,907.8	LBS
WATER USED:	8,334.2	GAL	29,605.2	GAL
% PC / MASS TREATED:	5.95%	%	5.86%	%
% GGBFS / MASS TREATED:	4.00%	%	3.92%	%
% BENTONITE/ MASS TREATED:	0.21%	%	0.46%	%
% WATER / MASS TREATED	13.11%	%	12.14%	%
WATER RATIO:	1.29	RATIO	1.19	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	193
TOTAL CELLS COMPLETED TO DATE	4	705
CELLS REMAINING	49	12,931
TOTAL CELLS	53	13,636
% COMPLETE	7.5%	5.2%

DAILY CELLS TREATED:

C37B				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Rain, 75 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-37B @ 20ft below swell. Secondary samples were collected from the center of C-37B @ 20ft below swell. Samples were collected for 4, 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	21.1	193.3	151.1	530,276.8	7:56	14:57	421	11,787	89.88	12.01	39.45	31,559.2	5.95%	21,234.9	4.00%	1,095.7	0.21%	69,507.3	8,334.2	13.11%	1.32
C37B	5.0	21.1	193.3	151.1	530,276.8	7:56	14:57	421	11,787	89.88	12.01	39.45	31,559.2	5.95%	21,234.9	4.00%	1,095.7	0.21%	69,507.3	8,334.2	13.11%	1.29

MIXING NOTES:

C37B

1 Batched from 7:56-14:57, 57 batches, 1.25/1 water to reagent ratio, 10% reagent with .25% Bentonite. Ave OG elev 28.87ft, ave pre-cut elev 23.87ft, bottom of ISS elev 1.84ft, swell elev 26.30ft, 21.1ft of ISS.
2 OG to elev.19.0 Course Sand/Ash Product/Concrete Wall, elev. 19.0 to elev. 10.0 Fine Sand/Slag, elev. 10.0 to Bottom of ISS sand silt/clay/product
3 Very Thick Mix, Primary sample was taken at 15:35 20ft below swell (Elev. 6.30). Secondary sample was taken at 15:50 20ft below swell (Elev. 6.30).

DATE: 7/6/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	296.5	CY	875.9	CY
MASS ISS TREATED:	1,040,599.2	LBS	3,074,504.1	LBS
GROUT DELIVERED:	21,697.0	GAL	62,694.0	GAL
PC USED:	62,205.6	LBS	181,425.0	LBS
GGBFS USED:	41,464.5	LBS	121,130.8	LBS
BENTONITE USED:	2,771.2	LBS	12,063.7	LBS
DRY RE-AGENT MIX	51.8	TONS	151.3	TONS
WATER USED:	134,453.3	LBS	381,361.1	LBS
WATER USED:	16,121.5	GAL	45,726.7	GAL
% PC / MASS TREATED:	5.98%	%	5.90%	%
% GGBFS / MASS TREATED:	3.98%	%	3.94%	%
% BENTONITE/ MASS TREATED:	0.27%	%	0.39%	%
% WATER / MASS TREATED	12.92%	%	12.40%	%
WATER RATIO:	1.26	RATIO	1.21	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	307
TOTAL CELLS COMPLETED TO DATE	5	1,011
CELLS REMAINING	48	12,625
TOTAL CELLS	53	13,636
% COMPLETE	9.4%	7.4%

DAILY CELLS TREATED:

C35				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Partly Cloudy, 83 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-35 @ 16ft below swell. Secondary samples were collected from the center of C-35 @ 16ft below swell. Samples were collected for 4, 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	26.1	306.7	296.5	1,040,599.2	6:54	15:24	510	21,697	88.63	11.84	35.00	62,205.6	5.98%	41,464.5	3.98%	2,771.2	0.27%	134,453.3	16,121.5	12.92%	1.30
C35	5.0	26.1	306.7	296.5	1,040,599.2	6:54	15:24	510	21,697	88.63	11.84	35.00	62,205.6	5.98%	41,464.5	3.98%	2,771.2	0.27%	134,453.3	16,121.5	12.92%	1.26

MIXING NOTES:

C35

1 Batched from 6:54-15:24, 107 batches, 1.25/1 water to reagent ratio, 10% reagent with .25% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 23.0ft, bottom of ISS elev -3.10ft, swell elev 25.20ft, 26.1ft of ISS.
2 OG to elev. 16.0 Course Sand/Ash Product/Concrete Wall, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Very Thick Mix, Primary sample was taken at 16:30 16ft below swell (Elev. 9.20). Secondary sample was taken at 16:45 16ft below swell (Elev. 9.20).

DATE: 7/7/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	407.7	CY	1,283.6	CY
MASS ISS TREATED:	1,431,003.8	LBS	4,505,508.0	LBS
GROUT DELIVERED:	29,576.0	GAL	92,270.0	GAL
PC USED:	85,876.7	LBS	267,301.7	LBS
GGBFS USED:	57,225.4	LBS	178,356.2	LBS
BENTONITE USED:	3,675.1	LBS	15,738.8	LBS
DRY RE-AGENT MIX	71.6	TONS	222.8	TONS
WATER USED:	183,711.2	LBS	565,072.3	LBS
WATER USED:	22,027.7	GAL	67,754.5	GAL
% PC / MASS TREATED:	6.00%	%	5.93%	%
% GGBFS / MASS TREATED:	4.00%	%	3.96%	%
% BENTONITE/ MASS TREATED:	0.26%	%	0.35%	%
% WATER / MASS TREATED	12.84%	%	12.54%	%
WATER RATIO:	1.25	RATIO	1.22	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	515
TOTAL CELLS COMPLETED TO DATE	6	1,526
CELLS REMAINING	47	12,110
TOTAL CELLS	53	13,636
% COMPLETE	11.3%	11.2%

DAILY CELLS TREATED:

C36				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 88 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-36 @ 15ft below swell. Secondary samples were collected from the center of C-36@ 10ft below swell. Samples were collected for 4, 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	21.4	514.6	407.7	1,431,003.8	5:39	15:32	593	29,576	91.75	12.26	30.50	85,876.7	6.00%	57,225.4	4.00%	3,675.1	0.26%	183,711.2	22,027.7	12.84%	1.28
C36	5.0	21.4	514.6	407.7	1,431,003.8	5:39	15:32	593	29,576	91.75	12.26	30.50	85,876.7	6.00%	57,225.4	4.00%	3,675.1	0.26%	183,711.2	22,027.7	12.84%	1.25

MIXING NOTES:

C36

1 Batched from 5:39-15:32, 151 batches, 1.25/1 water to reagent ratio, 10% reagent with .25% Bentonite. Ave OG elev 28.41ft, ave pre-cut elev 23.40ft, bottom of ISS elev 1.90ft, swell elev 26.35ft, 21.5ft of ISS.
2 OG to elev. 16.0 Course Sand/Ash Product/Concrete Wall, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Very Thick Mix, Primary sample was taken at 16:40 15ft below swell (Elev. 11.35). Secondary sample was taken at 17:00 10ft below swell (Elev. 16.35).

DATE: 7/8/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	140.2	CY	1,423.9	CY
MASS ISS TREATED:	492,266.6	LBS	4,997,774.5	LBS
GROUT DELIVERED:	10,376.0	GAL	102,646.0	GAL
PC USED:	29,689.7	LBS	296,991.3	LBS
GGBFS USED:	19,707.1	LBS	198,063.3	LBS
BENTONITE USED:	1,225.8	LBS	16,964.6	LBS
DRY RE-AGENT MIX	24.7	TONS	247.5	TONS
WATER USED:	63,175.7	LBS	628,248.0	LBS
WATER USED:	7,575.0	GAL	75,329.5	GAL
% PC / MASS TREATED:	6.03%	%	5.94%	%
% GGBFS / MASS TREATED:	4.00%	%	3.96%	%
% BENTONITE/ MASS TREATED:	0.25%	%	0.34%	%
% WATER / MASS TREATED	12.83%	%	12.57%	%
WATER RATIO:	1.25	RATIO	1.23	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	147
TOTAL CELLS COMPLETED TO DATE	7	1,673
CELLS REMAINING	46	11,963
TOTAL CELLS	53	13,636
% COMPLETE	13.2%	12.3%

DAILY CELLS TREATED:

C40				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 86 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-40 @ 15ft below swell. Secondary samples were collected from the center of C-40@ 10ft below swell. Samples were collected for 4, 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES														
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	25.8	146.8	140.2	492,266.6	7:05	11:46	281	10,376	92.38	12.34	31.52	29,689.7	6.03%	19,707.1	4.00%	1,225.8	0.25%	63,175.7	7,575.0	12.83%	1.28
C40	5.0	25.8	146.8	140.2	492,266.6	7:05	11:46	281	10,376	92.38	12.34	31.52	29,689.7	6.03%	19,707.1	4.00%	1,225.8	0.25%	63,175.7	7,575.0	12.83%	1.25

MIXING NOTES:

C40

1 Batched from 7:05-11:46, 52 batches, 1.25/1 water to reagent ratio, 10% reagent with .25% Bentonite. Ave OG elev 27.40ft, ave pre-cut elev 22.80ft, bottom of ISS elev -3.10ft, swell elev 24.90ft, 25.9ft of ISS.
2 OG to elev.19.0 Course Sand/Ash Product/Concrete Wall, elev. 19.0 to elev. 10.0 Fine Sand/Slag/24inch Pipe, elev. 10.0 to Bottom of ISS sand silt/clay/product
3 Very Thick Mix, Primary sample was taken at 13:00 15ft below swell (Elev. 9.90). Secondary sample was taken at 13:10 10ft below swell (Elev. 14.90).
4 Lost 25 Batches due to a unknown 24" pipe 15ft below OG (elev.12.80).

DATE: 7/11/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	157.6	CY	1,581.5	CY
MASS ISS TREATED:	553,280.0	LBS	5,551,054.5	LBS
GROUT DELIVERED:	11,700.0	GAL	114,346.0	GAL
PC USED:	33,223.7	LBS	330,215.0	LBS
GGBFS USED:	22,163.1	LBS	220,226.4	LBS
BENTONITE USED:	1,430.8	LBS	18,395.4	LBS
DRY RE-AGENT MIX	27.7	TONS	275.2	TONS
WATER USED:	70,997.7	LBS	699,245.6	LBS
WATER USED:	8,512.9	GAL	83,842.4	GAL
% PC / MASS TREATED:	6.00%	%	5.95%	%
% GGBFS / MASS TREATED:	4.01%	%	3.97%	%
% BENTONITE/ MASS TREATED:	0.26%	%	0.33%	%
% WATER / MASS TREATED	12.83%	%	12.60%	%
WATER RATIO:	1.25	RATIO	1.23	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	160
TOTAL CELLS COMPLETED TO DATE	8	1,833
CELLS REMAINING	45	11,803
TOTAL CELLS	53	13,636
% COMPLETE	15.1%	13.4%

DAILY CELLS TREATED:

C30				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 89 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-30 @ 20ft below swell. Secondary samples were collected from the center of C-30@ 15ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	26.6	160.0	157.6	553,280.0	7:12	11:46	274	11,700	91.75	12.26	30.73	33,223.7	6.00%	22,163.1	4.01%	1,430.8	0.26%	70,997.7	8,512.9	12.83%	1.28
C30	5.0	26.6	160.0	157.6	553,280.0	7:12	11:46	274	11,700	91.75	12.26	30.73	33,223.7	6.00%	22,163.1	4.01%	1,430.8	0.26%	70,997.7	8,512.9	12.83%	1.25

MIXING NOTES:

C30

1 Batched from 7:12-11:46, 58 batches, 1.25/1 water to reagent ratio, 10% reagent with .25% Bentonite. Ave OG elev 28.60ft, ave pre-cut elev 23.60ft, bottom of ISS elev -3.10ft, swell elev 25.10ft, 26.7ft of ISS.
2 OG to elev. 16.0 Course Sand/Ash Product/Concrete Wall/Piles, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Very Thick Mix, Primary sample was taken at 13:30 20ft below swell (Elev. 5.10). Secondary sample was taken at 13:45 15ft below swell (Elev. 10.10).

DATE: 7/12/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	497.4	CY	2,078.9	CY
MASS ISS TREATED:	1,745,936.0	LBS	7,296,990.6	LBS
GROUT DELIVERED:	36,232.0	GAL	150,578.0	GAL
PC USED:	105,250.9	LBS	435,465.9	LBS
GGBFS USED:	69,849.1	LBS	290,075.4	LBS
BENTONITE USED:	4,424.7	LBS	22,820.0	LBS
DRY RE-AGENT MIX	87.5	TONS	362.8	TONS
WATER USED:	223,819.9	LBS	923,065.5	LBS
WATER USED:	26,836.9	GAL	110,679.3	GAL
% PC / MASS TREATED:	6.03%	%	5.97%	%
% GGBFS / MASS TREATED:	4.00%	%	3.98%	%
% BENTONITE/ MASS TREATED:	0.25%	%	0.31%	%
% WATER / MASS TREATED	12.82%	%	12.65%	%
WATER RATIO:	1.25	RATIO	1.23	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	515
TOTAL CELLS COMPLETED TO DATE	9	2,347
CELLS REMAINING	44	11,289
TOTAL CELLS	53	13,636
% COMPLETE	17.0%	17.2%

DAILY CELLS TREATED:

C32				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 89 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-32 @ 10ft below swell. Secondary samples were collected from the center of C-32@ 15ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	26.1	514.6	497.4	1,745,936.0	5:29	16:36	667	36,232	91.75	12.26	30.72	105,250.9	6.03%	69,849.1	4.00%	4,424.7	0.25%	223,819.9	26,836.9	12.82%	1.28
C32	5.0	26.1	514.6	497.4	1,745,936.0	5:29	16:36	667	36,232	91.75	12.26	30.72	105,250.9	6.03%	69,849.1	4.00%	4,424.7	0.25%	223,819.9	26,836.9	12.82%	1.25

MIXING NOTES:

C32

1 Batched from 5:29-16:36, 182 batches, 1.25/1 water to reagent ratio, 10% reagent with .25% Bentonite. Ave OG elev 28.10ft, ave pre-cut elev 23.10ft, bottom of ISS elev -3.10ft, swell elev 24.90ft, 26.2ft of ISS.
2 OG to elev.19.0 Course Sand/Ash Product/Concrete Wall, elev. 19.0 to elev. 10.0 Fine Sand/Slag, elev. 10.0 to Bottom of ISS sand silt/clay/product
3 Very Thick Mix, Primary sample was taken at 18:10 10ft below swell (Elev. 14.90). Secondary sample was taken at 18:25 15ft below swell (Elev. 9.90).

DATE: 7/13/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	359.8	CY	2,438.7	CY
MASS ISS TREATED:	1,262,896.2	LBS	8,559,886.7	LBS
GROUT DELIVERED:	25,981.0	GAL	176,559.0	GAL
PC USED:	75,759.7	LBS	511,225.5	LBS
GGBFS USED:	50,523.3	LBS	340,598.8	LBS
BENTONITE USED:	1,891.6	LBS	24,711.6	LBS
DRY RE-AGENT MIX	63.1	TONS	425.9	TONS
WATER USED:	160,295.9	LBS	1,083,361.4	LBS
WATER USED:	19,220.1	GAL	129,899.5	GAL
% PC / MASS TREATED:	6.00%	%	5.97%	%
% GGBFS / MASS TREATED:	4.00%	%	3.98%	%
% BENTONITE/ MASS TREATED:	0.15%	%	0.29%	%
% WATER / MASS TREATED	12.69%	%	12.66%	%
WATER RATIO:	1.25	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	365
TOTAL CELLS COMPLETED TO DATE	10	2,713
CELLS REMAINING	43	10,923
TOTAL CELLS	53	13,636
% COMPLETE	18.9%	19.9%

DAILY CELLS TREATED:

C27				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 80 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-27 @ 20ft below swell. Secondary samples were collected from the center of C-27 @ 10ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES														
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	26.6	365.2	359.8	1,262,896.2	5:25	14:21	536	25,981	92.38	12.34	30.81	75,759.7	6.00%	50,523.3	4.00%	1,891.6	0.15%	160,295.9	19,220.1	12.69%	1.27
C27	5.0	26.6	365.2	359.8	1,262,896.2	5:25	14:21	536	25,981	92.38	12.34	30.81	75,759.7	6.00%	50,523.3	4.00%	1,891.6	0.15%	160,295.9	19,220.1	12.69%	1.25

MIXING NOTES:

C27

1 Batched from 5:25-14:21, 131 batches, 1.25/1 water to reagent ratio, 10% reagent with .15% Bentonite. Ave OG elev 28.60ft, ave pre-cut elev 23.60ft, bottom of ISS elev -3.10ft, swell elev 26.70ft, 26.7ft of ISS.
2 OG to elev. 16.0 Course Sand/Ash Product/Concrete Wall/Piles, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Very Thick Mix, Primary sample was taken at 15:15 20ft below swell (Elev. 6.70). Secondary sample was taken at 15:25 10ft below swell (Elev. 16.70).

DATE:	7/14/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	354.3	CY	2,793.0	CY
MASS ISS TREATED:	1,243,569.6	LBS	9,803,456.3	LBS
GROUT DELIVERED:	25,656.0	GAL	202,215.0	GAL
PC USED:	74,622.1	LBS	585,847.6	LBS
GGBFS USED:	49,740.7	LBS	390,339.5	LBS
BENTONITE USED:	1,247.8	LBS	25,959.4	LBS
DRY RE-AGENT MIX	62.2	TONS	488.1	TONS
WATER USED:	157,260.1	LBS	1,240,621.6	LBS
WATER USED:	18,856.1	GAL	148,755.6	GAL
% PC / MASS TREATED:	6.00%	%	5.98%	%
% GGBFS / MASS TREATED:	4.00%	%	3.98%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.26%	%
% WATER / MASS TREATED	12.65%	%	12.65%	%
WATER RATIO:	1.25	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	368
TOTAL CELLS COMPLETED TO DATE	11	3,080
CELLS REMAINING	42	10,556
TOTAL CELLS	53	13,636
% COMPLETE	20.8%	22.6%

DAILY CELLS TREATED:

C33				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 84 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-33 @ 20ft below swell. Secondary samples were collected from the center of C-33 @ 12ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	26.0	367.9	354.3	1,243,569.6	5:35	14:40	545	25,656	91.75	12.26	30.78	74,622.1	6.00%	49,740.7	4.00%	1,247.8	0.10%	157,260.1	18,856.1	12.65%	1.26
C33	5.0	26.0	367.9	354.3	1,243,569.6	5:35	14:40	545	25,656	91.75	12.26	30.78	74,622.1	6.00%	49,740.7	4.00%	1,247.8	0.10%	157,260.1	18,856.1	12.65%	1.25

MIXING NOTES:

C33

1 Batched from 5:35-14:40, 129 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 23.0ft, bottom of ISS elev -3.10ft, swell elev 25.80ft, 26.1ft of ISS.
2 OG to elev.19.0 Course Sand/Ash Product/Concrete Wall, elev. 19.0 to elev. 10.0 Fine Sand/Slag, elev. 10.0 to Bottom of ISS sand silt/clay/product
3 Very Thick Mix, Primary sample was taken at 15:35 20ft below swell (Elev. 5.80). Secondary sample was taken at 15:45 12ft below swell (Elev. 13.80).

DATE: 7/15/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	280.4	CY	3,073.4	CY
MASS ISS TREATED:	984,330.1	LBS	10,787,786.4	LBS
GROUT DELIVERED:	20,045.0	GAL	222,260.0	GAL
PC USED:	59,388.1	LBS	645,235.7	LBS
GGBFS USED:	39,361.3	LBS	429,700.8	LBS
BENTONITE USED:	994.3	LBS	26,953.7	LBS
DRY RE-AGENT MIX	49.4	TONS	537.5	TONS
WATER USED:	124,298.8	LBS	1,364,920.4	LBS
WATER USED:	14,903.9	GAL	163,659.5	GAL
% PC / MASS TREATED:	6.03%	%	5.98%	%
% GGBFS / MASS TREATED:	4.00%	%	3.98%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.25%	%
% WATER / MASS TREATED	12.63%	%	12.65%	%
WATER RATIO:	1.25	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	288
TOTAL CELLS COMPLETED TO DATE	12	3,368
CELLS REMAINING	41	10,268
TOTAL CELLS	53	13,636
% COMPLETE	22.6%	24.7%

DAILY CELLS TREATED:

C31				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 89 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-31 @ 20ft below swell. Secondary samples were collected from the center of C-31 @ 10ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES														
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	26.3	287.9	280.4	984,330.1	5:44	12:21	397	20,045	93.00	12.43	30.80	59,388.1	6.03%	39,361.3	4.00%	994.3	0.10%	124,298.8	14,903.9	12.63%	1.26
C31	5.0	26.3	287.9	280.4	984,330.1	5:44	12:21	397	20,045	93.00	12.43	30.80	59,388.1	6.03%	39,361.3	4.00%	994.3	0.10%	124,298.8	14,903.9	12.63%	1.25

MIXING NOTES:

C31

1 Batched from 5:44-12:21, 102 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.30ft, ave pre-cut elev 23.30ft, bottom of ISS elev -3.10ft, swell elev 25.70ft, 26.40ft of ISS.
2 OG to elev.19.0 Course Sand/Ash Product/Concrete Wall, elev. 19.0 to elev. 10.0 Fine Sand/Slag, elev. 10.0 to Bottom of ISS sand silt/clay/product
3 Very Thick Mix, Primary sample was taken at 13:00 20ft below swell (Elev. 5.70). Secondary sample was taken at 13:10 10ft below swell (Elev. 15.70).

DATE: 7/18/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	357.1	CY	3,430.5	CY
MASS ISS TREATED:	1,253,400.7	LBS	12,041,187.2	LBS
GROUT DELIVERED:	25,356.0	GAL	247,616.0	GAL
PC USED:	75,177.6	LBS	720,413.4	LBS
GGBFS USED:	50,141.9	LBS	479,842.7	LBS
BENTONITE USED:	1,349.2	LBS	28,302.9	LBS
DRY RE-AGENT MIX	62.7	TONS	600.1	TONS
WATER USED:	158,721.8	LBS	1,523,642.2	LBS
WATER USED:	19,031.4	GAL	182,690.9	GAL
% PC / MASS TREATED:	6.00%	%	5.98%	%
% GGBFS / MASS TREATED:	4.00%	%	3.99%	%
% BENTONITE/ MASS TREATED:	0.11%	%	0.24%	%
% WATER / MASS TREATED	12.66%	%	12.65%	%
WATER RATIO:	1.25	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	365
TOTAL CELLS COMPLETED TO DATE	13	3,734
CELLS REMAINING	40	9,902
TOTAL CELLS	53	13,636
% COMPLETE	24.5%	27.4%

DAILY CELLS TREATED:

C28				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 89 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-28 @ 18ft below swell. Secondary samples were collected from the center of C-28 @ 8ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	26.4	365.2	357.1	1,253,400.7	6:45	15:47	542	25,356	92.38	12.34	30.75	75,177.6	6.00%	50,141.9	4.00%	1,349.2	0.11%	158,721.8	19,031.4	12.66%	1.27
C28	5.0	26.4	365.2	357.1	1,253,400.7	6:45	15:47	542	25,356	92.38	12.34	30.75	75,177.6	6.00%	50,141.9	4.00%	1,349.2	0.11%	158,721.8	19,031.4	12.66%	1.25

MIXING NOTES:

C28

1 Batched from 6:45-15:47, 130 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.40ft, ave pre-cut elev 23.40ft, bottom of ISS elev -3.10ft, swell elev 26.45ft, 26.50ft of ISS.
2 OG to elev. 16.0 Course Sand/Ash Product/Piles, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Thick Mix, Primary sample was taken at 16:35 18ft below swell (Elev. 8.45). Secondary sample was taken at 16:45 8ft below swell (Elev. 18.45).

DATE: 7/19/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	267.9	CY	3,698.5	CY
MASS ISS TREATED:	940,473.8	LBS	12,981,661.0	LBS
GROUT DELIVERED:	18,986.0	GAL	266,602.0	GAL
PC USED:	56,888.1	LBS	777,301.4	LBS
GGBFS USED:	37,606.5	LBS	517,449.2	LBS
BENTONITE USED:	963.4	LBS	29,266.4	LBS
DRY RE-AGENT MIX	47.2	TONS	647.4	TONS
WATER USED:	117,942.9	LBS	1,641,585.1	LBS
WATER USED:	14,141.8	GAL	196,832.7	GAL
% PC / MASS TREATED:	6.05%	%	5.99%	%
% GGBFS / MASS TREATED:	4.00%	%	3.99%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.23%	%
% WATER / MASS TREATED	12.54%	%	12.65%	%
WATER RATIO:	1.24	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	2	278
TOTAL CELLS COMPLETED TO DATE	15	4,011
CELLS REMAINING	38	9,625
TOTAL CELLS	53	13,636
% COMPLETE	28.3%	29.4%

DAILY CELLS TREATED:

C34	C29			

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 93 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-34 @ 17ft below swell. Secondary samples were collected from the center of C-34 @ 8ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES														
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	26.1	277.8	267.9	940,473.8	5:34	13:11	420	18,986	93.62	12.51	30.91	56,888.1	6.05%	37,606.5	4.00%	963.4	0.10%	117,942.9	14,141.8	12.54%	1.25
C34	5.0	26.0	156.4	150.6	528,767.2	5:34	9:51	257	10,667	93.62	12.51	30.91	31,713.5	6.00%	21,124.7	4.00%	542.3	0.10%	66,279.8	7,947.2	12.53%	1.24
C29	5.0	26.1	121.3	117.3	411,706.6	10:28	13:11	163	8,319	93.62	12.51	30.91	25,174.6	6.11%	16,481.8	4.00%	421.1	0.10%	51,663.1	6,194.6	12.55%	1.23

MIXING NOTES:

C34

1 Batched from 5:34-9:51, 54 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.40ft, ave pre-cut elev 23.40ft, bottom of ISS elev -3.10ft, swell elev 25.50ft, 26.50ft of ISS.
2 OG to elev. 16.0 Course Sand/Ash Product/Piles, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Thick Mix, Primary sample was taken at 10:50 17ft below swell (Elev. 8.50). Secondary sample was taken at 11:00 8ft below swell (Elev. 17.50).

C29

1 Batched from 10:28-13:11, 42 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.60ft, ave pre-cut elev 23.60ft, bottom of ISS elev -3.10ft, swell elev 26.50ft, 26.70ft of ISS.
2 OG to elev. 16.0 Course Sand/Ash Product, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Thick Mix, Sample was taken from C-34

DATE: 7/20/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	208.6	CY	3,907.1	CY
MASS ISS TREATED:	732,277.5	LBS	13,713,938.5	LBS
GROUT DELIVERED:	15,164.0	GAL	281,766.0	GAL
PC USED:	43,953.6	LBS	821,255.0	LBS
GGBFS USED:	29,295.0	LBS	546,744.2	LBS
BENTONITE USED:	740.8	LBS	30,007.1	LBS
DRY RE-AGENT MIX	36.6	TONS	684.0	TONS
WATER USED:	92,512.6	LBS	1,734,097.7	LBS
WATER USED:	11,092.6	GAL	207,925.4	GAL
% PC / MASS TREATED:	6.00%	%	5.99%	%
% GGBFS / MASS TREATED:	4.00%	%	3.99%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.22%	%
% WATER / MASS TREATED	12.63%	%	12.64%	%
WATER RATIO:	1.25	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	187
TOTAL CELLS COMPLETED TO DATE	16	4,198
CELLS REMAINING	37	9,438
TOTAL CELLS	53	13,636
% COMPLETE	30.2%	30.8%

DAILY CELLS TREATED:

C16				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 94 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-16 @ 15ft below swell. Secondary samples were collected from the center of C-16 @ 10ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES														
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	30.2	186.5	208.6	732,277.5	5:20	12:03	403	15,164	91.75	12.26	30.75	43,953.6	6.00%	29,295.0	4.00%	740.8	0.10%	92,512.6	11,092.6	12.63%	1.26
C16	5.0	30.2	186.5	208.6	732,277.5	5:20	12:03	403	15,164	91.75	12.26	30.75	43,953.6	6.00%	29,295.0	4.00%	740.8	0.10%	92,512.6	11,092.6	12.63%	1.25

MIXING NOTES:

C16

1 Batched from 5:20-12:03, 76 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.20ft, ave pre-cut elev 23.20ft, bottom of ISS elev -7.10ft, swell elev 26.00ft, 30.3ft of ISS.
2 OG to elev. 16.0 Course Sand/Ash Product, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Thick Mix, Primary sample was taken at 12:40 15ft below swell (Elev. 11.00). Secondary sample was taken at 12:50 10ft below swell (Elev. 16.00).

DATE:	7/21/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	221.6	CY	4,128.7	CY
MASS ISS TREATED:	777,747.9	LBS	14,491,686.4	LBS
GROUT DELIVERED:	15,835.0	GAL	297,601.0	GAL
PC USED:	46,656.4	LBS	867,911.4	LBS
GGBFS USED:	31,107.2	LBS	577,851.4	LBS
BENTONITE USED:	784.8	LBS	30,792.0	LBS
DRY RE-AGENT MIX	38.9	TONS	722.9	TONS
WATER USED:	98,187.3	LBS	1,832,285.0	LBS
WATER USED:	11,773.1	GAL	219,698.4	GAL
% PC / MASS TREATED:	6.00%	%	5.99%	%
% GGBFS / MASS TREATED:	4.00%	%	3.99%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.21%	%
% WATER / MASS TREATED	12.62%	%	12.64%	%
WATER RATIO:	1.25	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	199
TOTAL CELLS COMPLETED TO DATE	17	4,397
CELLS REMAINING	36	9,239
TOTAL CELLS	53	13,636
% COMPLETE	32.1%	32.2%

DAILY CELLS TREATED:

C17				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 90 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-17 @ 17ft below swell. Secondary samples were collected from the center of C-17 @ 15ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES														
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	30.1	198.8	221.6	777,747.9	5:36	11:30	354	15,835	92.38	12.34	30.78	46,656.4	6.00%	31,107.2	4.00%	784.8	0.10%	98,187.3	11,773.1	12.62%	1.26
C17	5.0	30.1	198.8	221.6	777,747.9	5:36	11:30	354	15,835	92.38	12.34	30.78	46,656.4	6.00%	31,107.2	4.00%	784.8	0.10%	98,187.3	11,773.1	12.62%	1.25

MIXING NOTES:

C17

1 Batched from 5:36-11:30, 80 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.20ft, ave pre-cut elev 23.20ft, bottom of ISS elev -7.10ft, swell elev 26.20ft, 30.3ft of ISS.
2 OG to elev. 16.0 Course Sand/ Tar Product/Piles, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Thick Mix, Primary sample was taken at 12:30 17ft below swell (Elev. 9.20). Secondary sample was taken at 12:40 15ft below swell (Elev. 11.20).

DATE: 7/22/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	295.2	CY	4,423.8	CY
MASS ISS TREATED:	1,035,996.0	LBS	15,527,682.4	LBS
GROUT DELIVERED:	21,330.0	GAL	318,931.0	GAL
PC USED:	63,850.3	LBS	931,761.7	LBS
GGBFS USED:	42,577.9	LBS	620,429.3	LBS
BENTONITE USED:	1,122.2	LBS	31,914.1	LBS
DRY RE-AGENT MIX	53.2	TONS	776.1	TONS
WATER USED:	133,703.7	LBS	1,965,988.7	LBS
WATER USED:	16,031.6	GAL	235,730.1	GAL
% PC / MASS TREATED:	6.16%	%	6.00%	%
% GGBFS / MASS TREATED:	4.11%	%	4.00%	%
% BENTONITE/ MASS TREATED:	0.11%	%	0.21%	%
% WATER / MASS TREATED	12.91%	%	12.66%	%
WATER RATIO:	1.24	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	266
TOTAL CELLS COMPLETED TO DATE	18	4,662
CELLS REMAINING	35	8,974
TOTAL CELLS	53	13,636
% COMPLETE	34.0%	34.2%

DAILY CELLS TREATED:

C14				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 88 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-14 @ 15ft below swell. Secondary samples were collected from the center of C-14 @ 10ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	30.0	265.6	295.2	1,035,996.0	5:27	13:17	470	21,330	91.13	12.18	30.72	63,850.3	6.16%	42,577.9	4.11%	1,122.2	0.11%	133,703.7	16,031.6	12.91%	1.26
C14	5.0	30.0	265.6	295.2	1,035,996.0	5:27	13:17	470	21,330	91.13	12.18	30.72	63,850.3	6.16%	42,577.9	4.11%	1,122.2	0.11%	133,703.7	16,031.6	12.91%	1.24

MIXING NOTES:

C14

1 Batched from 5:27-13:17, 108 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.00ft, ave pre-cut elev 23.00ft, bottom of ISS elev -7.10ft, swell elev 24.55ft, 30.1ft of ISS.
2 OG to elev. 16.0 Course Sand/Ash Product/Concrete Wall, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Thick Mix, Primary sample was taken at 13:30 15ft below swell (Elev. 9.55). Secondary sample was taken at 13:40 10ft below swell (Elev. 14.55).

DATE: 7/25/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	304.0	CY	4,727.8	CY
MASS ISS TREATED:	1,066,923.0	LBS	16,594,605.4	LBS
GROUT DELIVERED:	21,527.0	GAL	340,458.0	GAL
PC USED:	64,022.2	LBS	995,783.9	LBS
GGBFS USED:	42,716.8	LBS	663,146.1	LBS
BENTONITE USED:	1,131.0	LBS	33,045.1	LBS
DRY RE-AGENT MIX	53.4	TONS	829.5	TONS
WATER USED:	133,688.3	LBS	2,099,677.0	LBS
WATER USED:	16,029.8	GAL	251,759.8	GAL
% PC / MASS TREATED:	6.00%	%	6.00%	%
% GGBFS / MASS TREATED:	4.00%	%	4.00%	%
% BENTONITE/ MASS TREATED:	0.11%	%	0.20%	%
% WATER / MASS TREATED	12.53%	%	12.65%	%
WATER RATIO:	1.24	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	274
TOTAL CELLS COMPLETED TO DATE	19	4,936
CELLS REMAINING	34	8,700
TOTAL CELLS	53	13,636
% COMPLETE	35.8%	36.2%

DAILY CELLS TREATED:

C15				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Rain, 85 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-15 @ 15ft below swell. Secondary samples were collected from the center of C-15 @ 10ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES														
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	30.0	273.6	304.0	1,066,923.0	9:04	16:52	468	21,527	92.38	12.34	30.78	64,022.2	6.00%	42,716.8	4.00%	1,131.0	0.11%	133,688.3	16,029.8	12.53%	1.25
C15	5.0	30.0	273.6	304.0	1,066,923.0	9:04	16:52	468	21,527	92.38	12.34	30.78	64,022.2	6.00%	42,716.8	4.00%	1,131.0	0.11%	133,688.3	16,029.8	12.53%	1.24

MIXING NOTES:

C15

1 Batched from 9:04-16:52, 110 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.00ft, ave pre-cut elev 23.00ft, bottom of ISS elev -7.10ft, swell elev 24.65ft, 30.1ft of ISS.
2 OG to elev. 16.0 Course Sand/Ash Product/Concrete Wall, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Wet Mix, Primary sample was taken at 17:30 15ft below swell (Elev. 9.65). Secondary sample was taken at 17:40 10ft below swell (Elev. 14.65).

DATE: 7/26/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	269.8	CY	4,997.6	CY
MASS ISS TREATED:	947,076.0	LBS	17,541,681.4	LBS
GROUT DELIVERED:	19,669.0	GAL	360,127.0	GAL
PC USED:	57,963.9	LBS	1,053,747.9	LBS
GGBFS USED:	38,808.0	LBS	701,954.0	LBS
BENTONITE USED:	983.3	LBS	34,028.4	LBS
DRY RE-AGENT MIX	48.4	TONS	877.9	TONS
WATER USED:	122,290.4	LBS	2,221,967.4	LBS
WATER USED:	14,663.1	GAL	266,423.0	GAL
% PC / MASS TREATED:	6.12%	%	6.01%	%
% GGBFS / MASS TREATED:	4.10%	%	4.00%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.19%	%
% WATER / MASS TREATED	12.91%	%	12.67%	%
WATER RATIO:	1.25	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	243
TOTAL CELLS COMPLETED TO DATE	20	5,179
CELLS REMAINING	33	8,457
TOTAL CELLS	53	13,636
% COMPLETE	37.7%	38.0%

DAILY CELLS TREATED:

C22				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 85 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-22 @ 12ft below swell. Secondary samples were collected from the center of C-22 @ 15ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES														
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	30.0	242.8	269.8	947,076.0	5:46	12:37	411	19,669	91.75	12.26	30.80	57,963.9	6.12%	38,808.0	4.10%	983.3	0.10%	122,290.4	14,663.1	12.91%	1.26
C22	5.0	30.0	242.8	269.8	947,076.0	5:46	12:37	411	19,669	91.75	12.26	30.80	57,963.9	6.12%	38,808.0	4.10%	983.3	0.10%	122,290.4	14,663.1	12.91%	1.25

MIXING NOTES:

C22

1 Batched from 5:46-12:37, 100 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.00ft, ave pre-cut elev 23.00ft, bottom of ISS elev -7.10ft, swell elev 22.50ft, 30.1ft of ISS.
2 OG to elev. 16.0 Course Sand/Ash Product, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Thick Mix, Primary sample was taken at 13:50 12ft below swell (Elev. 10.50). Secondary sample was taken at 14:00 15ft below swell (Elev. 7.50).

DATE: 7/27/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	344.2	CY	5,341.8	CY
MASS ISS TREATED:	1,207,986.0	LBS	18,749,667.4	LBS
GROUT DELIVERED:	24,399.0	GAL	384,526.0	GAL
PC USED:	72,567.4	LBS	1,126,315.2	LBS
GGBFS USED:	48,391.5	LBS	750,345.5	LBS
BENTONITE USED:	1,527.8	LBS	35,556.2	LBS
DRY RE-AGENT MIX	60.5	TONS	938.3	TONS
WATER USED:	151,435.5	LBS	2,373,403.0	LBS
WATER USED:	18,157.7	GAL	284,580.7	GAL
% PC / MASS TREATED:	6.01%	%	6.01%	%
% GGBFS / MASS TREATED:	4.01%	%	4.00%	%
% BENTONITE/ MASS TREATED:	0.13%	%	0.19%	%
% WATER / MASS TREATED	12.54%	%	12.66%	%
WATER RATIO:	1.24	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	310
TOTAL CELLS COMPLETED TO DATE	21	5,488
CELLS REMAINING	32	8,148
TOTAL CELLS	53	13,636
% COMPLETE	39.6%	40.2%

DAILY CELLS TREATED:

C21				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 80 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-21 @ 18ft below swell. Secondary samples were collected from the center of C-21 @ 8ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	30.0	309.7	344.2	1,207,986.0	5:43	14:33	530	24,399	91.13	12.18	30.72	72,567.4	6.01%	48,391.5	4.01%	1,527.8	0.13%	151,435.5	18,157.7	12.54%	1.25
C21	5.0	30.0	309.7	344.2	1,207,986.0	5:43	14:33	530	24,399	91.13	12.18	30.72	72,567.4	6.01%	48,391.5	4.01%	1,527.8	0.13%	151,435.5	18,157.7	12.54%	1.24

MIXING NOTES:

C21

1 Batched from 5:43-14:33, 123 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.00ft, ave pre-cut elev 23.00ft, bottom of ISS elev -7.10ft, swell elev 23.60ft, 30.1ft of ISS.
2 OG to elev. 16.0 Course Sand/Ash Product, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Thick Mix, Primary sample was taken at 17:40 18ft below swell (Elev. 5.60). Secondary sample was taken at 17:50 8ft below swell (Elev. 15.60).

DATE: 7/28/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	428.8	CY	5,770.6	CY
MASS ISS TREATED:	1,505,166.0	LBS	20,254,833.4	LBS
GROUT DELIVERED:	30,793.0	GAL	415,319.0	GAL
PC USED:	90,700.4	LBS	1,217,015.6	LBS
GGBFS USED:	60,682.2	LBS	811,027.8	LBS
BENTONITE USED:	1,527.8	LBS	37,084.0	LBS
DRY RE-AGENT MIX	75.7	TONS	1,014.0	TONS
WATER USED:	191,378.9	LBS	2,564,781.9	LBS
WATER USED:	22,947.1	GAL	307,527.8	GAL
% PC / MASS TREATED:	6.03%	%	6.01%	%
% GGBFS / MASS TREATED:	4.03%	%	4.00%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.18%	%
% WATER / MASS TREATED	12.71%	%	12.66%	%
WATER RATIO:	1.25	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	386
TOTAL CELLS COMPLETED TO DATE	22	5,874
CELLS REMAINING	31	7,762
TOTAL CELLS	53	13,636
% COMPLETE	41.5%	43.1%

DAILY CELLS TREATED:

C13				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 88 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-13 @ 17ft below swell. Secondary samples were collected from the center of C-13 @ 10ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES														
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	30.0	385.9	428.8	1,505,166.0	5:24	15:22	598	30,793	92.38	12.34	30.80	90,700.4	6.03%	60,682.2	4.03%	1,527.8	0.10%	191,378.9	22,947.1	12.71%	1.26
C13	5.0	30.0	385.9	428.8	1,505,166.0	5:24	15:22	598	30,793	92.38	12.34	30.80	90,700.4	6.03%	60,682.2	4.03%	1,527.8	0.10%	191,378.9	22,947.1	12.71%	1.25

MIXING NOTES:

C13

1 Batched from 5:24-15:22, 155 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.00ft, ave pre-cut elev 23.00ft, bottom of ISS elev -7.1ft, swell elev 24.00ft, ft of 30.1ISS.
2 OG to elev. 16.0 Course Sand/Ash Product/Concrete Wall, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Thick Mix, Primary sample was taken at 17:30 17ft below swell (Elev. 7.00). Secondary sample was taken at 17:40 10ft below swell (Elev. 14.00).

DATE: 7/29/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	291.3	CY	6,061.9	CY
MASS ISS TREATED:	1,022,385.0	LBS	21,277,218.4	LBS
GROUT DELIVERED:	21,197.0	GAL	436,516.0	GAL
PC USED:	62,800.9	LBS	1,279,816.5	LBS
GGBFS USED:	42,950.5	LBS	853,978.2	LBS
BENTONITE USED:	1,100.1	LBS	38,184.1	LBS
DRY RE-AGENT MIX	52.9	TONS	1,066.9	TONS
WATER USED:	132,050.3	LBS	2,696,832.1	LBS
WATER USED:	15,833.4	GAL	323,361.2	GAL
% PC / MASS TREATED:	6.14%	%	6.01%	%
% GGBFS / MASS TREATED:	4.20%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.11%	%	0.18%	%
% WATER / MASS TREATED	12.92%	%	12.67%	%
WATER RATIO:	1.24	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	315
TOTAL CELLS COMPLETED TO DATE	23	6,189
CELLS REMAINING	30	7,447
TOTAL CELLS	53	13,636
% COMPLETE	43.4%	45.4%

DAILY CELLS TREATED:

C7				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 83 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-7 @ 16ft below swell. Secondary samples were collected from the center of C-7 @ 9ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	25.0	314.6	291.3	1,022,385.0	5:21	12:04	403	21,197	91.13	12.18	30.75	62,800.9	6.14%	42,950.5	4.20%	1,100.1	0.11%	132,050.3	15,833.4	12.92%	1.25
C7	5.0	25.0	314.6	291.3	1,022,385.0	5:21	12:04	403	21,197	91.13	12.18	30.75	62,800.9	6.14%	42,950.5	4.20%	1,100.1	0.11%	132,050.3	15,833.4	12.92%	1.24

MIXING NOTES:

C7

1 Batched from 5:21-12:04, 108 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.00ft, ave pre-cut elev 23.00ft, bottom of ISS elev -2.10ft, swell elev 23.35ft, ft of 25.10 ISS.
2 OG to elev. 16.0 Course Sand/Ash Product/Concrete Wall, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Thick Mix, Primary sample was taken at 13:30 16ft below swell (Elev. 7.35). Secondary sample was taken at 13:35 9ft below swell (Elev. 14.35).

DATE: 8/1/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	266.0	CY	6,327.9	CY
MASS ISS TREATED:	933,627.5	LBS	22,210,845.9	LBS
GROUT DELIVERED:	19,040.0	GAL	455,556.0	GAL
PC USED:	55,986.4	LBS	1,335,802.9	LBS
GGBFS USED:	37,348.5	LBS	891,326.7	LBS
BENTONITE USED:	941.4	LBS	39,125.4	LBS
DRY RE-AGENT MIX	46.7	TONS	1,113.6	TONS
WATER USED:	118,264.8	LBS	2,815,096.9	LBS
WATER USED:	14,180.4	GAL	337,541.6	GAL
% PC / MASS TREATED:	6.00%	%	6.01%	%
% GGBFS / MASS TREATED:	4.00%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.18%	%
% WATER / MASS TREATED	12.67%	%	12.67%	%
WATER RATIO:	1.25	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	287
TOTAL CELLS COMPLETED TO DATE	24	6,476
CELLS REMAINING	29	7,160
TOTAL CELLS	53	13,636
% COMPLETE	45.3%	47.5%

DAILY CELLS TREATED:

C8				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 86 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-8 @ 15ft below swell. Secondary samples were collected from the center of C-8 @ 8ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES														
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	25.0	287.3	266.0	933,627.5	7:12	13:31	379	19,040	92.38	12.34	30.80	55,986.4	6.00%	37,348.5	4.00%	941.4	0.10%	118,264.8	14,180.4	12.67%	1.27
C8	5.0	25.0	287.3	266.0	933,627.5	7:12	13:31	379	19,040	92.38	12.34	30.80	55,986.4	6.00%	37,348.5	4.00%	941.4	0.10%	118,264.8	14,180.4	12.67%	1.25

MIXING NOTES:

C8

1 Batched from 7:12-13:31, 97 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.00ft, ave pre-cut elev 23.00ft, bottom of ISS elev -2.10ft, swell elev 25.15ft, ft of 25.10 ISS.
2 OG to elev. 16.0 Course Sand/Ash Product, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay/Concrete Wall, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Thick Mix, Primary sample was taken at 14:40 15ft below swell (Elev. 10.15). Secondary sample was taken at 14:50 8ft below swell (Elev. 17.15).

DATE: 8/2/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	527.6	CY	6,855.5	CY
MASS ISS TREATED:	1,852,022.9	LBS	24,062,868.8	LBS
GROUT DELIVERED:	37,315.0	GAL	492,871.0	GAL
PC USED:	111,117.4	LBS	1,446,920.3	LBS
GGBFS USED:	74,090.8	LBS	965,417.5	LBS
BENTONITE USED:	1,891.6	LBS	41,017.0	LBS
DRY RE-AGENT MIX	92.6	TONS	1,206.2	TONS
WATER USED:	232,753.0	LBS	3,047,849.9	LBS
WATER USED:	27,908.0	GAL	365,449.6	GAL
% PC / MASS TREATED:	6.00%	%	6.01%	%
% GGBFS / MASS TREATED:	4.00%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.17%	%
% WATER / MASS TREATED	12.57%	%	12.67%	%
WATER RATIO:	1.24	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	473
TOTAL CELLS COMPLETED TO DATE	25	6,950
CELLS REMAINING	28	6,686
TOTAL CELLS	53	13,636
% COMPLETE	47.2%	51.0%

DAILY CELLS TREATED:

C18				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Sunny, 83 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-18 @ 18ft below swell. Secondary samples were collected from the center of C-18 @ 10ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	30.1	473.3	527.6	1,852,022.9	4:27	17:29	782	37,315	91.75	12.26	30.78	111,117.4	6.00%	74,090.8	4.00%	1,891.6	0.10%	232,753.0	27,908.0	12.57%	1.26
C18	5.0	30.1	473.3	527.6	1,852,022.9	4:27	17:29	782	37,315	91.75	12.26	30.78	111,117.4	6.00%	74,090.8	4.00%	1,891.6	0.10%	232,753.0	27,908.0	12.57%	1.24

MIXING NOTES:

C18

1 Batched from 4:27-17:29, 191 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.00ft, ave pre-cut elev 23.00ft, bottom of ISS elev -7.10ft, swell elev 23.50ft, ft of 30.10 ISS.
2 OG to elev. 16.0 Course Sand/Ash Product/Concrete Wall, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Thick Mix, Primary sample was taken at 18:10 18ft below swell (Elev. 5.50). Secondary sample was taken at 18:15 10ft below swell (Elev. 13.50).

DATE:	8/3/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	302.3	CY	7,157.8	CY
MASS ISS TREATED:	1,061,153.3	LBS	25,124,022.1	LBS
GROUT DELIVERED:	21,614.0	GAL	514,485.0	GAL
PC USED:	63,656.3	LBS	1,510,576.6	LBS
GGBFS USED:	42,606.5	LBS	1,008,024.0	LBS
BENTONITE USED:	1,060.4	LBS	42,077.4	LBS
DRY RE-AGENT MIX	53.1	TONS	1,259.3	TONS
WATER USED:	134,459.9	LBS	3,182,309.9	LBS
WATER USED:	16,122.3	GAL	381,571.9	GAL
% PC / MASS TREATED:	6.00%	%	6.01%	%
% GGBFS / MASS TREATED:	4.02%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.17%	%
% WATER / MASS TREATED	12.67%	%	12.67%	%
WATER RATIO:	1.25	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	328
TOTAL CELLS COMPLETED TO DATE	26	7,277
CELLS REMAINING	28	6,017
TOTAL CELLS	54	13,295
% COMPLETE	48.1%	54.7%

DAILY CELLS TREATED:

C6				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: P/Cloudy, 80 Deg F

SAMPLING INFO: Primary samples were collected from the center of C-6 @ 16ft below swell. Secondary samples were collected from the center of C-6 @ 12ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	24.9	327.8	302.3	1,061,153.3	5:49	13:35	466	21,614	93.62	12.51	30.81	63,656.3	6.00%	42,606.5	4.02%	1,060.4	0.10%	134,459.9	16,122.3	12.67%	1.27
C6	5.0	24.9	327.8	302.3	1,061,153.3	5:49	13:35	466	21,614	93.62	12.51	30.81	63,656.3	6.00%	42,606.5	4.02%	1,060.4	0.10%	134,459.9	16,122.3	12.67%	1.25

MIXING NOTES:

C6

1 Batched from 5:49-13:35, 109 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.00ft, ave pre-cut elev 23.00ft, bottom of ISS elev -2.10ft, swell elev 25.25ft, ft of 25.10 ISS.
2 OG to elev. 16.0 Course Sand/Ash Product, elev. 16.0 to elev. 9.0 Fine Sand/silt/clay, elev. 9.0 to Bottom of ISS sand silt sand/clay/product
3 Optimum Mix, Primary sample was taken at 14:45 16ft below swell (Elev. 9.25). Secondary sample was taken at 14:55 12ft below swell (Elev. 13.25).

DATE:	8/4/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	434.7	CY	7,592.5	CY
MASS ISS TREATED:	1,525,712.5	LBS	26,649,734.6	LBS
GROUT DELIVERED:	31,590.0	GAL	546,075.0	GAL
PC USED:	91,555.8	LBS	1,602,132.3	LBS
GGBFS USED:	61,310.6	LBS	1,069,334.6	LBS
BENTONITE USED:	1,560.9	LBS	43,638.3	LBS
DRY RE-AGENT MIX	76.4	TONS	1,335.7	TONS
WATER USED:	196,815.5	LBS	3,379,125.4	LBS
WATER USED:	23,599.0	GAL	405,170.9	GAL
% PC / MASS TREATED:	6.00%	%	6.01%	%
% GGBFS / MASS TREATED:	4.02%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.16%	%
% WATER / MASS TREATED	12.90%	%	12.68%	%
WATER RATIO:	1.27	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	2	469
TOTAL CELLS COMPLETED TO DATE	28	7,747
CELLS REMAINING	26	5,548
TOTAL CELLS	54	13,295
% COMPLETE	51.9%	58.3%

DAILY CELLS TREATED:

C10	C9			

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: P/Cloudy,Afternoon Rain, 98 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-9 @ 15ft below swell. Secondary samples were collected from the center of C-9 @ 10ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

CELL ID	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	25.0	469.5	434.7	1,525,712.5	6:30	16:00	##### ######	31,590	92.69	12.38	30.97	91,555.8	6.00%	61,310.6	4.02%	1,560.9	0.10%	196,815.5	23,599.0	12.90%	1.29
C10	5.0	25.0	312.8	289.6	1,016,470.0	6:30	16:00	570	21,165	93.00	12.43	30.92	61,003.6	6.00%	40,851.2	4.02%	1,038.4	0.10%	131,138.1	15,724.0	12.90%	1.27
C9	5.0	25.0	156.7	145.1	509,242.5	6:30	16:00	570	10,425	92.38	12.34	31.02	30,552.2	6.00%	20,459.3	4.02%	522.5	0.10%	65,677.3	7,875.0	12.90%	1.27

MIXING NOTES:

C10

1 Cells C9 and C10 mixed together as one. Batched from 5:20-15:45, 107 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.00ft, ave pre-cut elev 23.00ft, ave bottom of ISS elev -2.10ft, swell elev 25.15ft, 25.10ft of ISS.
2 OG to elev 10.0ft coarse sand/gravel (<6in), with concrete, steel, debris and product; elev 10.0ft to elev 2.0ft hard digging slag; elev 2.0ft to elev -2.1ft brown clayey silt with some sand.
3 Thick Mix, No Samples Collected.

C9

1 Cells C9 and C10 mixed together as one. Batched from 5:20-15:45, 53 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.00ft, ave pre-cut elev 23.00ft, ave bottom of ISS elev -2.10ft, swell elev 25.15ft, 25.10ft of ISS.
2 OG to elev 10.0ft coarse sand/gravel (<6in), with concrete, steel, debris and product; elev 10.0ft to elev 2.0ft hard digging slag; elev 2.0ft to elev -2.1ft brown clayey silt with some sand.
3 Thick Mix, Primary sample was taken at 16:40, 15ft below swell (Elev. 10.15ft). Secondary sample was taken at 16:45, 10ft below swell (Elev. 15.15ft).

DATE: 8/8/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	284.3	CY	7,876.8	CY
MASS ISS TREATED:	997,893.0	LBS	27,647,627.6	LBS
GROUT DELIVERED:	22,010.0	GAL	568,085.0	GAL
PC USED:	59,912.8	LBS	1,662,045.2	LBS
GGBFS USED:	39,941.1	LBS	1,109,275.7	LBS
BENTONITE USED:	992.1	LBS	44,630.4	LBS
DRY RE-AGENT MIX	49.9	TONS	1,385.7	TONS
WATER USED:	126,190.4	LBS	3,505,315.8	LBS
WATER USED:	15,130.7	GAL	420,301.6	GAL
% PC / MASS TREATED:	6.00%	%	6.01%	%
% GGBFS / MASS TREATED:	4.00%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.16%	%
% WATER / MASS TREATED	12.65%	%	12.68%	%
WATER RATIO:	1.25	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	256
TOTAL CELLS COMPLETED TO DATE	29	8,003
CELLS REMAINING	25	5,292
TOTAL CELLS	54	13,295
% COMPLETE	53.7%	60.2%

DAILY CELLS TREATED:

C19A				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: P/Cloudy, Afternoon Rain, 90 Deg, F

SAMPLING INFO: Primary samples were collected from the center of C-19A @ 15ft below swell. Secondary samples were collected from the center of C-19A @ 13ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	30.0	255.9	284.3	997,893.0	6:30	15:45	### ########	22,010	93.00	12.43	30.76	59,912.8	6.00%	39,941.1	4.00%	992.1	0.10%	126,190.4	15,130.7	12.65%	1.26
C19A	5.0	30.0	255.9	284.3	997,893.0	6:30	15:45	555	22,010	93.00	12.43	30.76	59,912.8	6.00%	39,941.1	4.00%	992.1	0.10%	126,190.4	15,130.7	12.65%	1.25

MIXING NOTES:

C19A

1 Batched from 4:22-15:26, 103 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.00ft, ave pre-cut elev 23.00ft, ave bottom of ISS elev -7.10ft, swell elev 25.50ft, 30.10ft of ISS.
2 OG to elev 4.0ft coarse sand/gravel (<6in), with concrete, steel, debris, product, tar from elev 18.0ft to 14.0ft; elev 4.0ft to elev -2.0ft hard digging slag; elev -2.0ft to elev -7.10ft brown clayey silt with some sand.
3 Wet Mix, Primary sample was taken at 16:00, 15ft below swell (Elev. 10.50ft). Secondary sample was taken at 16:10, 13ft below swell (Elev. 12.50ft).

DATE:	8/9/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	301.9	CY	8,178.7	CY
MASS ISS TREATED:	1,059,684.6	LBS	28,707,312.2	LBS
GROUT DELIVERED:	22,108.0	GAL	590,193.0	GAL
PC USED:	63,826.0	LBS	1,725,871.2	LBS
GGBFS USED:	42,399.3	LBS	1,151,675.0	LBS
BENTONITE USED:	1,073.7	LBS	45,704.0	LBS
DRY RE-AGENT MIX	53.1	TONS	1,438.8	TONS
WATER USED:	136,014.2	LBS	3,641,329.9	LBS
WATER USED:	16,308.7	GAL	436,610.3	GAL
% PC / MASS TREATED:	6.02%	%	6.01%	%
% GGBFS / MASS TREATED:	4.00%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.16%	%
% WATER / MASS TREATED	12.84%	%	12.68%	%
WATER RATIO:	1.27	RATIO	1.25	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	2	291
TOTAL CELLS COMPLETED TO DATE	31	8,294
CELLS REMAINING	23	5,001
TOTAL CELLS	54	13,295
% COMPLETE	57.4%	62.4%

DAILY CELLS TREATED:

C19B	C1			

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: P/Cloudy, 90 Deg F

SAMPLING INFO: Primary samples were collected from the center of C-19B @ 12ft below swell. Secondary samples were collected from the center of C-19B @ 8ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	26.9	291.0	301.9	1,059,684.6	8:00	17:30	### ########	22,108	90.50	12.09	29.92	63,826.0	6.02%	42,399.3	4.00%	1,073.7	0.10%	136,014.2	16,308.7	12.84%	1.28
C19B	5.0	30.0	199.4	221.5	777,465.0	8:00	12:45	285	16,094	89.88	12.01	29.74	46,722.6	6.01%	31,105.0	4.00%	791.5	0.10%	99,373.4	11,915.3	12.78%	1.26
C1	5.0	23.7	91.6	80.4	282,219.6	13:30	17:30	240	6,014	91.13	12.18	30.10	17,103.5	6.06%	11,294.3	4.00%	282.2	0.10%	36,640.8	4,393.4	12.98%	1.28

MIXING NOTES:

C19B

1 Batched from 6:55-12:20, 81 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 23.0ft, ave bottom of ISS elev -7.10ft, swell elev 25.25ft, 30.1ft of ISS.
2 OG to elev 4.0ft coarse sand/gravel (<6in), with concrete, steel, debris, product, tar from elev 18.0ft to 14.0ft; elev 4.0ft to elev -2.0ft hard digging slag; elev -2.0ft to elev -7.10ft brown clayey silt with some sand.
3 Wet Mix, Primary sample was taken at 12:55, 12ft below swell (Elev. 13.25ft). Secondary sample was taken at 13:05, 8ft below swell (Elev. 17.25ft).

C1

1 Batched from 12:37-15:09, 30 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 23.0ft, ave bottom of ISS elev -2.10ft, swell elev 23.25ft, 25.1ft of ISS.
2 OG to elev 10.0ft coarse sand/gravel with concrete, steel, and debris; elev 10.0ft to elev -1.0ft hard digging slag; elev -1.0ft to -2.1ft brown clayey silt.
3 Thick Mix, No Samples Collected.

DATE: 8/10/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	278.4	CY	8,457.1	CY
MASS ISS TREATED:	977,250.3	LBS	29,684,562.5	LBS
GROUT DELIVERED:	19,820.0	GAL	610,013.0	GAL
PC USED:	58,658.4	LBS	1,784,529.6	LBS
GGBFS USED:	39,116.6	LBS	1,190,791.6	LBS
BENTONITE USED:	976.6	LBS	46,680.7	LBS
DRY RE-AGENT MIX	48.9	TONS	1,487.7	TONS
WATER USED:	123,286.9	LBS	3,764,616.9	LBS
WATER USED:	14,782.6	GAL	451,392.9	GAL
% PC / MASS TREATED:	6.00%	%	6.01%	%
% GGBFS / MASS TREATED:	4.00%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.16%	%
% WATER / MASS TREATED	12.62%	%	12.68%	%
WATER RATIO:	1.25	RATIO	1.25	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	302
TOTAL CELLS COMPLETED TO DATE	32	8,596
CELLS REMAINING	22	4,699
TOTAL CELLS	54	13,295
% COMPLETE	59.3%	64.7%

DAILY CELLS TREATED:

C5				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: P/Cloudy, 80 Deg F

SAMPLING INFO: Primary samples were collected from the center of C-5 @ 15ft below swell. Secondary samples were collected from the center of C-5 @ 7ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

CELL ID	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	24.9	301.9	278.4	977,250.3	8:55	14:25	### ########	19,820	90.50	12.09	29.94	58,658.4	6.00%	39,116.6	4.00%	976.6	0.10%	123,286.9	14,782.6	12.62%	1.26
C5	5.0	24.9	301.9	278.4	977,250.3	8:55	14:25	330	19,820	90.50	12.09	29.94	58,658.4	6.00%	39,116.6	4.00%	976.6	0.10%	123,286.9	14,782.6	12.62%	1.25

MIXING NOTES:

C5

1 Batched from 6:58-13:44, 101 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 23.0ft, ave bottom of ISS elev -2.10ft, swell elev 24.70ft, 25.1ft of ISS.
2 OG to elev 12.0ft coarse sand/gravel with concrete, steel, and debris; elev 12.0ft to elev 2.0ft hard digging slag; elev 2.0ft to 0.0ft silt with product; elev 0.0ft to elev -2.10ft brown clayey silt with some sand and organics.
3 Optimum Mix, Primary sample was taken at 14:45, 15ft below swell (Elev. 9.70ft). Secondary sample was taken at 14:50, 7.0ft below swell (Elev. 17.7ft).

DATE: 8/11/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	534.4	CY	8,991.5	CY
MASS ISS TREATED:	1,875,588.0	LBS	31,560,150.5	LBS
GROUT DELIVERED:	38,526.0	GAL	648,539.0	GAL
PC USED:	113,802.6	LBS	1,898,332.2	LBS
GGBFS USED:	74,999.1	LBS	1,265,790.7	LBS
BENTONITE USED:	1,948.9	LBS	48,629.6	LBS
DRY RE-AGENT MIX	94.4	TONS	1,582.1	TONS
WATER USED:	239,455.1	LBS	4,004,071.9	LBS
WATER USED:	28,711.6	GAL	480,104.5	GAL
% PC / MASS TREATED:	6.07%	%	6.01%	%
% GGBFS / MASS TREATED:	4.00%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.15%	%
% WATER / MASS TREATED	12.77%	%	12.69%	%
WATER RATIO:	1.26	RATIO	1.25	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	481
TOTAL CELLS COMPLETED TO DATE	33	9,076
CELLS REMAINING	21	4,218
TOTAL CELLS	54	13,295
% COMPLETE	61.1%	68.3%

DAILY CELLS TREATED:

C20				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: P/Cloudy, 80 Deg F

SAMPLING INFO: Primary samples were collected from the center of C-20 @ 18ft below swell. Secondary samples were collected from the center of C-20 @ 8ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	30.0	480.9	534.4	1,875,588.0	7:15	17:00	### ########	38,526	94.87	12.68	30.66	113,802.6	6.07%	74,999.1	4.00%	1,948.9	0.10%	239,455.1	28,711.6	12.77%	1.27
C20	5.0	30.0	480.9	534.4	1,875,588.0	7:15	17:00	585	38,526	94.87	12.68	30.66	113,802.6	6.07%	74,999.1	4.00%	1,948.9	0.10%	239,455.1	28,711.6	12.77%	1.26

MIXING NOTES:

C20

1 Batched from 4:12-16:17, 196 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 23.0ft, ave bottom of ISS elev -7.10ft, swell elev 24.75ft, 30.1ft of ISS.
2 OG to elev 10.0ft coarse sand/gravel with concrete, steel, brick, and debris; elev 10.0ft to elev 5.0ft gravel (<2in); elev 5.0ft to 2.0ft gravel (<2in) with product, slag; elev 2.0ft to elev -7.10ft brown clayey silt with some sand and organics.
3 Optimum Mix, Primary sample was taken at 17:10, 18ft below swell (Elev. 6.75ft). Secondary sample was taken at 17:15, 8ft below swell (Elev. 16.75ft).

DATE: 8/12/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	270.1	CY	9,261.6	CY
MASS ISS TREATED:	947,917.6	LBS	32,508,068.1	LBS
GROUT DELIVERED:	19,464.0	GAL	668,003.0	GAL
PC USED:	56,890.3	LBS	1,955,222.5	LBS
GGBFS USED:	37,937.1	LBS	1,303,727.8	LBS
BENTONITE USED:	1,003.1	LBS	49,632.7	LBS
DRY RE-AGENT MIX	47.4	TONS	1,629.5	TONS
WATER USED:	119,360.5	LBS	4,123,432.4	LBS
WATER USED:	14,311.8	GAL	494,416.4	GAL
% PC / MASS TREATED:	6.00%	%	6.01%	%
% GGBFS / MASS TREATED:	4.00%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.11%	%	0.15%	%
% WATER / MASS TREATED	12.59%	%	12.68%	%
WATER RATIO:	1.25	RATIO	1.25	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	2	220
TOTAL CELLS COMPLETED TO DATE	35	9,296
CELLS REMAINING	19	3,998
TOTAL CELLS	54	13,295
% COMPLETE	64.8%	69.9%

DAILY CELLS TREATED:

N12	N8			

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: P/Cloudy, 80 Deg F

SAMPLING INFO: Primary samples were collected from the center of N-12 @ 18ft below swell. Secondary samples were collected from the center of N-18 @ 8ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES														
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	2.0	33.2	220.0	270.1	947,917.6	6:26	13:16	398	19,464	93.31	12.47	30.13	56,890.3	6.00%	37,937.1	4.00%	1,003.1	0.11%	119,360.5	14,311.8	12.59%	1.26
N12	2.0	33.1	110.0	134.8	473,243.9	6:26	10:03	217	9,728	93.00	12.43	30.15	28,408.8	6.00%	18,948.7	4.00%	478.4	0.10%	59,654.9	7,152.9	12.61%	1.25
N8	2.0	33.2	110.0	135.2	474,673.7	10:15	13:16	181	9,736	93.62	12.51	30.10	28,481.5	6.00%	18,988.4	4.00%	524.7	0.11%	59,705.6	7,158.9	12.58%	1.24

MIXING NOTES:

N12

1 Batched from 6:26-10:03, 49 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 26.0ft, ave bottom of ISS elev -7.10ft, swell elev 24.80ft, 33.1ft of ISS.
2 OG to elev 4.0ft coarse sand/gravel (<6in), with concrete, steel, debris, product, tar from elev 18.0ft to 14.0ft; elev 4.0ft to elev -2.0ft hard digging slag; elev -2.0ft to elev -7.10ft brown clayey silt with some sand.
3 Optimum Mix, Sample was taken from N-12

N8

1 Batched from 10:15-13:16, 49 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 26.0ft, ave bottom of ISS elev -7.10ft, swell elev 25.45ft, 33.1ft of ISS.
2 OG to elev 4.0ft coarse sand/gravel (<6in), with concrete, steel, debris, product, tar from elev 18.0ft to 14.0ft; elev 4.0ft to elev -2.0ft hard digging slag; elev -2.0ft to elev -7.10ft brown clayey silt with some sand.
3 Optimum Mix, Primary sample was taken at 14:10, 18ft below swell (Elev. 7.45ft). Secondary sample was taken at 14:15, 8ft below swell (Elev. 17.45ft).

DATE: 8/15/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	358.7	CY	9,620.3	CY
MASS ISS TREATED:	1,259,208.6	LBS	33,767,276.7	LBS
GROUT DELIVERED:	25,610.0	GAL	693,613.0	GAL
PC USED:	75,523.8	LBS	2,030,746.2	LBS
GGBFS USED:	50,373.4	LBS	1,354,101.3	LBS
BENTONITE USED:	1,265.5	LBS	50,898.1	LBS
DRY RE-AGENT MIX	62.9	TONS	1,692.4	TONS
WATER USED:	158,265.4	LBS	4,281,697.9	LBS
WATER USED:	18,976.7	GAL	513,393.0	GAL
% PC / MASS TREATED:	6.00%	%	6.01%	%
% GGBFS / MASS TREATED:	4.00%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.15%	%
% WATER / MASS TREATED	12.57%	%	12.68%	%
WATER RATIO:	1.24	RATIO	1.25	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	2	394
TOTAL CELLS COMPLETED TO DATE	37	9,691
CELLS REMAINING	17	3,604
TOTAL CELLS	54	13,295
% COMPLETE	68.5%	72.9%

DAILY CELLS TREATED:

C3	C4			

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: P/Cloudy, Afternoon Rain, 80 Deg F

SAMPLING INFO: Primary samples were collected from the center of C-4 @ 18ft below swell. Secondary samples were collected from the center of C-4 @ 7ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	24.6	394.4	358.7	1,259,208.6	8:00	15:15	### ########	25,610	93.94	12.55	30.13	75,523.8	6.00%	50,373.4	4.00%	1,265.5	0.10%	158,265.4	18,976.7	12.57%	1.26
C3	5.0	24.5	165.1	149.8	525,907.2	8:00	15:15	435	10,756	94.25	12.59	30.20	31,531.2	6.00%	21,030.9	4.00%	529.1	0.10%	66,075.8	7,922.8	12.56%	1.24
C4	5.0	24.6	229.3	208.9	733,301.4	8:00	15:15	435	14,854	93.62	12.51	30.05	43,992.6	6.00%	29,342.5	4.00%	736.3	0.10%	92,189.6	11,053.9	12.57%	1.24

MIXING NOTES:

C3

1 Cells C3 and C4 mixed together as one. Batched from 6:39-14:45, 55 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 23.0ft, ave bottom of ISS elev -2.10ft, swell elev 26.65ft, 25.10ft of ISS.
2 OG to elev 15.0ft coarse sand/gravel (<6in) with concrete, steel, and debris; elev 15.0ft to elev 4.0ft fine sand and ash; elev 4.0ft to 2.0ft rock with product; elev 2.0ft to elev -2.10ft brown clayey silt with some sand and organics.
3 Optimum Mix, Sample was taken from C-4

C4

1 Cells C3 and C4 mixed together as one. Batched from 6:39-14:45, 75 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 23.0ft, ave bottom of ISS elev -2.10ft, swell elev 26.65ft, 25.10ft of ISS.
2 OG to elev 15.0ft coarse sand/gravel (<6in) with concrete, steel, and debris; elev 15.0ft to elev 4.0ft fine sand and ash; elev 4.0ft to 2.0ft rock with product; elev 2.0ft to elev -2.10ft brown clayey silt with some sand and organics.
3 Optimum Mix, Primary sample was taken at 15:35, 18ft below swell (Elev. 8.65ft). Secondary sample was taken at 15:40, 7ft below swell (Elev. 19.65ft).

DATE: 8/16/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	486.3	CY	10,106.6	CY
MASS ISS TREATED:	1,706,820.6	LBS	35,474,097.3	LBS
GROUT DELIVERED:	34,471.0	GAL	728,084.0	GAL
PC USED:	103,048.5	LBS	2,133,794.7	LBS
GGBFS USED:	68,696.0	LBS	1,422,797.3	LBS
BENTONITE USED:	1,750.5	LBS	52,648.6	LBS
DRY RE-AGENT MIX	85.9	TONS	1,778.3	TONS
WATER USED:	214,214.4	LBS	4,495,912.2	LBS
WATER USED:	25,685.2	GAL	539,078.2	GAL
% PC / MASS TREATED:	6.04%	%	6.02%	%
% GGBFS / MASS TREATED:	4.02%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.15%	%
% WATER / MASS TREATED	12.55%	%	12.67%	%
WATER RATIO:	1.23	RATIO	1.25	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	439
TOTAL CELLS COMPLETED TO DATE	38	10,130
CELLS REMAINING	16	3,165
TOTAL CELLS	54	13,295
% COMPLETE	70.4%	76.2%

DAILY CELLS TREATED:

C23				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: P/Cloudy, 80 Deg F

SAMPLING INFO: Primary samples were collected from the center of C-23 @ 18ft below swell. Secondary samples were collected from the center of C-23 @ 8ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	29.9	439.1	486.3	1,706,820.6	7:15	17:00	### ########	34,471	93.00	12.43	30.09	103,048.5	6.04%	68,696.0	4.02%	1,750.5	0.10%	214,214.4	25,685.2	12.55%	1.25
C23	5.0	29.9	439.1	486.3	1,706,820.6	7:15	17:00	585	34,471	93.00	12.43	30.09	103,048.5	6.04%	68,696.0	4.02%	1,750.5	0.10%	214,214.4	25,685.2	12.55%	1.23

MIXING NOTES:

C23

1 Batched from 5:38-17:08, 175 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 23.0ft, ave bottom of ISS elev -7.10ft, swell elev 24.75ft, 30.10ft of ISS.

2 OG to elev 10.0ft coarse sand/gravel with concrete, brick, steel, and debris; elev 10.0ft to elev 5.0ft rock (<2in) with some sand; elev 5.0ft to elev 2.0ft slag, rock, with product; elev 2.0ft to elev 0.0ft sand with product; elev 0.0ft to elev -7.10ft brown clayey silt with some sand and organics.

3 Optimum Mix, Primary sample was taken at 17:10, 18ft below swell (Elev. 6.75ft). Secondary sample was taken at 17:15, 8ft below swell (Elev. 16.75ft).

DATE: 8/17/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	308.6	CY	10,415.2	CY
MASS ISS TREATED:	1,083,167.8	LBS	36,557,265.1	LBS
GROUT DELIVERED:	22,368.0	GAL	750,452.0	GAL
PC USED:	64,983.5	LBS	2,198,778.2	LBS
GGBFS USED:	43,369.3	LBS	1,466,166.6	LBS
BENTONITE USED:	1,086.9	LBS	53,735.5	LBS
DRY RE-AGENT MIX	54.2	TONS	1,832.5	TONS
WATER USED:	136,430.9	LBS	4,632,343.1	LBS
WATER USED:	16,358.6	GAL	555,436.8	GAL
% PC / MASS TREATED:	6.00%	%	6.01%	%
% GGBFS / MASS TREATED:	4.00%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.15%	%
% WATER / MASS TREATED	12.60%	%	12.67%	%
WATER RATIO:	1.25	RATIO	1.25	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	344
TOTAL CELLS COMPLETED TO DATE	39	10,474
CELLS REMAINING	15	2,820
TOTAL CELLS	54	13,295
% COMPLETE	72.2%	78.8%

DAILY CELLS TREATED:

C2				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: P/Cloudy, Afternoon Rain, 80 Deg F

SAMPLING INFO: Primary samples were collected from the center of C-2 @ 12ft below swell. Secondary samples were collected from the center of C-2 @ 7ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	24.2	344.3	308.6	1,083,167.8	7:30	13:15	### ########	22,368	94.25	12.59	30.21	64,983.5	6.00%	43,369.3	4.00%	1,086.9	0.10%	136,430.9	16,358.6	12.60%	1.26
C2	5.0	24.2	344.3	308.6	1,083,167.8	7:30	13:15	345	22,368	94.25	12.59	30.21	64,983.5	6.00%	43,369.3	4.00%	1,086.9	0.10%	136,430.9	16,358.6	12.60%	1.25

MIXING NOTES:

C2

1 Batched from 5:37-12:41, 112 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 23.0ft, ave bottom of ISS elev -2.10ft, swell elev 26.20ft, 25.10ft of ISS.

2 OG to elev 16.0ft coarse sand/gravel with concrete, steel, and debris; elev 16.0ft to elev 8.0ft gravel (>6in) with some sand; elev 8.0ft to elev 4.0ft sand and ash; elev 4.0ft to elev 0.0ft slag and product; elev 0.0ft to elev -2.10ft brown clayey silt with some sand and organics.

3 Optimum Mix, Primary sample was taken at 13:30, 12ft below swell (Elev. 14.20ft). Secondary sample was taken at 13:40, 7ft below swell (Elev. 19.20ft).

DATE:	8/18/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	495.5	CY	10,910.7	CY
MASS ISS TREATED:	1,739,166.0	LBS	38,296,431.1	LBS
GROUT DELIVERED:	35,670.0	GAL	786,122.0	GAL
PC USED:	104,410.9	LBS	2,303,189.1	LBS
GGBFS USED:	69,595.5	LBS	1,535,762.2	LBS
BENTONITE USED:	1,765.9	LBS	55,501.4	LBS
DRY RE-AGENT MIX	87.0	TONS	1,919.5	TONS
WATER USED:	218,041.6	LBS	4,850,384.7	LBS
WATER USED:	26,144.1	GAL	581,580.9	GAL
% PC / MASS TREATED:	6.00%	%	6.01%	%
% GGBFS / MASS TREATED:	4.00%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.14%	%
% WATER / MASS TREATED	12.54%	%	12.67%	%
WATER RATIO:	1.24	RATIO	1.25	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	446
TOTAL CELLS COMPLETED TO DATE	40	10,920
CELLS REMAINING	14	2,375
TOTAL CELLS	54	13,295
% COMPLETE	74.1%	82.1%

DAILY CELLS TREATED:

C24				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: P/Cloudy, 80 Deg F

SAMPLING INFO: Primary samples were collected from the center of C-24 @ 20ft below swell. Secondary samples were collected from the center of C-24 @ 15ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

CELL ID	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	30.0	445.9	495.5	1,739,166.0	7:30	17:00	### ########	35,670	90.50	12.09	30.10	104,410.9	6.00%	69,595.5	4.00%	1,765.9	0.10%	218,041.6	26,144.1	12.54%	1.25
C24	5.0	30.0	445.9	495.5	1,739,166.0	7:30	17:00	570	35,670	90.50	12.09	30.10	104,410.9	6.00%	69,595.5	4.00%	1,765.9	0.10%	218,041.6	26,144.1	12.54%	1.24

MIXING NOTES:

C24

1 Batched from 5:21-16:40, 178 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 23.0ft, ave bottom of ISS elev -7.10ft, swell elev 25.10ft, 30.10ft of ISS.
2 OG to elev 6.0ft coarse sand/gravel with concrete, steel, and debris; elev 6.0ft to elev 0.0ft gravel (>6in) with some sand and product; elev 0.0ft to elev -6.0ft rock and product; elev -6.0ft to elev -7.10ft brown clayey silt with some sand and organics.
3 Optimum Mix, Primary sample was taken at 17:25, 20ft below swell (Elev. 5.10ft). Secondary sample was taken at 17:30, 15ft below swell (Elev. 10.1ft).

DATE: 8/19/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	270.1	CY	11,180.7	CY
MASS ISS TREATED:	947,917.6	LBS	39,244,348.7	LBS
GROUT DELIVERED:	19,864.0	GAL	805,986.0	GAL
PC USED:	56,903.5	LBS	2,360,092.6	LBS
GGBFS USED:	38,248.0	LBS	1,574,010.2	LBS
BENTONITE USED:	994.3	LBS	56,495.7	LBS
DRY RE-AGENT MIX	47.6	TONS	1,967.1	TONS
WATER USED:	118,915.1	LBS	4,969,299.8	LBS
WATER USED:	14,258.4	GAL	595,839.3	GAL
% PC / MASS TREATED:	6.00%	%	6.01%	%
% GGBFS / MASS TREATED:	4.03%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.14%	%
% WATER / MASS TREATED	12.54%	%	12.66%	%
WATER RATIO:	1.24	RATIO	1.25	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	2	220
TOTAL CELLS COMPLETED TO DATE	42	11,140
CELLS REMAINING	12	2,155
TOTAL CELLS	54	13,295
% COMPLETE	77.8%	83.8%

DAILY CELLS TREATED:

N11	N7			

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: P/Cloudy, 80 Deg F

SAMPLING INFO: Primary samples were collected from the center of N-7 @ 15ft below swell. Secondary samples were collected from the center of N-7 @ 10ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	2.0	33.2	220.0	270.1	947,917.6	7:00	12:30	### ########	19,864	92.69	12.38	30.04	56,903.5	6.00%	38,248.0	4.03%	994.3	0.10%	118,915.1	14,258.4	12.54%	1.25
N11	2.0	33.1	110.0	134.8	473,243.9	7:00	9:00	120	9,961	93.00	12.43	30.12	28,413.2	6.00%	18,992.8	4.01%	480.6	0.10%	59,699.0	7,158.2	12.61%	1.25
N7	2.0	33.2	110.0	135.2	474,673.7	10:00	12:30	150	9,903	92.38	12.34	29.96	28,490.3	6.00%	19,255.2	4.06%	513.7	0.11%	59,216.2	7,100.3	12.48%	1.23

MIXING NOTES:

N11

1 Batched from 5:29-9:23, 49 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 26.0ft, ave bottom of ISS elev -7.10ft, swell elev 25.30ft, 33.1ft of ISS.
2 OG to elev 6.0ft coarse sand/gravel with concrete, steel, and debris; elev 6.0ft to elev 0.0ft gravel (>6in) with some sand and product; elev 0.0ft to elev -6.0ft rock and product; elev -6.0ft to elev -7.10ft brown clayey silt with some sand and organics.
3 Wet of Optimum Mix. No Samples Collected

N7

1 Batched from 9:33-12:15, 49 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 26.0ft, ave bottom of ISS elev -7.10ft, swell elev 26.25ft, 33.1ft of ISS.
2 OG to elev 13.0ft coarse sand/gravel with concrete, steel, and debris; elev 13.0ft to elev 6.0ft sand and silt; elev 6.0ft to elev 4.0ft rock and product; elev 4.0ft to elev -7.10ft brown clayey silt with some sand and organics.
3 Optimum Mix, Primary sample was taken at 12:50, 15ft below swell (Elev. 11.25ft). Secondary sample was taken at 13:00, 10ft below swell (Elev. 16:25ft).

DATE: 8/22/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	361.5	CY	11,542.2	CY
MASS ISS TREATED:	1,268,918.8	LBS	40,513,267.5	LBS
GROUT DELIVERED:	25,418.0	GAL	831,404.0	GAL
PC USED:	76,218.2	LBS	2,436,310.8	LBS
GGBFS USED:	50,730.6	LBS	1,624,740.7	LBS
BENTONITE USED:	1,289.7	LBS	57,785.4	LBS
DRY RE-AGENT MIX	63.5	TONS	2,030.5	TONS
WATER USED:	159,844.0	LBS	5,129,143.8	LBS
WATER USED:	19,165.9	GAL	615,005.2	GAL
% PC / MASS TREATED:	6.01%	%	6.01%	%
% GGBFS / MASS TREATED:	4.00%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.14%	%
% WATER / MASS TREATED	12.60%	%	12.66%	%
WATER RATIO:	1.25	RATIO	1.25	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	2	316
TOTAL CELLS COMPLETED TO DATE	44	11,456
CELLS REMAINING	10	1,838
TOTAL CELLS	54	13,295
% COMPLETE	81.5%	86.2%

DAILY CELLS TREATED:

C25	N10			

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: P/Cloudy, 80 Deg F

SAMPLING INFO: Primary samples were collected from the center of C-25 @ 18ft below swell. Secondary samples were collected from the center of C-25 @ 12ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES														
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	3.5	31.4	316.1	361.5	1,268,918.8	6:51	15:25	502	25,418	93.00	12.43	30.02	76,218.2	6.01%	50,730.6	4.00%	1,289.7	0.10%	159,844.0	19,165.9	12.60%	1.26
C25	5.0	29.7	206.1	226.7	795,674.9	6:51	12:01	310	15,987	93.62	12.51	29.99	47,776.4	6.00%	31,812.7	4.00%	804.7	0.10%	100,067.8	11,998.5	12.58%	1.24
N10	2.0	33.1	110.0	134.8	473,243.9	12:13	15:25	192	9,431	92.38	12.34	30.04	28,441.8	6.01%	18,917.9	4.00%	485.0	0.10%	59,776.1	7,167.4	12.63%	1.25

MIXING NOTES:

C25

1 Batched from 6:51-12:01, 82 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 23.0ft, ave bottom of ISS elev -7.10ft, swell elev 24.70ft, 33.1ft of ISS.
2 OG to elev 16.0ft coarse sand/gravel with concrete, steel, and debris; elev 16.0ft to elev 8.0ft gravel (>6in) with some sand; elev 8.0ft to elev 4.0ft sand and ash; elev 4.0ft to elev 0.0ft slag and product; elev 0.0ft to elev -2.10ft brown clayey silt with some sand and organics.
3 Optimum Mix, Primary sample was taken at 13:20, 18ft below swell (Elev. 6.70ft). Secondary sample was taken at 13:30, 12ft below swell (Elev. 12.70ft).

N10

1 Batched from 12:13-15:25, 49 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 23.0ft, ave bottom of ISS elev -7.10ft, swell elev 25.70ft, 33.1ft of ISS.
2 OG to elev 13.0ft coarse sand/gravel with concrete, steel, and debris; elev 13.0ft to elev 6.0ft sand and silt; elev 6.0ft to elev 4.0ft rock and product; elev 4.0ft to elev -7.10ft brown clayey silt with some sand and organics.
3 Wet of Optimum Mix. No Samples Collected

DATE: 8/23/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	432.9	CY	11,975.1	CY
MASS ISS TREATED:	1,519,305.3	LBS	42,032,572.9	LBS
GROUT DELIVERED:	31,487.0	GAL	862,891.0	GAL
PC USED:	90,989.2	LBS	2,527,300.0	LBS
GGBFS USED:	61,180.5	LBS	1,685,921.2	LBS
BENTONITE USED:	1,530.0	LBS	59,315.4	LBS
DRY RE-AGENT MIX	76.1	TONS	2,106.6	TONS
WATER USED:	190,042.9	LBS	5,319,186.7	LBS
WATER USED:	22,786.9	GAL	637,792.2	GAL
% PC / MASS TREATED:	5.99%	%	6.01%	%
% GGBFS / MASS TREATED:	4.03%	%	4.01%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.14%	%
% WATER / MASS TREATED	12.51%	%	12.65%	%
WATER RATIO:	1.24	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	392
TOTAL CELLS COMPLETED TO DATE	45	11,848
CELLS REMAINING	9	1,446
TOTAL CELLS	54	13,295
% COMPLETE	83.3%	89.1%

DAILY CELLS TREATED:

C26				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: P/Cloudy, 88 Deg F

SAMPLING INFO: Primary samples were collected from the center of C-26 @ 15ft below swell. Secondary samples were collected from the center of C-26 @ 10ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	29.8	392.2	432.9	1,519,305.3	5:23	14:31	548	31,487	92.38	12.34	29.97	90,989.2	5.99%	61,180.5	4.03%	1,530.0	0.10%	190,042.9	22,786.9	12.51%	1.25
C26	5.0	29.8	392.2	432.9	1,519,305.3	5:23	14:31	548	31,487	92.38	12.34	29.97	90,989.2	5.99%	61,180.5	4.03%	1,530.0	0.10%	190,042.9	22,786.9	12.51%	1.24

MIXING NOTES:

C26

1 Batched from 5:23-14:31, 155 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 23.0ft, ave bottom of ISS elev -7.10ft, swell elev 24.25ft, 33.1ft of ISS.
2 OG to elev 16.0ft coarse sand/gravel with concrete, steel, and debris; elev 16.0ft to elev 8.0ft gravel (>6in) with some sand; elev 8.0ft to elev 4.0ft sand and ash; elev 4.0ft to elev 0.0ft slag and product; elev 0.0ft to elev -2.10ft brown clayey silt with some sand and organics.
3 Optimum Mix, Primary sample was taken at 13:30, 15ft below swell (Elev. 9.25ft). Secondary sample was taken at 13:40, 10ft below swell (Elev. 14:25ft).

DATE: 8/24/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	406.5	CY	12,381.6	CY
MASS ISS TREATED:	1,426,880.5	LBS	43,459,453.4	LBS
GROUT DELIVERED:	30,957.0	GAL	893,848.0	GAL
PC USED:	90,074.3	LBS	2,617,374.3	LBS
GGBFS USED:	60,243.5	LBS	1,746,164.7	LBS
BENTONITE USED:	1,699.8	LBS	61,015.1	LBS
DRY RE-AGENT MIX	75.2	TONS	2,181.8	TONS
WATER USED:	188,504.1	LBS	5,507,690.7	LBS
WATER USED:	22,602.4	GAL	660,394.6	GAL
% PC / MASS TREATED:	6.31%	%	6.02%	%
% GGBFS / MASS TREATED:	4.22%	%	4.02%	%
% BENTONITE/ MASS TREATED:	0.12%	%	0.14%	%
% WATER / MASS TREATED	13.21%	%	12.67%	%
WATER RATIO:	1.24	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	3	330
TOTAL CELLS COMPLETED TO DATE	48	12,178
CELLS REMAINING	6	1,116
TOTAL CELLS	54	13,295
% COMPLETE	88.9%	91.6%

DAILY CELLS TREATED:

N9	N6	N2		

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: P/Cloudy, 92 deg. F

SAMPLING INFO: Primary samples were collected from the center of N-6 @ 18ft below swell. Secondary samples were collected from the center of N-6 @ 12ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	2.0	33.3	329.9	406.5	1,426,880.5	6:43	17:16	569	30,957	92.79	12.40	29.99	90,074.3	6.31%	60,243.5	4.22%	1,699.8	0.12%	188,504.1	22,602.4	13.21%	1.25
N9	2.0	33.1	110.0	134.8	473,243.9	6:43	9:56	193	9,849	91.75	12.26	29.95	28,673.3	6.06%	19,319.1	4.08%	520.3	0.11%	60,016.4	7,196.2	12.68%	1.24
N6	2.0	33.3	110.0	135.6	476,103.4	10:47	14:07	200	10,013	93.62	12.51	30.01	28,329.4	5.95%	19,052.3	4.00%	610.7	0.13%	61,270.9	7,346.6	12.87%	1.28
N2	2.0	33.4	110.0	136.0	477,533.2	14:20	17:16	176	11,095	93.00	12.43	30.00	33,071.5	6.93%	21,872.1	4.58%	568.8	0.12%	67,216.7	8,059.6	14.08%	1.21

MIXING NOTES:

N9

1 Batched from 6:43-9:56, 49 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 26.0ft, ave bottom of ISS elev -7.10ft, swell elev 26.30ft, 33.1ft of ISS.
2 OG to elev 13.0ft coarse sand/gravel with concrete, steel, and debris; elev 13.0ft to elev 6.0ft course sand, baseball size rock; elev 6.0ft to elev 4.0ft rock and product; elev 4.0ft to elev -7.10ft brown clayey silt with some sand and organics.
3 Optimum Mix. No Samples Collected

N6

1 Batched from 10:47-14:07, 50 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 26.0ft, ave bottom of ISS elev -7.10ft, swell elev 25.20ft, 33.1ft of ISS.
2 OG to elev 13.0ft coarse sand/gravel with concrete, steel, and debris; elev 13.0ft to elev 6.0ft course sand, baseball size rock; elev 6.0ft to elev 4.0ft rock and product; elev 4.0ft to elev -7.10ft brown clayey silt with some sand and organics.
3 Optimum Mix, Primary sample was taken at 14:40, 18ft below swell (Elev. 7.20ft). Secondary sample was taken at 14:45, 12ft below swell (Elev. 13.20ft).

N2

1 Batched from 14:20-17:16, 55 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 26.0ft, ave bottom of ISS elev -7.10ft, swell elev 25.70ft, 33.1ft of ISS.
2 OG to elev 13.0ft coarse sand/gravel with concrete, steel, and debris; elev 13.0ft to elev 6.0ft course sand, baseball size rock; elev 6.0ft to elev 4.0ft rock and product; elev 4.0ft to elev -7.10ft brown clayey silt with some sand and organics.
3 Optimum Mix. No Samples Collected

DATE: 8/25/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	272.1	CY	12,653.7	CY
MASS ISS TREATED:	955,066.3	LBS	44,414,519.7	LBS
GROUT DELIVERED:	19,825.0	GAL	913,673.0	GAL
PC USED:	59,284.5	LBS	2,676,658.8	LBS
GGBFS USED:	38,841.0	LBS	1,785,005.8	LBS
BENTONITE USED:	1,036.2	LBS	62,051.3	LBS
DRY RE-AGENT MIX	49.1	TONS	2,230.8	TONS
WATER USED:	118,566.8	LBS	5,626,257.5	LBS
WATER USED:	14,216.6	GAL	674,611.2	GAL
% PC / MASS TREATED:	6.21%	%	6.03%	%
% GGBFS / MASS TREATED:	4.07%	%	4.02%	%
% BENTONITE/ MASS TREATED:	0.11%	%	0.14%	%
% WATER / MASS TREATED	12.41%	%	12.67%	%
WATER RATIO:	1.20	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	2	220
TOTAL CELLS COMPLETED TO DATE	50	12,398
CELLS REMAINING	4	896
TOTAL CELLS	54	13,295
% COMPLETE	92.6%	93.3%

DAILY CELLS TREATED:

N1	N4			

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: P/Cloudy, 85 deg. F

SAMPLING INFO: Primary samples were collected from the center of N-1 @ 17ft below swell. Secondary samples were collected from the center of N-1 @ 7ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	2.0	33.4	220.0	272.1	955,066.3	11:14	17:15	341	19,825	93.31	12.47	30.00	59,284.5	6.21%	38,841.0	4.07%	1,036.2	0.11%	118,566.8	14,216.6	12.41%	1.21
N1	2.0	33.4	110.0	136.0	477,533.2	11:14	14:18	184	9,929	93.00	12.43	30.01	28,735.1	6.02%	19,660.8	4.12%	524.7	0.11%	60,208.2	7,219.2	12.61%	1.23
N4	2.0	33.4	110.0	136.0	477,533.2	14:38	17:15	157	9,896	93.62	12.51	29.98	30,549.5	6.40%	19,180.2	4.02%	511.5	0.11%	58,358.6	6,997.4	12.22%	1.16

MIXING NOTES:

N1

1 Batched from 11:14 -14:18, 50 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 26.0ft, ave bottom of ISS elev -7.10ft, swell elev 25.15ft, 33.1ft of ISS.
2 OG to elev 13.0ft coarse sand/gravel with concrete, steel, and debris; elev 13.0ft to elev 6.0ft course sand, baseball size rock; elev 6.0ft to elev 4.0ft rock and product; elev 4.0ft to elev -7.10ft brown clayey silt with some sand and organics.
3 Optimum Mix, Primary sample was taken at 14:50, 17ft below swell (Elev. 8.15ft). Secondary sample was taken at 15:00, 7ft below swell (Elev. 18.15ft).

N4

1 Batched from 14:38-17:15, 48 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 26.0ft, ave bottom of ISS elev -7.10ft, swell elev 26.00ft, 33.1ft of ISS.
2 OG to elev 16.0ft coarse sand/gravel with concrete, steel, and debris; elev 16.0ft to elev 8.0ft gravel (>6in) with some sand; elev 8.0ft to elev 4.0ft sand and ash; elev 4.0ft to elev 0.0ft slag and product; elev 0.0ft to elev -2.10ft brown clayey silt with some sand and organics.
3 Optimum Mix. No Samples Collected

DATE: 8/26/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	271.7	CY	12,925.4	CY
MASS ISS TREATED:	953,636.6	LBS	45,368,156.3	LBS
GROUT DELIVERED:	18,958.0	GAL	932,631.0	GAL
PC USED:	56,993.9	LBS	2,733,652.7	LBS
GGBFS USED:	38,056.2	LBS	1,823,062.0	LBS
BENTONITE USED:	1,042.8	LBS	63,094.1	LBS
DRY RE-AGENT MIX	47.5	TONS	2,278.4	TONS
WATER USED:	118,364.0	LBS	5,744,621.5	LBS
WATER USED:	14,192.3	GAL	688,803.5	GAL
% PC / MASS TREATED:	5.98%	%	6.03%	%
% GGBFS / MASS TREATED:	3.99%	%	4.02%	%
% BENTONITE/ MASS TREATED:	0.11%	%	0.14%	%
% WATER / MASS TREATED	12.41%	%	12.66%	%
WATER RATIO:	1.23	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	2	220
TOTAL CELLS COMPLETED TO DATE	52	12,618
CELLS REMAINING	2	676
TOTAL CELLS	54	13,295
% COMPLETE	96.3%	94.9%

DAILY CELLS TREATED:

N3	N5			

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Rain, 85 deg. F

SAMPLING INFO: Primary samples were collected from the center of N-3 @ 15ft below swell. Secondary samples were collected from the center of N-3 @ 13ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

CELL ID	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	2.0	33.4	220.0	271.7	953,636.6	6:52	12:50	349	18,958	92.69	12.38	29.98	56,993.9	5.98%	38,056.2	3.99%	1,042.8	0.11%	118,364.0	14,192.3	12.41%	1.25
N3	2.0	33.4	110.0	136.0	477,533.2	6:52	9:45	173	9,479	93.00	12.43	29.99	28,554.3	5.98%	19,092.0	4.00%	504.9	0.11%	59,341.8	7,115.3	12.43%	1.23
N5	2.0	33.3	110.0	135.6	476,103.4	9:54	12:50	176	9,479	92.38	12.34	29.97	28,439.6	5.97%	18,964.2	3.98%	537.9	0.11%	59,022.2	7,077.0	12.40%	1.23

MIXING NOTES:

N3

1 Batched from 6:52-9:45, 49 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 26.0ft, ave bottom of ISS elev -7.10ft, swell elev 26.40ft, 33.1ft of ISS.
2 OG to elev 16.0ft coarse sand/gravel with concrete, steel, and debris; elev 16.0ft to elev 8.0ft gravel (>6in) with some sand; elev 8.0ft to elev 4.0ft sand and ash; elev 4.0ft to elev 0.0ft slag and product; elev 0.0ft to elev -2.10ft brown clayey silt with some sand and organics.
3 Optimum Mix, Primary sample was taken at 10:40, 15ft below swell (Elev. 11.40ft). Secondary sample was taken at 10:45, 13ft below swell (Elev. 13.40ft).

N5

1 Batched from 09:54-12:50, 48 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 26.0ft, ave bottom of ISS elev -7.10ft, swell elev 26.00ft, 33.1ft of ISS.
2 OG to elev 13.0ft coarse sand/gravel with concrete, steel, and debris; elev 13.0ft to elev 6.0ft course sand, baseball size rock; elev 6.0ft to elev 4.0ft rock and product; elev 4.0ft to elev -7.10ft brown clayey silt with some sand and organics.
3 Optimum Mix. No Samples Collected

DATE: 8/29/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	386.6	CY	13,312.0	CY
MASS ISS TREATED:	1,356,982.8	LBS	46,725,139.1	LBS
GROUT DELIVERED:	26,750.0	GAL	959,381.0	GAL
PC USED:	79,236.3	LBS	2,812,889.0	LBS
GGBFS USED:	53,649.5	LBS	1,876,711.5	LBS
BENTONITE USED:	1,373.5	LBS	64,467.6	LBS
DRY RE-AGENT MIX	66.4	TONS	2,344.8	TONS
WATER USED:	165,875.8	LBS	5,910,497.3	LBS
WATER USED:	19,889.2	GAL	708,692.7	GAL
% PC / MASS TREATED:	5.84%	%	6.02%	%
% GGBFS / MASS TREATED:	3.95%	%	4.02%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.14%	%
% WATER / MASS TREATED	12.22%	%	12.65%	%
WATER RATIO:	1.24	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	419
TOTAL CELLS COMPLETED TO DATE	53	13,037
CELLS REMAINING	1	257
TOTAL CELLS	54	13,295
% COMPLETE	98.1%	98.1%

DAILY CELLS TREATED:

C11				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Partly Cloudy, 85 deg. F

SAMPLING INFO: Primary samples were collected from the center of C-11 @ 16ft below swell. Secondary samples were collected from the center of C-11 @ 14ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES													
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	24.9	419.2	386.6	1,356,982.8	6:18	15:37	559	26,750	93.62	12.51	29.98	79,236.3	5.84%	53,649.5	3.95%	1,373.5	0.10%	165,875.8	19,889.2	12.22%	1.25
C11	5.0	24.9	419.2	386.6	1,356,982.8	6:18	15:37	559	26,750	93.62	12.51	29.98	79,236.3	5.84%	53,649.5	3.95%	1,373.5	0.10%	165,875.8	19,889.2	12.22%	1.24

MIXING NOTES:

C11

1 Batched from 06:18-15:37, 138 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 23.0ft, ave bottom of ISS elev -2.10ft, swell elev 24..40ft, 25.1ft of ISS.
2 OG to elev 16.0ft coarse sand/gravel with concrete, steel, and debris; elev 16.0ft to elev 8.0ft gravel (>6in) with some sand; elev 8.0ft to elev 4.0ft sand and ash; elev 4.0ft to elev 0.0ft slag and product; elev 0.0ft to elev -2.10ft brown clayey silt with some sand and organics.
3 Optimum Mix, Primary sample was taken at 16:45, 16ft below swell (Elev. 8.40ft). Secondary sample was taken at 16:50, 14ft below swell (Elev. 10.40ft).

DATE: 8/30/2022

ISS MIXING REPORT

CLIENT: NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
PROJECT NAME: TROY (WATER STREET) SITE - PHASE 1A - AREA 2
PROJECT LOCATION: TROY, NEW YORK
SITE NO.: 4-42-029

SUMMARY:

	DAILY		TOTALS TO DATE	
VOLUME ISS TREATED:	235.3	CY	13,547.3	CY
MASS ISS TREATED:	825,997.6	LBS	47,551,136.7	LBS
GROUT DELIVERED:	17,618.0	GAL	976,999.0	GAL
PC USED:	49,734.1	LBS	2,862,623.1	LBS
GGBFS USED:	32,482.9	LBS	1,909,194.4	LBS
BENTONITE USED:	837.8	LBS	65,305.3	LBS
DRY RE-AGENT MIX	41.1	TONS	2,385.9	TONS
WATER USED:	104,563.0	LBS	6,015,060.4	LBS
WATER USED:	12,537.5	GAL	721,230.3	GAL
% PC / MASS TREATED:	6.02%	%	6.02%	%
% GGBFS / MASS TREATED:	3.93%	%	4.02%	%
% BENTONITE/ MASS TREATED:	0.10%	%	0.14%	%
% WATER / MASS TREATED	12.66%	%	12.65%	%
WATER RATIO:	1.26	RATIO	1.24	RATIO

COMPLETION STATUS:

	QTY	AREA (SF)
DAILY CELLS COMPLETED	1	257
TOTAL CELLS COMPLETED TO DATE	54	13,295
CELLS REMAINING	-	-
TOTAL CELLS	54	13,295
% COMPLETE	100.0%	100.0%

DAILY CELLS TREATED:

C12				

ADDITIONAL COMMENTS:

WEATHER CONDITIONS: Partly Cloudy, 89 deg. F

SAMPLING INFO: Primary samples were collected from the center of C-12 @ 18ft below swell. Secondary samples were collected from the center of C-12 @ 13ft below swell. Samples were collected for 7, 14, and 28 Day UCS and Hydraulic Conductivity.

EQUIPMENT USED: JM 30 grout plant and Appurtenances, Cement and Slag Silos with Bentonite Silo, Liberty grout pump, Siemens Flow Meter, LB800 Excavator, IR Compressor, Pneumatic Sampling Apparatus.

ADDITIONAL COMMENTS:

DAILY PROGRESS:

	ISS TREATMENT CELL DESIGN					PRODUTION TIME			PRODUCTION VALUES														
CELL ID	PRE-CUT	ISS DEPTH	AREA	VOLUME	MASS	START TIME	END TIME	DURATION	GROUT	GROUT DENSITY		GROUT VISC	PC DELIVERED		GGBFS DELIVERED		BENTONITE DELIVERED		WATER DELIVERED			WATER/RE-
	FT	FT	SF	CY	LBS	HH:MM	HH:MM	MIN	GALLONS	PCF	LBS/GAL	SEC	LBS	% MASS	LBS	% MASS	LBS	% MASS	LBS	GAL	% MASS	RATIO
TOTAL	5.0	24.7	257.2	235.3	825,997.6	8:11	14:34	383	17,618	93.00	12.43	30.00	49,734.1	6.02%	32,482.9	3.93%	837.8	0.10%	104,563.0	12,537.5	12.66%	1.27
C12	5.0	24.7	257.2	235.3	825,997.6	8:11	14:34	383	17,618	93.00	12.43	30.00	49,734.1	6.02%	32,482.9	3.93%	837.8	0.10%	104,563.0	12,537.5	12.66%	1.26

MIXING NOTES:

C12

1 Batched from 08:11-14:34, 85 batches, 1.25/1 water to reagent ratio, 10% reagent with .10% Bentonite. Ave OG elev 28.0ft, ave pre-cut elev 23.0ft, ave bottom of ISS elev -2.10ft, swell elev 24.85ft, 25.1ft of ISS.
2 OG to elev 15.0ft coarse sand/gravel (<6in) with concrete, steel, and debris; elev 15.0ft to elev 4.0ft fine sand and ash; elev 4.0ft to 2.0ft rock with product; elev 2.0ft to elev -2.10ft brown clayey silt with some sand and organics.
3 Optimum Mix, Primary sample was taken at 15:00, 18ft below swell (Elev. 11.40ft). Secondary sample was taken at 15:10, 13ft below swell (Elev. 13.40ft).

Appendix J-3: Hydraulic Conductivity Results

PW Laboratories, Inc.
6544 Fremont Road - East Syracuse, New York 13057
Office 315.437.1420 ~ Fax 315.503-3058~ pwlabsinc@hotmail.com

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	June 29, 2022	**Test Start Date:**	June 27, 2022
Project #:	L-22095	**Date Cast:**	June 21, 2022
Lab I.D. #:	42689	**Elevation (Feet):**	20.00
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-37A Primary Center | 17:15 | 9% Portland/Slag | 0.8% Bentonite | 1/1 Water to Reagent Ratio | Cylinder #7 (6 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	21.7
Final Degree of Saturation (B Value) (%):	100.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	99.0
Final Moisture Content (% of Dry Weight):	23.1	**Final Dry Unit Weight (PCF):**		99.0	

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.0	**Initial Height (cm):**	11.10	**Initial Diameter (cm):**	7.60
Final Gradient:	19.0	**Final Height (cm):**	11.10	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

6.00×10^{-8}	6.01×10^{-8}
6.01×10^{-8}	6.02×10^{-8}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): **6.01×10^{-8}**

Remarks:

PW Laboratories, Inc.
6544 Fremont Road - East Syracuse, New York 13057
Office 315.437.1420 ~ Fax 315.503-3058~ pwlabsinc@hotmail.com

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	July 25, 2022	**Test Start Date:**	July 19, 2022
Project #:	L-22095	**Date Cast:**	June 21, 2022
Lab I.D. #:	42694	**Elevation (Feet):**	20.00
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-37A Primary Center | 17:15 | 8% Portland/Slag | 0.8% Bentonite | 1/1 Water to Reagent Ratio | Cylinder #6 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	24.5
Final Degree of Saturation (B Value) (%):	100.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	99.2
Final Moisture Content (% of Dry Weight):	25.5	**Final Dry Unit Weight (PCF):**		99.2	

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.4	**Initial Height (cm):**	10.90	**Initial Diameter (cm):**	7.60
Final Gradient:	19.4	**Final Height (cm):**	10.90	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

1.18×10^{-7}	1.19×10^{-7}
1.18×10^{-7}	1.19×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 1.19×10^{-7}

Remarks:

PW Laboratories, Inc.
6544 Fremont Road - East Syracuse, New York 13057
Office 315.437.1420 ~ Fax 315.503-3058~ pwlabsinc@hotmail.com

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	June 29, 2022	**Test Start Date:**	June 27, 2022
Project #:	L-22095	**Date Cast:**	June 21, 2022
Lab I.D. #:	42707	**Elevation (Feet):**	10.80
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-38 Primary Center | 12:10 | 9% Portland/Slag | 0.9% Bentonite | 1/1 Water to Reagent Ratio | Cylinder #19 (6 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	25.8
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	94.7
Final Moisture Content (% of Dry Weight):	26.9			**Final Dry Unit Weight (PCF):**	94.7

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.2	**Initial Height (cm):**	11.00	**Initial Diameter (cm):**	7.60
Final Gradient:	19.2	**Final Height (cm):**	11.00	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

1.82×10^{-7}	1.83×10^{-7}
1.82×10^{-7}	1.83×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 1.82×10^{-7}

Remarks:

PW Laboratories, Inc.
6544 Fremont Road - East Syracuse, New York 13057
Office 315.437.1420 ~ Fax 315.503-3058~ pwlabsinc@hotmail.com

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	July 25, 2022	**Test Start Date:**	July 19, 2022
Project #:	L-22095	**Date Cast:**	June 21, 2022
Lab I.D. #:	42712	**Elevation (Feet):**	20.00
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-38 Primary Center | 12:10 | 9% Portland/Slag | 0.9% Bentonite | 1/1 Water to Reagent Ratio | Cylinder #24 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	25.0
Final Degree of Saturation (B Value) (%):	98.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	93.7
Final Moisture Content (% of Dry Weight):	25.5	**Final Dry Unit Weight (PCF):**			93.7

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.2	**Initial Height (cm):**	11.00	**Initial Diameter (cm):**	7.60
Final Gradient:	19.2	**Final Height (cm):**	11.00	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

1.19×10^{-7}	1.19×10^{-7}
1.19×10^{-7}	1.19×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 1.19×10^{-7}

Remarks:

PW Laboratories, Inc.
6544 Fremont Road - East Syracuse, New York 13057
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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	June 29, 2022	**Test Start Date:**	June 27, 2022
Project #:	L-22095	**Date Cast:**	June 22, 2022
Lab I.D. #:	42725	**Elevation (Feet):**	6.1
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-39 Primary Center 15:30 10% Portland/Slag 1.25/1 Water to Reagent Ratio Cylinder #37 (5 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	31.8
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	80.6
Final Moisture Content (% of Dry Weight):	34.3			**Final Dry Unit Weight (PCF):**	80.6

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.4	**Initial Height (cm):**	11.50	**Initial Diameter (cm):**	7.60
Final Gradient:	18.4	**Final Height (cm):**	11.50	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

9.75×10^{-7}	9.88×10^{-7}
9.82×10^{-7}	9.95×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 9.85×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	July 25, 2022	**Test Start Date:**	July 20, 2022
Project #:	L-22095	**Date Cast:**	June 22, 2022
Lab I.D. #:	42730	**Elevation (Feet):**	6.10
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-39 Primary Center | 15:30 | 10% Portland/Slag | 1.25/1 Water to Reagent Ratio | Cylinder #42 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	34.5
Final Degree of Saturation (B Value) (%):	100.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	80.5
Final Moisture Content (% of Dry Weight):	36.5	**Final Dry Unit Weight (PCF):**			80.5

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.2	**Initial Height (cm):**	11.00	**Initial Diameter (cm):**	7.60
Final Gradient:	19.2	**Final Height (cm):**	11.00	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

4.85×10^{-7}	4.27×10^{-7}
4.26×10^{-7}	4.90×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): **4.57×10^{-7}**

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	June 29, 2022	**Test Start Date:**	June 27, 2022
Project #:	L-22095	**Date Cast:**	June 22, 2022
Lab I.D. #:	42743	**Elevation (Feet):**	6.1
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-39 Primary Center | 16:30 | 12% Portland/Slag | 1.25/1 Water to Reagent Ratio | Cylinder #55 (5 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	32.0
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	80.8
Final Moisture Content (% of Dry Weight):	34.2			**Final Dry Unit Weight (PCF):**	80.8

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	21.1	**Initial Height (cm):**	10.00	**Initial Diameter (cm):**	7.60
Final Gradient:	21.1	**Final Height (cm):**	10.00	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

5.85×10^{-7}	5.90×10^{-7}
5.87×10^{-7}	5.93×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): **5.89×10^{-7}**

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	July 27, 2022	**Test Start Date:**	July 20, 2022
Project #:	L-22095	**Date Cast:**	June 22, 2022
Lab I.D. #:	42748	**Elevation (Feet):**	6.10
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-39 Primary Center | 16:30 | 12% Portland/Slag | 1.25/1 Water to Reagent Ratio | Cylinder #60 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	35.1
Final Degree of Saturation (B Value) (%):	100.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	77.3
Final Moisture Content (% of Dry Weight):	36.6			**Final Dry Unit Weight (PCF):**	77.3

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.9	**Initial Height (cm):**	10.60	**Initial Diameter (cm):**	7.60
Final Gradient:	19.9	**Final Height (cm):**	10.60	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

6.06×10^{-7}	6.12×10^{-7}
6.09×10^{-7}	6.15×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): **6.11×10^{-7}**

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	July 15, 2022	**Test Start Date:**	July 12, 2022
Project #:	L-22095	**Date Cast:**	July 5, 2022
Lab I.D. #:	42776	**Elevation (Feet):**	-
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-37B Primary Center | 10% Portland/Slag | 0.25% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #74 (7 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	25.8
Final Degree of Saturation (B Value) (%):	100.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	93.3
Final Moisture Content (% of Dry Weight):	27.3	**Final Dry Unit Weight (PCF):**		93.3	

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.2	**Initial Height (cm):**	11.00	**Initial Diameter (cm):**	7.60
Final Gradient:	19.2	**Final Height (cm):**	11.00	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.38×10^{-7}	2.39×10^{-7}
2.38×10^{-7}	2.39×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.38×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 8, 2022	**Test Start Date:**	August 2, 2022
Project #:	L-22095	**Date Cast:**	July 5, 2022
Lab I.D. #:	42780	**Elevation (Feet):**	--
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-37B Primary Center | 10% Portland/Slag | 0.25% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder 78 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	25.7
Final Degree of Saturation (B Value) (%):	100.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	92.1
Final Moisture Content (% of Dry Weight):	27.3	**Final Dry Unit Weight (PCF):**		92.1	

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.4	**Initial Height (cm):**	11.50	**Initial Diameter (cm):**	7.60
Final Gradient:	18.4	**Final Height (cm):**	11.50	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.48×10^{-7}	2.49×10^{-7}
2.49×10^{-7}	2.50×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.49×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	July 18, 2022	**Test Start Date:**	July 13, 2022
Project #:	L-22095	**Date Cast:**	July 6, 2022
Lab I.D. #:	42793	**Elevation (Feet):**	-
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-35 Primary Center | 10% Portland/Slag | 0.25% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #92 (7 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	29.9
Final Degree of Saturation (B Value) (%):	100.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	91.6
Final Moisture Content (% of Dry Weight):	31.1	**Final Dry Unit Weight (PCF):**			91.6

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	20.1	**Initial Height (cm):**	10.50	**Initial Diameter (cm):**	7.60
Final Gradient:	20.1	**Final Height (cm):**	10.50	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

5.83×10^{-7}	5.88×10^{-7}
5.86×10^{-7}	5.91×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): **5.87×10^{-7}**

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 8, 2022	**Test Start Date:**	August 3, 2022
Project #:	L-22095	**Date Cast:**	July 6, 2022
Lab I.D. #:	42798	**Elevation (Feet):**	--
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-35 Primary Center | 10% Portland/Slag | 0.25% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #96 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	28.7
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	92.1
Final Moisture Content (% of Dry Weight):	30.4			**Final Dry Unit Weight (PCF):**	92.1

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	20.5	**Initial Height (cm):**	10.30	**Initial Diameter (cm):**	7.60
Final Gradient:	20.5	**Final Height (cm):**	10.30	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.27×10^{-7}	2.27×10^{-7}
2.27×10^{-7}	2.28×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.27×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	July 21, 2022	**Test Start Date:**	July 14, 2022
Project #:	L-22095	**Date Cast:**	July 7, 2022
Lab I.D. #:	42812	**Elevation (Feet):**	11.35
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-36 Primary Center | 10% Portland/Slag | 0.25% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #110 (7 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	38.5
Final Degree of Saturation (B Value) (%):	100.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	76.9
Final Moisture Content (% of Dry Weight):	40.4	**Final Dry Unit Weight (PCF):**			76.9

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.5	**Initial Height (cm):**	11.40	**Initial Diameter (cm):**	7.60
Final Gradient:	18.5	**Final Height (cm):**	11.40	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.30×10^{-6}	2.38×10^{-6}
2.34×10^{-6}	2.42×10^{-6}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.36×10^{-6}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 11, 2022	**Test Start Date:**	August 4, 2022
Project #:	L-22095	**Date Cast:**	July 13, 2022
Lab I.D. #:	42816	**Elevation (Feet):**	11.35
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-36 Primary Center | 10% Portland/Slag | 0.25% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #114 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	34.6
Final Degree of Saturation (B Value) (%):	98.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	80.6
Final Moisture Content (% of Dry Weight):	35.4			**Final Dry Unit Weight (PCF):**	80.6

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.0	**Initial Height (cm):**	11.10	**Initial Diameter (cm):**	7.60
Final Gradient:	19.0	**Final Height (cm):**	11.10	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

5.12×10^{-7}	5.16×10^{-7}
5.14×10^{-7}	5.18×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 5.15×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	July 25, 2022	**Test Start Date:**	July 21, 2022
Project #:	L-22095	**Date Cast:**	July 7, 2022
Lab I.D. #:	42817	**Elevation (Feet):**	11.35
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-36 Primary Center | 10% Portland/Slag | 0.25% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #115 (14 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	31.1
Final Degree of Saturation (B Value) (%):	100.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	83.4
Final Moisture Content (% of Dry Weight):	32.9	**Final Dry Unit Weight (PCF):**		83.4	

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	21.5	**Initial Height (cm):**	9.80	**Initial Diameter (cm):**	7.60
Final Gradient:	21.5	**Final Height (cm):**	9.80	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

3.18×10^{-7}	3.73×10^{-7}
3.19×10^{-7}	3.21×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 3.33×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	July 21, 2022	**Test Start Date:**	July 15, 2022
Project #:	L-22095	**Date Cast:**	July 8, 2022
Lab I.D. #:	42845	**Elevation (Feet):**	9.90
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-40 Primary Center | 13:00 | 10% Portland/Slag | 0.25% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #128 (7 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	31.0
Final Degree of Saturation (B Value) (%):	100.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	83.3
Final Moisture Content (% of Dry Weight):	33.1	**Final Dry Unit Weight (PCF):**			83.3

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.2	**Initial Height (cm):**	11.00	**Initial Diameter (cm):**	7.60
Final Gradient:	19.2	**Final Height (cm):**	11.00	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

6.61×10^{-7}	5.33×10^{-7}
5.31×10^{-7}	6.69×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): **5.99×10^{-7}**

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 11, 2022	**Test Start Date:**	August 2, 2022
Project #:	L-22095	**Date Cast:**	July 8, 2022
Lab I.D. #:	42849	**Elevation (Feet):**	9.90
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-40 Primary Center | 10% Portland/Slag | 0.25% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #132 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	32.4
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	81.0
Final Moisture Content (% of Dry Weight):	34.5			**Final Dry Unit Weight (PCF):**	81.0

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.5	**Initial Height (cm):**	10.80	**Initial Diameter (cm):**	7.60
Final Gradient:	19.5	**Final Height (cm):**	10.80	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

4.83×10^{-7}	4.86×10^{-7}
5.45×10^{-7}	4.88×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 5.01×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	July 25, 2022	**Test Start Date:**	July 18, 2022
Project #:	L-22095	**Date Cast:**	July 11, 2022
Lab I.D. #:	42863	**Elevation (Feet):**	5.10
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-30 Primary Center | 13:30 | 10% Portland/Slag | 0.25% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #146 (7 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	27.6
Final Degree of Saturation (B Value) (%):	100.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	18.4
Final Moisture Content (% of Dry Weight):	28.3	**Final Dry Unit Weight (PCF):**		18.4	

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.4	**Initial Height (cm):**	11.50	**Initial Diameter (cm):**	7.60
Final Gradient:	18.4	**Final Height (cm):**	11.50	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

6.50×10^{-7}	6.56×10^{-7}
6.53×10^{-7}	6.59×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 6.55×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 11, 2022	**Test Start Date:**	August 8, 2022
Project #:	L-22095	**Date Cast:**	July 11, 2022
Lab I.D. #:	42867	**Elevation (Feet):**	5.10
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-30 Primary Center | 13:30 | 10% Portland/Slag | 0.25% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #150 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	22.4
Final Degree of Saturation (B Value) (%):	10.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	97.8
Final Moisture Content (% of Dry Weight):	23.3			**Final Dry Unit Weight (PCF):**	97.8

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.5	**Initial Height (cm):**	11.40	**Initial Diameter (cm):**	7.60
Final Gradient:	18.5	**Final Height (cm):**	11.40	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

1.23×10^{-7}	1.24×10^{-7}
1.23×10^{-7}	1.24×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 1.24×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	July 25, 2022	**Test Start Date:**	July 19, 2022
Project #:	L-22095	**Date Cast:**	July 12, 2022
Lab I.D. #:	42878	**Elevation (Feet):**	14.90
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-32 Primary Center | 18:10 | 10% Portland/Slag | 0.25% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #165 (7 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	32.9
Final Degree of Saturation (B Value) (%):	100.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	87.0
Final Moisture Content (% of Dry Weight):	33.5	**Final Dry Unit Weight (PCF):**			87.0

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	20.3	**Initial Height (cm):**	10.40	**Initial Diameter (cm):**	7.60
Final Gradient:	20.3	**Final Height (cm):**	10.40	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

8.12×10^{-7}	8.22×10^{-7}
8.17×10^{-7}	8.28×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): **8.20×10^{-7}**

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 16, 2022	**Test Start Date:**	August 9, 2022
Project #:	L-22095	**Date Cast:**	July 19, 2022
Lab I.D. #:	42882	**Elevation (Feet):**	14.90
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-32 Primary Center | 18:10 | 10% Portland/Slag | 0.25% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #165 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	25.8
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	91.9
Final Moisture Content (% of Dry Weight):	26.3			**Final Dry Unit Weight (PCF):**	91.9

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	17.6	**Initial Height (cm):**	12.00	**Initial Diameter (cm):**	7.60
Final Gradient:	17.6	**Final Height (cm):**	12.00	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.61×10^{-7}	2.62×10^{-7}
2.62×10^{-7}	2.63×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.62×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	July 25, 2022	**Test Start Date:**	July 20, 2022
Project #:	L-22095	**Date Cast:**	July 13, 2022
Lab I.D. #:	42893	**Elevation (Feet):**	6.70
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-27 Primary Center | 15:15 | 10% Portland/Slag | 0.15% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #176 (7 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	30.3
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	91.6
Final Moisture Content (% of Dry Weight):	31.0			**Final Dry Unit Weight (PCF):**	91.6

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	20.7	**Initial Height (cm):**	10.20	**Initial Diameter (cm):**	7.60
Final Gradient:	20.7	**Final Height (cm):**	10.20	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

7.91×10^{-7}	8.02×10^{-7}
9.10×10^{-7}	8.07×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 8.27×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 16, 2022	**Test Start Date:**	August 10, 2022
Project #:	L-22095	**Date Cast:**	July 13, 2022
Lab I.D. #:	42897	**Elevation (Feet):**	6.70
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-27 Primary Center | 15:15 | 10% Portland/Slag | 0.15% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #180 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	25.8
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	93.4
Final Moisture Content (% of Dry Weight):	26.4			**Final Dry Unit Weight (PCF):**	93.4

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.0	**Initial Height (cm):**	11.70	**Initial Diameter (cm):**	7.60
Final Gradient:	18.0	**Final Height (cm):**	11.70	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

3.83×10^{-7}	3.85×10^{-7}
3.84×10^{-7}	3.86×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 3.85×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 1, 2022	**Test Start Date:**	July 25, 2022
Project #:	L-22095	**Date Cast:**	July 14, 2022
Lab I.D. #:	42912	**Elevation (Feet):**	5.80
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-33 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #191 (11 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	28.1
Final Degree of Saturation (B Value) (%):	98.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	86.3
Final Moisture Content (% of Dry Weight):	29.2	**Final Dry Unit Weight (PCF):**		86.3	

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.4	**Initial Height (cm):**	10.90	**Initial Diameter (cm):**	7.60
Final Gradient:	19.4	**Final Height (cm):**	10.90	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

1.18×10^{-7}	1.19×10^{-7}
1.18×10^{-7}	1.19×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 1.19×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 22, 2022	**Test Start Date:**	August 11, 2022
Project #:	L-22095	**Date Cast:**	July 14, 2022
Lab I.D. #:	42916	**Elevation (Feet):**	5.80
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-33 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #195 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	28.2
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	86.8
Final Moisture Content (% of Dry Weight):	31.2			**Final Dry Unit Weight (PCF):**	86.8

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.2	**Initial Height (cm):**	11.00	**Initial Diameter (cm):**	7.60
Final Gradient:	19.2	**Final Height (cm):**	11.00	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

1.17×10^{-7}	1.18×10^{-7}
1.18×10^{-7}	1.18×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 1.18×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 1, 2022	**Test Start Date:**	July 25, 2022
Project #:	L-22095	**Date Cast:**	July 15, 2022
Lab I.D. #:	42927	**Elevation (Feet):**	5.70
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-31 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #206 (10 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	22.8
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	97.7
Final Moisture Content (% of Dry Weight):	23.5			**Final Dry Unit Weight (PCF):**	97.7

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.5	**Initial Height (cm):**	11.40	**Initial Diameter (cm):**	7.60
Final Gradient:	18.5	**Final Height (cm):**	11.40	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

6.83×10^{-7}	6.90×10^{-7}
6.86×10^{-7}	6.93×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 6.88×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 22, 2022	**Test Start Date:**	August 12, 2022
Project #:	L-22095	**Date Cast:**	July 15, 2022
Lab I.D. #:	42931	**Elevation (Feet):**	5.70
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-31 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #210 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	25.9
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	95.1
Final Moisture Content (% of Dry Weight):	26.1			**Final Dry Unit Weight (PCF):**	95.1

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.0	**Initial Height (cm):**	11.00	**Initial Diameter (cm):**	7.60
Final Gradient:	19.0	**Final Height (cm):**	11.00	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

4.92×10^{-7}	4.95×10^{-7}
4.94×10^{-7}	4.97×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): **4.94×10^{-7}**

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 1, 2022	**Test Start Date:**	July 25, 2022
Project #:	L-22095	**Date Cast:**	July 18, 2022
Lab I.D. #:	42942	**Elevation (Feet):**	8.45
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-28 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #221 (7 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	28.4
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	92.0
Final Moisture Content (% of Dry Weight):	29.1			**Final Dry Unit Weight (PCF):**	92.0

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.0	**Initial Height (cm):**	11.70	**Initial Diameter (cm):**	7.60
Final Gradient:	18.0	**Final Height (cm):**	11.70	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

3.87×10^{-7}	3.89×10^{-7}
3.88×10^{-7}	3.90×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 3.89×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 22, 2022	**Test Start Date:**	July 15, 2022
Project #:	L-22095	**Date Cast:**	July 18, 2022
Lab I.D. #:	42946	**Elevation (Feet):**	8.45
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-28 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #225 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	17.5
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	99.9
Final Moisture Content (% of Dry Weight):	18.1			**Final Dry Unit Weight (PCF):**	99.9

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.2	**Initial Height (cm):**	11.60	**Initial Diameter (cm):**	7.60
Final Gradient:	18.2	**Final Height (cm):**	11.60	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

6.43×10^{-7}	5.19×10^{-7}
5.17×10^{-7}	5.20×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 5.50×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 3, 2022	**Test Start Date:**	July 26, 2022
Project #:	L-22095	**Date Cast:**	July 19, 2022
Lab I.D. #:	42957	**Elevation (Feet):**	8.50
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-34 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #236 (7 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	29.2
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	86.1
Final Moisture Content (% of Dry Weight):	31.2			**Final Dry Unit Weight (PCF):**	86.1

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.5	**Initial Height (cm):**	11.40	**Initial Diameter (cm):**	7.60
Final Gradient:	18.5	**Final Height (cm):**	11.40	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.57×10^{-7}	2.58×10^{-7}
2.58×10^{-7}	2.59×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.58×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 23, 2022	**Test Start Date:**	August 16, 2022
Project #:	L-22095	**Date Cast:**	July 19, 2022
Lab I.D. #:	42961	**Elevation (Feet):**	8.50
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-34 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #240 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	30.1
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	83.1
Final Moisture Content (% of Dry Weight):	31.5			**Final Dry Unit Weight (PCF):**	83.1

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	17.9	**Initial Height (cm):**	11.80	**Initial Diameter (cm):**	7.60
Final Gradient:	17.9	**Final Height (cm):**	11.80	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

9.10×10^{-7}	9.18×10^{-7}
9.13×10^{-7}	8.58×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 8.99×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 3, 2022	**Test Start Date:**	July 27, 2022
Project #:	L-22095	**Date Cast:**	July 20, 2022
Lab I.D. #:	42972	**Elevation (Feet):**	11.00
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-16 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #251 (7 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	31.7
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	83.8
Final Moisture Content (% of Dry Weight):	33.5			**Final Dry Unit Weight (PCF):**	83.8

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.2	**Initial Height (cm):**	11.00	**Initial Diameter (cm):**	7.60
Final Gradient:	19.2	**Final Height (cm):**	11.00	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

8.04×10^{-7}	8.14×10^{-7}
8.09×10^{-7}	9.56×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 8.46×10^{-7}

Remarks:

PW Laboratories, Inc.
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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 23, 2022	**Test Start Date:**	August 17, 2022
Project #:	L-22095	**Date Cast:**	July 20, 2022
Lab I.D. #:	42976	**Elevation (Feet):**	11.00
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-16 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #255 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	26.7
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	87.7
Final Moisture Content (% of Dry Weight):	28.4			**Final Dry Unit Weight (PCF):**	87.7

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.4	**Initial Height (cm):**	10.90	**Initial Diameter (cm):**	7.60
Final Gradient:	19.4	**Final Height (cm):**	10.90	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

1.19×10^{-7}	1.19×10^{-7}
1.19×10^{-7}	1.20×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 1.19×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 8, 2022	**Test Start Date:**	August 1, 2022
Project #:	L-22095	**Date Cast:**	July 21, 2022
Lab I.D. #:	43006	**Elevation (Feet):**	19.20
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-17 Primary Center | 12:30 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #266 (11 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	35.9
Final Degree of Saturation (B Value) (%):	98.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	79.8
Final Moisture Content (% of Dry Weight):	37.7			**Final Dry Unit Weight (PCF):**	79.8

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.4	**Initial Height (cm):**	11.50	**Initial Diameter (cm):**	7.60
Final Gradient:	18.4	**Final Height (cm):**	11.50	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

5.08×10^{-7}	5.12×10^{-7}
5.10×10^{-7}	5.14×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 5.11×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 23, 2022	**Test Start Date:**	August 18, 2022
Project #:	L-22095	**Date Cast:**	July 21, 2022
Lab I.D. #:	43010	**Elevation (Feet):**	9.20
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-17 Primary Center | 12:30 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #270 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	30.9
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	82.1
Final Moisture Content (% of Dry Weight):	32.4			**Final Dry Unit Weight (PCF):**	82.1

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.2	**Initial Height (cm):**	11.60	**Initial Diameter (cm):**	7.60
Final Gradient:	18.2	**Final Height (cm):**	11.60	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

4.06×10^{-7}	4.08×10^{-7}
4.07×10^{-7}	4.09×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): **4.08×10^{-7}**

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 8, 2022	**Test Start Date:**	August 1, 2022
Project #:	L-22095	**Date Cast:**	July 22, 2022
Lab I.D. #:	43021	**Elevation (Feet):**	9.55
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-14 Primary Center | 13:30 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #281(10 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	29.5
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	90.4
Final Moisture Content (% of Dry Weight):	30.7			**Final Dry Unit Weight (PCF):**	90.4

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.5	**Initial Height (cm):**	11.40	**Initial Diameter (cm):**	7.60
Final Gradient:	18.5	**Final Height (cm):**	11.40	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.54×10^{-7}	2.55×10^{-7}
2.55×10^{-7}	2.56×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.55×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 25, 2022	**Test Start Date:**	August 19, 2022
Project #:	L-22095	**Date Cast:**	July 22, 2022
Lab I.D. #:	43025	**Elevation (Feet):**	9.55
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-14 Primary Center | 13:30 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #285 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	24.6
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	96.2
Final Moisture Content (% of Dry Weight):	25.3			**Final Dry Unit Weight (PCF):**	96.2

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.8	**Initial Height (cm):**	11.20	**Initial Diameter (cm):**	7.60
Final Gradient:	18.8	**Final Height (cm):**	11.20	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

1.22×10^{-7}	1.22×10^{-7}
1.22×10^{-7}	1.22×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 1.22×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 8, 2022	**Test Start Date:**	August 1, 2022
Project #:	L-22095	**Date Cast:**	July 25, 2022
Lab I.D. #:	43036	**Elevation (Feet):**	9.65
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-15 Primary Center | 17:30 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #296 (7 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	32.1
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	88.2
Final Moisture Content (% of Dry Weight):	34.7			**Final Dry Unit Weight (PCF):**	88.2

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.2	**Initial Height (cm):**	11.00	**Initial Diameter (cm):**	7.60
Final Gradient:	19.2	**Final Height (cm):**	11.00	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

9.32×10^{-7}	9.45×10^{-7}
9.38×10^{-7}	9.52×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 9.42×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 25, 2022	**Test Start Date:**	August 22, 2022
Project #:	L-22095	**Date Cast:**	July 25, 2022
Lab I.D. #:	43040	**Elevation (Feet):**	9.65
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-15 Primary Center | 17:30 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #300 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	24.0
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	96.8
Final Moisture Content (% of Dry Weight):	25.3			**Final Dry Unit Weight (PCF):**	96.8

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.5	**Initial Height (cm):**	11.40	**Initial Diameter (cm):**	7.60
Final Gradient:	18.5	**Final Height (cm):**	11.40	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

6.46×10^{-7}	6.52×10^{-7}
6.49×10^{-7}	6.55×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 6.50×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 8, 2022	**Test Start Date:**	August 2, 2022
Project #:	L-22095	**Date Cast:**	July 26, 2022
Lab I.D. #:	43051	**Elevation (Feet):**	10.50
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-22 Primary Center | 13:50 | 10% Portland/Slag | 0.18% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #311 (7 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	38.8
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	80.5
Final Moisture Content (% of Dry Weight):	41.1			**Final Dry Unit Weight (PCF):**	80.5

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.9	**Initial Height (cm):**	10.60	**Initial Diameter (cm):**	7.60
Final Gradient:	19.9	**Final Height (cm):**	10.60	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

6.13×10^{-7}	6.19×10^{-7}
6.16×10^{-7}	6.22×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 6.17×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 30, 2022	**Test Start Date:**	August 23, 2022
Project #:	L-22095	**Date Cast:**	July 26, 2022
Lab I.D. #:	43055	**Elevation (Feet):**	10.50
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-22 Primary Center | 13:50 | 10% Portland/Slag | 0.8% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #315 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	22.6
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	90.2
Final Moisture Content (% of Dry Weight):	25.6			**Final Dry Unit Weight (PCF):**	90.2

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.5	**Initial Height (cm):**	11.40	**Initial Diameter (cm):**	7.60
Final Gradient:	18.5	**Final Height (cm):**	11.40	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

1.27×10^{-7}	1.28×10^{-7}
1.27×10^{-7}	1.28×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 1.27×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 8, 2022	**Test Start Date:**	August 3, 2022
Project #:	L-22095	**Date Cast:**	July 27, 2022
Lab I.D. #:	43066	**Elevation (Feet):**	5.60
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-21 Primary Center | 17:40 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #326 (7 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	35.0
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	76.8
Final Moisture Content (% of Dry Weight):	38.2			**Final Dry Unit Weight (PCF):**	76.8

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	20.1	**Initial Height (cm):**	10.50	**Initial Diameter (cm):**	7.60
Final Gradient:	20.1	**Final Height (cm):**	10.50	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

9.79×10^{-7}	9.95×10^{-7}
9.87×10^{-7}	1.00×10^{-6}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 9.91×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 30, 2022	**Test Start Date:**	August 24, 2022
Project #:	L-22095	**Date Cast:**	July 27, 2022
Lab I.D. #:	43070	**Elevation (Feet):**	5.60
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-21 Primary Center 17:40 10% Portland/Slag .10% Bentonite 1.25/1 Water to Reagent Ratio Cylinder #330 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	27.8
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	84.7
Final Moisture Content (% of Dry Weight):	30.8			**Final Dry Unit Weight (PCF):**	84.7

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.0	**Initial Height (cm):**	11.10	**Initial Diameter (cm):**	7.60
Final Gradient:	19.0	**Final Height (cm):**	11.10	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

6.53×10^{-7}	6.59×10^{-7}
6.56×10^{-7}	6.62×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 6.57×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 8, 2022	**Test Start Date:**	August 8, 2022
Project #:	L-22095	**Date Cast:**	July 28, 2022
Lab I.D. #:	43084	**Elevation (Feet):**	17.00
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-13 Primary Center | 17:30 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #341 (11 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	29.3
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	85.6
Final Moisture Content (% of Dry Weight):	30.5			**Final Dry Unit Weight (PCF):**	85.6

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.8	**Initial Height (cm):**	11.20	**Initial Diameter (cm):**	7.60
Final Gradient:	18.8	**Final Height (cm):**	11.20	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.55×10^{-7}	2.56×10^{-7}
2.55×10^{-7}	2.56×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.55×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 30, 2022	**Test Start Date:**	August 25, 2022
Project #:	L-22095	**Date Cast:**	July 28, 2022
Lab I.D. #:	43088	**Elevation (Feet):**	17.00
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-13 Primary Center | 17:30 | 10% Portland/Slag | .10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #345 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	20.4
Final Degree of Saturation (B Value) (%):	98.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	85.3
Final Moisture Content (% of Dry Weight):	21.9			**Final Dry Unit Weight (PCF):**	85.3

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.8	**Initial Height (cm):**	11.20	**Initial Diameter (cm):**	7.60
Final Gradient:	18.8	**Final Height (cm):**	11.20	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

6.77×10^{-7}	6.84×10^{-7}
6.81×10^{-7}	6.88×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 6.83×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 8, 2022	**Test Start Date:**	August 8, 2022
Project #:	L-22095	**Date Cast:**	July 29, 2022
Lab I.D. #:	43099	**Elevation (Feet):**	7.35
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-7 Primary Center | 13:30 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #356 (10 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	32.5
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	87.5
Final Moisture Content (% of Dry Weight):	33.7			**Final Dry Unit Weight (PCF):**	87.5

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.4	**Initial Height (cm):**	10.90	**Initial Diameter (cm):**	7.60
Final Gradient:	19.4	**Final Height (cm):**	10.90	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.44×10^{-7}	3.67×10^{-7}
2.44×10^{-7}	2.45×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.75×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 2, 2022	**Test Start Date:**	August 26, 2022
Project #:	L-22095	**Date Cast:**	July 29, 2022
Lab I.D. #:	43103	**Elevation (Feet):**	7.35
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-7 Primary Center | 13:30 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #360 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	19.6
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	97.0
Final Moisture Content (% of Dry Weight):	20.4			**Final Dry Unit Weight (PCF):**	97.0

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.5	**Initial Height (cm):**	11.40	**Initial Diameter (cm):**	7.60
Final Gradient:	18.5	**Final Height (cm):**	11.40	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.53×10^{-7}	2.54×10^{-7}
2.54×10^{-7}	2.55×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.54×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	August 16, 2022	**Test Start Date:**	August 8, 2022
Project #:	L-22095	**Date Cast:**	August 1, 2022
Lab I.D. #:	43114	**Elevation (Feet):**	10.15
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-8 Primary Center | 14:40 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #371 (7 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	29.2
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	94.8
Final Moisture Content (% of Dry Weight):	29.8			**Final Dry Unit Weight (PCF):**	94.8

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.0	**Initial Height (cm):**	11.10	**Initial Diameter (cm):**	7.60
Final Gradient:	19.0	**Final Height (cm):**	11.10	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

6.17×10^{-7}	6.23×10^{-7}
6.20×10^{-7}	6.26×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 6.21×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 2, 2022	**Test Start Date:**	August 29, 2022
Project #:	L-22095	**Date Cast:**	August 1, 2022
Lab I.D. #:	43118	**Elevation (Feet):**	10.15
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-8 Primary Center | 14:40 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #375 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	21.5
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	99.0
Final Moisture Content (% of Dry Weight):	22.0			**Final Dry Unit Weight (PCF):**	99.0

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.8	**Initial Height (cm):**	11.20	**Initial Diameter (cm):**	7.60
Final Gradient:	18.8	**Final Height (cm):**	11.20	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.61×10^{-7}	2.62×10^{-7}
2.62×10^{-7}	2.63×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.62×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 7, 2022	**Test Start Date:**	August 30, 2022
Project #:	L-22095	**Date Cast:**	August 2, 2022
Lab I.D. #:	43133	**Elevation (Feet):**	5.50
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-18 Primary Center | 18:10 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #390 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	34.1
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	99.0
Final Moisture Content (% of Dry Weight):	35.9			**Final Dry Unit Weight (PCF):**	99.0

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.8	**Initial Height (cm):**	11.20	**Initial Diameter (cm):**	7.60
Final Gradient:	18.8	**Final Height (cm):**	11.20	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

5.77×10^{-7}	6.46×10^{-7}
6.43×10^{-7}	6.50×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 6.29×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 7, 2022	**Test Start Date:**	August 31, 2022
Project #:	L-22095	**Date Cast:**	August 3, 2022
Lab I.D. #:	43148	**Elevation (Feet):**	9.25
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-6 Primary Center | 14:45 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #405 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	20.3
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	100.8
Final Moisture Content (% of Dry Weight):	22.1			**Final Dry Unit Weight (PCF):**	100.8

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.8	**Initial Height (cm):**	11.20	**Initial Diameter (cm):**	7.60
Final Gradient:	18.8	**Final Height (cm):**	11.20	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.48×10^{-7}	2.49×10^{-7}
2.49×10^{-7}	2.49×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.49×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 13, 2022	**Test Start Date:**	September 1, 2022
Project #:	L-22095	**Date Cast:**	August 4, 2022
Lab I.D. #:	43165	**Elevation (Feet):**	10.15
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-9 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #420 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	34.7
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	83.1
Final Moisture Content (% of Dry Weight):	37.1			**Final Dry Unit Weight (PCF):**	83.1

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.4	**Initial Height (cm):**	11.50	**Initial Diameter (cm):**	7.60
Final Gradient:	18.4	**Final Height (cm):**	11.50	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.53×10^{-7}	2.53×10^{-7}
2.53×10^{-7}	2.54×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.53×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 13, 2022	**Test Start Date:**	September 5, 2022
Project #:	L-22095	**Date Cast:**	August 8, 2022
Lab I.D. #:	43180	**Elevation (Feet):**	10.50
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-19A Primary Center | 16:10 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #435 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	40.2
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	77.0
Final Moisture Content (% of Dry Weight):	42.2			**Final Dry Unit Weight (PCF):**	77.0

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.5	**Initial Height (cm):**	11.40	**Initial Diameter (cm):**	7.60
Final Gradient:	18.5	**Final Height (cm):**	11.40	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

5.14×10^{-7}	5.18×10^{-7}
5.16×10^{-7}	5.20×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 5.17×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 14, 2022	**Test Start Date:**	September 6, 2022
Project #:	L-22095	**Date Cast:**	August 9, 2022
Lab I.D. #:	43195	**Elevation (Feet):**	13.25
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-19B Primary Center | 12:55 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #450 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	30.0
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	80.7
Final Moisture Content (% of Dry Weight):	31.7			**Final Dry Unit Weight (PCF):**	80.7

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.5	**Initial Height (cm):**	11.40	**Initial Diameter (cm):**	7.60
Final Gradient:	18.5	**Final Height (cm):**	11.40	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.45×10^{-7}	2.46×10^{-7}
2.46×10^{-7}	2.47×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.46×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 14, 2022	**Test Start Date:**	September 7, 2022
Project #:	L-22095	**Date Cast:**	August 17, 2022
Lab I.D. #:	43210	**Elevation (Feet):**	9.75
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-5 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #465 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	22.8
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	93.3
Final Moisture Content (% of Dry Weight):	23.8			**Final Dry Unit Weight (PCF):**	93.3

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	17.6	**Initial Height (cm):**	12.00	**Initial Diameter (cm):**	7.60
Final Gradient:	17.6	**Final Height (cm):**	12.00	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

3.94×10^{-7}	3.96×10^{-7}
3.95×10^{-7}	3.97×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 3.95×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 14, 2022	**Test Start Date:**	September 8, 2022
Project #:	L-22095	**Date Cast:**	August 11, 2022
Lab I.D. #:	43235	**Elevation (Feet):**	6.75
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-20 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #479 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	28.6
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	87.8
Final Moisture Content (% of Dry Weight):	29.2			**Final Dry Unit Weight (PCF):**	87.8

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.0	**Initial Height (cm):**	11.70	**Initial Diameter (cm):**	7.60
Final Gradient:	18.0	**Final Height (cm):**	11.70	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

1.30×10^{-7}	1.30×10^{-7}
1.30×10^{-7}	1.30×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 1.30×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 20, 2022	**Test Start Date:**	September 9, 2022
Project #:	L-22095	**Date Cast:**	August 12, 2022
Lab I.D. #:	43250	**Elevation (Feet):**	7.45
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell N-8 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #494 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	21.0
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	92.4
Final Moisture Content (% of Dry Weight):	21.8			**Final Dry Unit Weight (PCF):**	92.4

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	17.9	**Initial Height (cm):**	11.80	**Initial Diameter (cm):**	7.60
Final Gradient:	17.9	**Final Height (cm):**	11.80	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

5.28×10^{-7}	5.32×10^{-7}
5.30×10^{-7}	5.34×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 5.31×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 20, 2022	**Test Start Date:**	September 12, 2022
Project #:	L-22095	**Date Cast:**	January 8, 1900
Lab I.D. #:	43265	**Elevation (Feet):**	8.65
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-4 Primary Center | 15:35 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #509 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	25.0
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	92.8
Final Moisture Content (% of Dry Weight):	25.9			**Final Dry Unit Weight (PCF):**	92.8

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.8	**Initial Height (cm):**	11.20	**Initial Diameter (cm):**	7.60
Final Gradient:	18.8	**Final Height (cm):**	11.20	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.47×10^{-7}	2.47×10^{-7}
2.47×10^{-7}	2.48×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.47×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 21, 2022	**Test Start Date:**	September 13, 2022
Project #:	L-22095	**Date Cast:**	August 16, 2022
Lab I.D. #:	43280	**Elevation (Feet):**	6.75
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-23 Primary Center | 17:10 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #524 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	27.0
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	82.1
Final Moisture Content (% of Dry Weight):	28.9			**Final Dry Unit Weight (PCF):**	82.1

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.2	**Initial Height (cm):**	11.60	**Initial Diameter (cm):**	7.60
Final Gradient:	18.2	**Final Height (cm):**	11.60	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

1.29×10^{-7}	1.29×10^{-7}
1.29×10^{-7}	1.30×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 1.29×10^{-7}

Remarks:

PW Laboratories, Inc.
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Office 315.437.1420 ~ Fax 315.503-3058 ~ pwlabsinc@hotmail.com

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 21, 2022	**Test Start Date:**	September 14, 2022
Project #:	L-22095	**Date Cast:**	August 17, 2022
Lab I.D. #:	43294	**Elevation (Feet):**	14.20
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-2 Primary Center | 13:30 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #539 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	20.4
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	98.1
Final Moisture Content (% of Dry Weight):	21.6			**Final Dry Unit Weight (PCF):**	98.1

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.5	**Initial Height (cm):**	11.40	**Initial Diameter (cm):**	7.60
Final Gradient:	18.5	**Final Height (cm):**	11.40	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.59×10^{-7}	2.60×10^{-7}
2.59×10^{-7}	2.60×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.60×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 21, 2022	**Test Start Date:**	September 15, 2022
Project #:	L-22095	**Date Cast:**	August 18, 2022
Lab I.D. #:	43323	**Elevation (Feet):**	5.10
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-24 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #554 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	28.9
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	82.4
Final Moisture Content (% of Dry Weight):	30.6			**Final Dry Unit Weight (PCF):**	82.4

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	17.6	**Initial Height (cm):**	12.00	**Initial Diameter (cm):**	7.60
Final Gradient:	17.6	**Final Height (cm):**	12.00	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

3.51×10^{-7}	2.82×10^{-7}
3.52×10^{-7}	4.42×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 3.52×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 26, 2022	**Test Start Date:**	September 16, 2022
Project #:	L-22095	**Date Cast:**	August 19, 2022
Lab I.D. #:	43338	**Elevation (Feet):**	11.25
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell N-7 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #569 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	43.4
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	76.0
Final Moisture Content (% of Dry Weight):	44.9			**Final Dry Unit Weight (PCF):**	76.0

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.7	**Initial Height (cm):**	11.30	**Initial Diameter (cm):**	7.60
Final Gradient:	18.7	**Final Height (cm):**	11.30	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

3.68×10^{-7}	3.70×10^{-7}
3.69×10^{-7}	3.71×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 3.69×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 26, 2022	**Test Start Date:**	September 19, 2022
Project #:	L-22095	**Date Cast:**	August 22, 2022
Lab I.D. #:	43353	**Elevation (Feet):**	6.70
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-25 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #584 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	43.6
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	72.5
Final Moisture Content (% of Dry Weight):	46.1			**Final Dry Unit Weight (PCF):**	72.5

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.2	**Initial Height (cm):**	11.00	**Initial Diameter (cm):**	7.60
Final Gradient:	19.2	**Final Height (cm):**	11.00	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

4.84×10^{-7}	4.87×10^{-7}
4.86×10^{-7}	4.89×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 4.86×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 26, 2022	**Test Start Date:**	September 20, 2022
Project #:	L-22095	**Date Cast:**	August 23, 2022
Lab I.D. #:	43368	**Elevation (Feet):**	9.25
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-26 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #599 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	50.2
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	68.9
Final Moisture Content (% of Dry Weight):	52.6			**Final Dry Unit Weight (PCF):**	68.9

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	19.0	**Initial Height (cm):**	11.10	**Initial Diameter (cm):**	7.60
Final Gradient:	19.0	**Final Height (cm):**	11.10	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

4.95×10^{-7}	4.99×10^{-7}
4.97×10^{-7}	5.01×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 4.98×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 29, 2022	**Test Start Date:**	September 21, 2022
Project #:	L-22095	**Date Cast:**	August 24, 2022
Lab I.D. #:	43383	**Elevation (Feet):**	7.20
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell N-6 Primary Center | 14:40 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #614 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	37.4
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	77.3
Final Moisture Content (% of Dry Weight):	39.6			**Final Dry Unit Weight (PCF):**	77.3

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.8	**Initial Height (cm):**	11.20	**Initial Diameter (cm):**	7.60
Final Gradient:	18.8	**Final Height (cm):**	11.20	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

4.89×10^{-7}	3.69×10^{-7}
4.29×10^{-7}	3.70×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 4.14×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 29, 2022	**Test Start Date:**	September 22, 2022
Project #:	L-22095	**Date Cast:**	August 25, 2022
Lab I.D. #:	43420	**Elevation (Feet):**	8.15
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell N-1 Primary Center | 14:50 | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #629 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	25.2
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	91.5
Final Moisture Content (% of Dry Weight):	26.8			**Final Dry Unit Weight (PCF):**	91.5

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.0	**Initial Height (cm):**	11.70	**Initial Diameter (cm):**	7.60
Final Gradient:	18.0	**Final Height (cm):**	11.70	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

3.78×10^{-7}	3.80×10^{-7}
3.79×10^{-7}	3.81×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 3.80×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 29, 2022	**Test Start Date:**	September 23, 2022
Project #:	L-22095	**Date Cast:**	August 26, 2022
Lab I.D. #:	43435	**Elevation (Feet):**	11.40
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell N-3 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #644 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	25.8
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	89.3
Final Moisture Content (% of Dry Weight):	26.7			**Final Dry Unit Weight (PCF):**	89.3

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.2	**Initial Height (cm):**	11.60	**Initial Diameter (cm):**	7.60
Final Gradient:	18.2	**Final Height (cm):**	11.60	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

2.55×10^{-7}	2.56×10^{-7}
2.56×10^{-7}	2.56×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 2.56×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 30, 2022	**Test Start Date:**	September 26, 2022
Project #:	L-22095	**Date Cast:**	August 29, 2022
Lab I.D. #:	43450	**Elevation (Feet):**	8.40
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-11 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #659 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	28.1
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	84.2
Final Moisture Content (% of Dry Weight):	29.8			**Final Dry Unit Weight (PCF):**	84.2

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	18.5	**Initial Height (cm):**	11.40	**Initial Diameter (cm):**	7.60
Final Gradient:	18.5	**Final Height (cm):**	11.40	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

3.69×10^{-7}	3.71×10^{-7}
3.70×10^{-7}	3.72×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 3.70×10^{-7}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	September 30, 2022	**Test Start Date:**	September 27, 2022
Project #:	L-22095	**Date Cast:**	August 30, 2022
Lab I.D. #:	43465	**Elevation (Feet):**	6.85
Project Title	NM Troy Water St. MGP Site (Site #442029)	**ASTM Method:**	D5084

Sample Location: Cell C-12 Primary Center | 10% Portland/Slag | 0.10% Bentonite | 1.25/1 Water to Reagent Ratio | Cylinder #674 (28 Day)

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--				

Moisture Content (% of Dry Weight)

Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	30.3
Final Degree of Saturation (B Value) (%):	100.0				

Dry Unit Weight (PCF)

Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	82.2
Final Moisture Content (% of Dry Weight):	32.3			**Final Dry Unit Weight (PCF):**	82.2

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	20.7	**Initial Height (cm):**	10.20	**Initial Diameter (cm):**	7.60
Final Gradient:	20.7	**Final Height (cm):**	10.20	**Final Diameter (cm):**	7.60

Final Four Determinations k (cm/sec)

4.42×10^{-7}	4.46×10^{-7}
4.44×10^{-7}	4.47×10^{-7}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 4.45×10^{-7}

Remarks:

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August 22, 2022

L-22095
NM Troy Water St. MGP Site (Site #442029)
Troy, New York

Natural Moisture Content ASTM D2216

Composite Laboratory I.D. #	Sample I.D.	Moisture Content as a Percent of Dry Weight
43220, 43221, 43222	Troy Swell Material	32.8

Appendix J-4: ISS Unconfined Compressive Strength Results

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 1

Specification: ASTM D1633 **Break Dates:** 5/18, 5/25, 6/8, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-37A Primary Center of Cell 17:15 8% Portland/Slag 0.8% Bentonite 1/1 Water to Reagent Ratio Elevation 20.0'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
1	42689	06/21/22	6 (Perm)	6	-	-	-	-
2	42690	06/21/22	6	6	3.00	7.07	1119	160
3	42691	06/21/22	14	6	3.01	7.12	2107	300
4	42692	06/21/22	28	6	2.99	7.02	3011	430
5	42693	06/21/22	28	6	3.01	7.12	3196	450
6	42694	06/21/22	28 (Perm)	6				
7	42695	06/21/22	Hold	6				
8	42696	06/21/22	Hold	6				
9	42697	06/21/22	Hold	6				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 3

Specification: ASTM D1633 **Break Dates:** 6/27, 7/8, 7/19, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-38 Primary Center of Cell 12:10 9% Portland/Slag 0.9% Bentonite 1/1 Water to Reagent Ratio Elevation 10.8'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
19	42707	06/21/22	6 (Perm)	6	-	-	-	-
20	42708	06/21/22	6	6	3.00	7.07	1165	170
21	42709	06/21/22	14	6	3.00	7.07	3180	450
22	42710	06/21/22	28	6	2.98	6.97	3989	570
23	42711	06/21/22	28	6	3.02	7.16	3457	480
24	42712	06/21/22	28 (Perm)	6				
25	42713	06/21/22	Hold	6				
26	42714	06/21/22	Hold	6				
27	42715	06/21/22	Hold	6				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 5

Specification: ASTM D1633 **Break Dates:** 6/27, 7/8, 7/19, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-39 Primary Center of Cell 15:30 10% Portland/Slag 1.25/1 Water to Reagent Ratio Elevation 6.1'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
37	42725	06/22/22	5 (Perm)	5	-	-	-	-
38	42726	06/22/22	5	5	3.00	7.07	1180	170
39	42727	06/22/22	14	5	2.99	7.02	2346	330
40	42728	06/22/22	28	5	3.01	7.12	3203	450
41	42729	06/22/22	28	5	3.01	7.12	2741	390
42	42730	06/22/22	28 (Perm)	5				
43	42731	06/22/22	Hold	5				
44	42732	06/22/22	Hold	5				
45	42733	06/22/22	Hold	5				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 7

Specification: ASTM D1633 **Break Dates:** 6/27, 7/6, 7/20, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-39 Primary Center of Cell 16:30 12% Portland/Slag 1.25/1 Water to Reagent Ratio Elevation 6.1'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
55	42743	06/22/22	5 (Perm)	5	-	-	-	-
56	42744	06/22/22	5	5	3.01	7.12	1451	200
57	42745	06/22/22	14	5	3.00	7.07	2732	390
58	42746	06/22/22	28	5	3.00	7.07	2768	390
59	42747	06/22/22	28	5	3.00	7.07	3196	450
60	42748	06/22/22	28 (Perm)	5				
61	42749	06/22/22	Hold	5				
62	42750	06/22/22	Hold	5				
63	42751	06/22/22	Hold	5				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 9

Specification: ASTM D1633 **Break Dates:** 7/12, 7/19, 8/2/22

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-37B Primary Center of Cell 10% Portland/Slag 0.25% Bentonite 1.25/1 Water to Reagent Ratio

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
73	42775	07/05/22	7	6	3.01	7.12	1661	230
74	42776	07/05/22	7 (Perm)	6	-	-	-	-
75	42777	07/05/22	14	6	3.00	7.07	2151	300
76	42778	07/05/22	28	6	3.01	7.12	3475	490
77	42779	07/05/22	28	6	3.01	7.12	3532	500
78	42780	07/05/22	28 (Perm)	6	-	-	-	-
79	42781	07/05/22	Hold	6				
80	42782	07/05/22	Hold	6				
81	42783	07/05/22	Hold	6				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 11

Specification: ASTM D1633 **Break Dates:** 7/13, 7/20, 8/3, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-35 Primary Center of Cell 10% Portland/Slag 0.25% Bentonite 1.25/1 Water to Reagent Ratio

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
91	42793	07/06/22	7	5	3.00	7.07	1093	160
92	42794	07/06/22	7 (Perm)	5	-	-	-	-
93	42795	07/06/22	14	5	3.01	7.12	2099	300
94	42796	07/06/22	28	5	3.03	7.21	2598	360
95	42797	07/06/22	28	5	3.01	7.12	3447	480
96	42798	07/06/22	28 (Perm)	5	-	-	-	-
97	42799	07/06/22	Hold	5				
98	42800	07/06/22	Hold	5				
99	42801	07/06/22	Hold	5				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 13

Specification: ASTM D1633 **Break Dates:** 7/14, 7/21, 8/4, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-36 Primary Center of Cell 10% Portland/Slag 0.25% Bentonite 1.25/1 Water to Reagent Ratio Elevation 11.35'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
109	42811	07/07/22	7	4	3.00	7.07	1264	180
110	42822	07/07/22	7 (Perm)	4	-	-	-	-
111	42823	07/07/22	14	4	3.02	7.16	1677	230
112	42824	07/07/22	28	4	3.00	7.07	2625	370
113	42825	07/07/22	28	4	3.00	7.07	2817	400
114	42826	07/07/22	28 (Perm)	4	-	-	-	-
115	42827	07/07/22	Hold	4				
116	42828	07/07/22	Hold	4				
117	42829	07/07/22	Hold	4				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 15

Specification: ASTM D1633 **Break Dates:** 7/16, 7/21, 8/4, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-40 Primary Center of Cell 10% Portland/Slag 13:00 0.25% Bentonite 1.25/1 Water to Reagent Ratio Elevation 9.90'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
127	42844	07/08/22	7	8	2.99	7.02	580	80
128	42845	07/08/22	7 (Perm)	8	-	-	-	-
129	42846	07/08/22	14	8	3.02	7.16	1865	260
130	42847	07/08/22	28	8	3.00	7.07	2704	380
131	42848	07/08/22	28	8	2.99	7.02	2893	410
132	42849	07/08/22	28 (Perm)	8	-	-	-	-
133	42850	07/08/22	Hold	8				
134	42851	07/08/22	Hold	8				
135	42852	07/08/22	Hold	8				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 17

Specification: ASTM D1633 **Break Dates:** 7/18, 7/25, 8/8, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-30 Primary Center of Cell 10% Portland/Slag 13:30 0.25% Bentonite 1.25/1 Water to Reagent Ratio Elevation 5.10'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
145	42862	07/11/22	7	4	2.98	6.97	731	110
146	42863	07/11/22	7 (Perm)	4	-	-	-	-
147	42864	07/11/22	14	4	3.00	7.07	1664	240
148	42865	07/11/22	28	4	3.01	7.12	2925	410
149	42866	07/11/22	28	4	3.00	7.07	2418	340
150	42867	07/11/22	28 (Perm)	4	-	-	-	-
151	42868	07/11/22	Hold	4				
152	42869	07/11/22	Hold	4				
153	42870	07/11/22	Hold	4				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 19

Specification: ASTM D1633 **Break Dates:** 7/19, 7/26, 8/9, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-32 Primary Center of Cell 10% Portland/Slag 18:10 0.25% Bentonite 1.25/1 Water to Reagent Ratio Elevation 14.90'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
160	42877	07/12/22	7	3	2.99	7.02	1296	180
161	42878	07/12/22	7 (Perm)	3	-	-	-	-
162	42879	07/12/22	14	3	3.02	7.16	1889	265
163	42880	07/12/22	28	3	3.02	7.16	2549	360
164	42881	07/12/22	28	3	3.02	7.16	2425	340
165	42882	07/12/22	28 (Perm)	3	-	-	-	-
166	42883	07/12/22	Hold	3				
167	42884	07/12/22	Hold	3				
168	42885	07/12/22	Hold	3				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 21

Specification: ASTM D1633 **Break Dates:** 7/20, 7/27, 8/10, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-27 Primary Center of Cell 10% Portland/Slag 15:15 0.15% Bentonite 1.25/1 Water to Reagent Ratio Elevation 6.70'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
175	42892	07/13/22	7	2	3.00	7.07	1097	160
176	42893	07/13/22	7 (Perm)	2	-	-	-	-
177	42894	07/13/22	14	2	3.01	7.12	1768	250
178	42895	07/13/22	28	2	3.01	7.12	2390	340
179	42896	07/13/22	28	2	3.03	7.21	2246	310
180	42897	07/13/22	28 (Perm)	2	-	-	-	-
181	42898	07/13/22	Hold	2				
182	42899	07/13/22	Hold	2				
183	42900	07/13/22	Hold	2				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 23

Specification: ASTM D1633 **Break Dates:** 7/25, 7/28, 8/11/2022

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-33 Primary Center of Cell 10% Portland/Slag 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 5.80'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
190	42911	07/14/22	11	11	3.02	7.16	2333	330
191	42912	07/14/22	11 (Perm)	11	-	-	-	-
192	42913	07/14/22	14	11	3.01	7.12	2490	350
193	42914	07/14/22	28	11	3.02	7.16	3177	450
194	42915	07/14/22	28	11	3.03	7.21	3525	490
195	42916	07/14/22	28 (Perm)	11	-	-	-	-
196	42917	07/14/22	Hold	11				
197	42918	07/14/22	Hold	11				
198	42919	07/14/22	Hold	11				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 25

Specification: ASTM D1633 **Break Dates:** 7/25, 7/29, 8/12/2022

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-31 Primary Center of Cell 10% Portland/Slag 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 5.70'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
205	42926	07/15/22	10	10	3.00	7.07	1848	260
206	42927	07/15/22	10 (Perm)	10	-	-	-	-
207	42928	07/15/22	14	10	2.99	7.02	2192	310
208	42929	07/15/22	28	10	3.01	7.12	2593	370
209	42930	07/15/22	28	10	3.00	7.07	2716	390
210	42931	07/15/22	28 (Perm)	10	-	-	-	-
211	42932	07/15/22	Hold	10				
212	42933	07/15/22	Hold	10				
213	42934	07/15/22	Hold	10				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 27

Specification: ASTM D1633 **Break Dates:** 7/25, 8/1, 8/15/2022

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-28 Primary Center of Cell 10% Portland/Slag 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 8.45'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
220	42941	07/18/22	7	7	3.00	7.07	1516	220
221	42942	07/18/22	7 (Perm)	7	-	-	-	-
222	42943	07/18/22	14	7	3.01	7.12	2137	300
223	42944	07/18/22	28	7	3.00	7.07	2661	370
224	42945	07/18/22	28	7	3.01	7.12	2346	330
225	42946	07/18/22	28 (Perm)	7	-	-	-	-
226	42947	07/18/22	Hold	7				
227	42948	07/18/22	Hold	7				
228	42949	07/18/22	Hold	7				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 29

Specification: ASTM D1633 **Break Dates:** 7/26, 8/2, 8/16/2022

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-34 Primary Center of Cell 10% Portland/Slag 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 8.50'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
235	42956	07/19/22	7	6	3.01	7.12	1674	240
236	42957	07/19/22	7 (Perm)	6	-	-	-	-
237	42958	07/19/22	14	6	3.01	7.12	2486	350
238	42959	07/19/22	28	6	2.99	7.02	3360	480
239	42960	07/19/22	28	6	2.98	6.97	3278	470
240	42961	07/19/22	28 (Perm)	6	-	-	-	-
241	42962	07/19/22	Hold	6				
242	42963	07/19/22	Hold	6				
243	42964	07/19/22	Hold	6				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 31

Specification: ASTM D1633 **Break Dates:** 7/27, 8/3, 8/17/2022

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-16 Primary Center of Cell 10% Portland/Slag 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 11.0'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
250	42971	07/20/22	7	5	3.01	7.12	1294	180
251	42972	07/20/22	7 (Perm)	5	-	-	-	-
252	42973	07/20/22	14	5	3.01	7.12	1753	250
253	42974	07/20/22	28	5	2.99	7.02	2516	360
254	42975	07/20/22	28	5	3.00	7.07	2340	330
255	42976	07/20/22	28 (Perm)	5	-	-	-	-
256	42977	07/20/22	Hold	5				
257	42978	07/20/22	Hold	5				
258	42979	07/20/22	Hold	5				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 33

Specification: ASTM D1633 **Break Dates:** 8/1, 8/4, 8/18/2022

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-17 Primary Center of Cell 10% Portland/Slag 12:40 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 9.20'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
265	43005	07/21/22	11	8	3.00	7.07	1427	200
266	43006	07/21/22	11 (Perm)	8	-	-	-	-
267	43007	07/21/22	14	8	3.01	7.12	1784	250
268	43008	07/21/22	28	8	3.01	7.12	2296	320
269	43009	07/21/22	28	8	3.01	7.12	2302	330
270	43010	07/21/22	28 (Perm)	8	-	-	-	-
271	43011	07/21/22	Hold	8				
272	43012	07/21/22	Hold	8				
273	43013	07/21/22	Hold	8				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 35

Specification: ASTM D1633 **Break Dates:** 8/1, 8/5, 8/19/2022

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-14 Primary Center of Cell 10% Portland/Slag 13:30 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 9.55'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
280	43026	07/22/22	10	7	3.01	7.12	2544	360
281	43027	07/22/22	10 (Perm)	7	-	-	-	-
282	43028	07/22/22	14	7	3.03	7.21	2939	410
283	43029	07/22/22	28	7	3.01	7.12	5240	740
284	43030	07/22/22	28	7	2.99	7.02	4860	690
285	43031	07/22/22	28 (Perm)	7	-	-	-	-
286	43032	07/22/22	Hold	7				
287	43033	07/22/22	Hold	7				
288	43034	07/22/22	Hold	7				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 37

Specification: ASTM D1633 **Break Dates:** 8/1, 8/8, 8/22/2022

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-15 Primary Center of Cell 10% Portland/Slag 17:30 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 9.65'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
295	43035	07/25/22	7	4	2.99	7.02	1607	230
296	43036	07/25/22	7 (Perm)	4	-	-	-	-
297	43037	07/25/22	14	4	2.99	7.02	2737	390
298	43038	07/25/22	28	4	3.01	7.12	3245	460
299	43039	07/25/22	28	4	3.01	7.12	3354	470
300	43040	07/25/22	28 (Perm)	4	-	-	-	-
301	43041	07/25/22	Hold	4				
302	43042	07/25/22	Hold	4				
303	43043	07/25/22	Hold	4				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 39

Specification: ASTM D1633 **Break Dates:** 8/2, 8/9, 8/23/2022

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-22 Primary Center of Cell 10% Portland/Slag 13:50 0.18% Bentonite 1.25/1 Water to Reagent Ratio Elevation 10.5'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
310	43050	07/26/22	7	3	3.01	7.12	2026	290
311	43051	07/26/22	7 (Perm)	3	-	-	-	-
312	43052	07/26/22	14	3	3.02	7.16	3134	440
313	43053	07/26/22	28	3	2.97	6.93	3856	560
314	43054	07/26/22	28	3	2.99	7.02	3682	520
315	43055	07/26/22	28 (Perm)	3	-	-	-	-
316	43056	07/26/22	Hold	3				
317	43057	07/26/22	Hold	3				
318	43058	07/26/22	Hold	3				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 41

Specification: ASTM D1633 **Break Dates:** 8/3, 8/10, 8/24/2022

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-21 Primary Center of Cell 10% Portland/Slag 17:40 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 5.6'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
325	43065	07/27/22	7	2	3.02	7.16	1586	220
326	43066	07/27/22	7 (Perm)	2	-	-	-	-
327	43067	07/27/22	14	2	3.00	7.07	2380	340
328	43068	07/27/22	28	2	3.02	7.16	2946	410
329	43069	07/27/22	28	2	3.03	7.21	2758	380
330	43070	07/27/22	28 (Perm)	2	-	-	-	-
331	43071	07/27/22	Hold	2				
332	43072	07/27/22	Hold	2				
333	43073	07/27/22	Hold	2				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 43

Specification: ASTM D1633 **Break Dates:** 8/8, 8/11, 8/25/2022

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-13 Primary Center of Cell 10% Portland/Slag 17:30 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 7.0'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
340	43083	07/28/22	11	11	2.99	7.02	3356	470
341	43084	07/28/22	11 (Perm)	11	-	-	-	-
342	43085	07/28/22	14	11	3.03	7.21	2460	340
343	43086	07/28/22	28	11	3.01	7.12	4001	560
344	43087	07/28/22	28	11	3.00	7.07	3863	550
345	43088	07/28/22	28 (Perm)	11	-	-	-	-
346	43089	07/28/22	Hold	11				
347	43090	07/28/22	Hold	11				
348	43091	07/28/22	Hold	11				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 45

Specification: ASTM D1633 **Break Dates:** 8/8, 8/10, 8/24/2022

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-7 Primary Center of Cell 10% Portland/Slag 13:30 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 7.35'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
355	43098	07/29/22	10	10	3.01	7.12	2353	330
356	43099	07/29/22	10 (Perm)	10	-	-	-	-
357	43100	07/29/22	14	10	3.01	7.12	2490	350
358	43101	07/29/22	28	10	3.01	7.12	3305	460
359	43102	07/29/22	28	10	3.00	7.07	3525	500
360	43103	07/29/22	28 (Perm)	10	-	-	-	-
361	43104	07/29/22	Hold	10				
362	43105	07/29/22	Hold	10				
363	43106	07/29/22	Hold	10				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 47

Specification: ASTM D1633 **Break Dates:** 8/8, 8/15, 8/29/2022

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-8 Primary Center of Cell 10% Portland/Slag 14:40 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 10.15'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
370	43113	08/01/22	7	7	3.01	7.12	1689	240
371	43114	08/01/22	7 (Perm)	7	-	-	-	-
372	43115	08/01/22	14	7	3.01	7.12	2691	380
373	43116	08/01/22	28	7	3.00	7.07	3385	480
374	43117	08/01/22	28	7	3.00	7.07	3441	490
375	43118	08/01/22	28 (Perm)	7	-	-	-	-
376	43119	08/01/22	Hold	7				
377	43120	08/01/22	Hold	7				
378	43121	08/01/22	Hold	7				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 49

Specification: ASTM D1633 **Break Dates:** 8/9, 8/16, 8/30/2022

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-18 Primary Center of Cell 10% Portland/Slag 18:10 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 5.5'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
385	43128	08/02/22	7	6	3.01	7.12	1492	210
386	43129	08/02/22	7 (Perm)	6	-	-	-	-
387	43130	08/02/22	14	6	2.99	7.02	2082	300
388	43131	08/02/22	28	6	3.02	7.16	3150	440
389	43132	08/02/22	28	6	3.02	7.16	2809	390
390	43133	08/02/22	28 (Perm)	6	-	-	-	-
391	43134	08/02/22	Hold	6				
392	43135	08/02/22	Hold	6				
393	43136	08/02/22	Hold	6				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 51

Specification: ASTM D1633 **Break Dates:** 8/10, 8/17, 8/31, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-6 Primary Center of Cell 10% Portland/Slag 14:45 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 9.25'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
400	43143	08/03/22	7	5	3.03	7.21	1047	150
401	43144	08/03/22	7 (Perm)	5	-	-	-	-
402	43145	08/03/22	14	5	2.99	7.02	1934	280
403	43146	08/03/22	28	5	2.98	6.97	2640	380
404	43147	08/03/22	28	5	3.00	7.07	2507	350
405	43148	08/03/22	28 (Perm)	5	-	-	-	-
406	43149	08/03/22	Hold	5				
407	43150	08/03/22	Hold	5				
408	43151	08/03/22	Hold	5				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 53

Specification: ASTM D1633 **Break Dates:** 8/17, 8/18, 9/1, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-9 Primary Center of Cell 10% Portland/Slag 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 10.15'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
415	43160	08/04/22	13	11	2.98	6.97	2068	300
416	43161	08/04/22	Hold	11	-	-	-	-
417	43162	08/04/22	14	11	3.01	7.12	1818	260
418	43163	08/04/22	28	11	2.99	7.02	3250	460
419	43164	08/04/22	28	11	3.00	7.07	3180	450
420	43165	08/04/22	28 (Perm)	11	-	-	-	-
421	43166	08/04/22	Hold	11				
422	43167	08/04/22	Hold	11				
423	43168	08/04/22	Hold	11				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 55

Specification: ASTM D1633 **Break Dates:** 8/17, 8/22, 9/5, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-19A Primary Center of Cell 10% Portland/Slag 16:00 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 10.50'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
430	43175	08/08/22	9	7	2.98	6.97	1136	160
431	43176	08/08/22	Hold	7	-	-	-	-
432	43177	08/08/22	14	7	3.03	7.21	1694	240
433	43178	08/08/22	28	7	2.97	6.93	2280	330
434	43179	08/08/22	28	7	2.99	7.02	1858	270
435	43180	08/08/22	28 (Perm)	7	-	-	-	-
436	43181	08/08/22	Hold	7				
437	43182	08/08/22	Hold	7				
438	43183	08/08/22	Hold	7				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 57

Specification: ASTM D1633 **Break Dates:** 8/17, 8/23, 9/6, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-19B Primary Center of Cell 10% Portland/Slag 12:55 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 13:25'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
445	43190	08/09/22	8	6	2.99	7.02	1329	190
446	43191	08/09/22	Hold	6	-	-	-	-
447	43192	08/09/22	14	6	3.00	7.07	1740	250
448	43193	08/09/22	28	6	2.99	7.02	2455	350
449	43194	08/09/22	28	6	2.97	6.93	2361	340
450	43195	08/09/22	28 (Perm)	6	-	-	-	-
451	43196	08/09/22	Hold	6				
452	43197	08/09/22	Hold	6				
453	43198	08/09/22	Hold	6				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 59

Specification: ASTM D1633 **Break Dates:** 8/17, 8/24, 9/7, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-5 Primary Center of Cell 10% Portland/Slag 14:45 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 9.75'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
460	43205	08/10/22	7	5	2.99	7.02	1497	210
461	43206	08/10/22	Hold	5	-	-	-	-
462	43207	08/10/22	14	5	3.02	7.16	2184	310
463	43208	08/10/22	28	5	2.98	6.97	3037	440
464	43209	08/10/22	28	5	3.00	7.07	3057	430
465	43210	08/10/22	28 (Perm)	5	-	-	-	-
466	43211	08/10/22	Hold	5				
467	43212	08/10/22	Hold	5				
468	43213	08/10/22	Hold	5				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 61

Specification: ASTM D1633 **Break Dates:** 8/22, 8/25, 9/8, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-20 Primary Center of Cell 10% Portland/Slag 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 6.75'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
475	43231	08/11/22	11	11	3.00	7.07	1628	230
476	43232	08/11/22	14	11	3.01	7.12	1971	280
477	43233	08/11/22	28	11	2.98	6.97	2583	370
478	43234	08/11/22	28	11	2.98	6.97	2587	370
479	43235	08/11/22	28 (Perm)	11				
480	43236	08/11/22	Hold	11	-	-	-	-
481	43237	08/11/22	Hold	11				
482	43238	08/11/22	Hold	11				
483	43239	08/11/22	Hold	11				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 63

Specification: ASTM D1633 **Break Dates:** 8/22, 8/26, 9/9, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell N-8 Primary Center of Cell 10% Portland/Slag 14:10 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 7.45'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
490	43246	08/12/22	10	10	2.99	7.02	2091	300
491	43247	08/12/22	14	10	3.00	7.07	2091	290
492	43248	08/12/22	28	10	3.01	7.12	2528	360
493	43249	08/12/22	28	10	3.00	7.07	2670	380
494	43250	08/12/22	28 (Perm)	10				
495	43251	08/12/22	Hold	10				
496	43252	08/12/22	Hold	10				
497	43253	08/12/22	Hold	10				
498	43254	08/12/22	Hold	10				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 65

Specification: ASTM D1633 **Break Dates:** 8/22, 8/29, 9/12, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-4 Primary Center of Cell 10% Portland/Slag 15:35 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 8.65'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
505	43261	08/15/22	7	7	3.00	7.07	1428	200
506	43262	08/15/22	14	7	3.00	7.07	2296	330
507	43263	08/15/22	28	7	3.01	7.12	2959	415
508	43264	08/15/22	28	7	3.02	7.16	3082	430
509	43265	08/15/22	28 (Perm)	7				
510	43266	08/15/22	Hold	7				
511	43267	08/15/22	Hold	7				
512	43268	08/15/22	Hold	7				
513	43269	08/15/22	Hold	7				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 67

Specification: ASTM D1633 **Break Dates:** 8/23, 8/30, 9/13, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-23 Primary Center of Cell 10% Portland/Slag 17:10 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 6.75'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
520	43276	08/16/22	7	6	3.00	7.07	1504	210
521	43277	08/16/22	14	6	3.02	7.16	2381	330
522	43278	08/16/22	28	6	3.03	7.21	3875	540
523	43279	08/16/22	28	6	3.02	7.16	3581	500
524	43280	08/16/22	28 (Perm)	6				
525	43281	08/16/22	Hold	6				
526	43282	08/16/22	Hold	6				
527	43283	08/16/22	Hold	6				
528	43284	08/16/22	Hold	6				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 69

Specification: ASTM D1633 **Break Dates:** 8/24, 8/31, 9/14, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-2 Primary Center of Cell 10% Portland/Slag 13:30 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 14.20'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
535	43290	08/17/22	7	5	3.02	7.16	1128	160
536	43291	08/17/22	14	5	2.99	7.02	1888	270
537	43292	08/17/22	28	5	3.01	7.12	3890	550
538	43293	08/17/22	28	5	2.99	7.02	4213	600
539	43294	08/17/22	28 (Perm)	5				
540	43295	08/17/22	Hold	5				
541	43296	08/17/22	Hold	5				
542	43297	08/17/22	Hold	5				
543	43298	08/17/22	Hold	5				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 71

Specification: ASTM D1633 **Break Dates:** 8/30, 9/1, 9/5, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-24 Primary Center of Cell 10% Portland/Slag 17:25 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 5.10'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
550	43319	08/18/22	12	12	3.02	7.16	2218	310
551	43320	08/18/22	14	12	2.98	6.97	2140	310
552	43321	08/18/22	28	12	3.02	7.16	2949	410
553	43322	08/18/22	28	12	3.01	7.12	3011	420
554	43323	08/18/22	28 (Perm)	12				
555	43324	08/18/22	Hold	12				
556	43325	08/18/22	Hold	12				
557	43326	08/18/22	Hold	12				
558	43327	08/18/22	Hold	12				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 73

Specification: ASTM D1633 **Break Dates:** 8/30, 9/2, 9/16, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell N-7 Primary Center of Cell 10% Portland/Slag 12:50 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 11.25'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
565	43334	08/19/22	11	11	3.03	7.21	2226	310
566	43335	08/19/22	14	11	3.03	7.21	2284	320
567	43336	08/19/22	28	11	3.00	7.07	3311	470
568	43337	08/19/22	28	11	3.01	7.12	3296	460
569	43338	08/19/22	28 (Perm)	11				
570	43339	08/19/22	Hold	11				
571	43340	08/19/22	Hold	11				
572	43341	08/19/22	Hold	11				
573	43342	08/19/22	Hold	11				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 75

Specification: ASTM D1633 **Break Dates:** 8/30, 9/5, 9/19, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-25 Primary Center of Cell 10% Portland/Slag 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 6.70'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
580	43349	08/22/22	8	8	3.02	7.16	1770	250
581	43350	08/22/22	14	8	2.97	6.93	2372	340
582	43351	08/22/22	28	8	2.99	7.02	2619	370
583	43352	08/22/22	28	8	2.98	6.97	2718	390
584	43353	08/22/22	28 (Perm)	8				
585	43354	08/22/22	Hold	8				
586	43355	08/22/22	Hold	8				
587	43356	08/22/22	Hold	8				
588	43357	08/22/22	Hold	8				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 77

Specification: ASTM D1633 **Break Dates:** 8/30, 9/6, 9/20, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-26 Primary Center of Cell 10% Portland/Slag 13:30 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 9.25'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
595	43364	08/23/22	7	7	3.03	7.21	1172	160
596	43365	08/23/22	14	7	2.98	6.97	1567	220
597	43366	08/23/22	28	7	3.01	7.12	2268	320
598	43367	08/23/22	28	7	3.00	7.07	2214	320
599	43368	08/23/22	28 (Perm)	7				
600	43369	08/23/22	Hold	7				
601	43370	08/23/22	Hold	7				
602	43371	08/23/22	Hold	7				
603	43372	08/23/22	Hold	7				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 79

Specification: ASTM D1633 **Break Dates:** 8/31, 9/2, 9/21, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell N-6 Primary Center of Cell 10% Portland/Slag 14:40 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 7.20'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
610	43379	08/24/22	7	6	2.99	7.02	1328	190
611	43380	08/24/22	14	6	2.98	6.97	2306	330
612	43381	08/24/22	28	6	2.97	6.93	3280	470
613	43382	08/24/22	28	6	2.99	7.02	3155	450
614	43383	08/24/22	28 (Perm)	6				
615	43384	08/24/22	Hold	6				
616	43385	08/24/22	Hold	6				
617	43386	08/24/22	Hold	6				
618	43387	08/24/22	Hold	6				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 81

Specification: ASTM D1633 **Break Dates:** 9/7, 9/8, 9/22, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell N-1 Primary Center of Cell 10% Portland/Slag 14:50 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 8.15'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
625	43416	08/25/22	13	12	2.98	6.97	2135	310
626	43417	08/25/22	14	12	2.98	6.97	2545	370
627	43418	08/25/22	28	12	2.99	7.02	2642	380
628	43419	08/25/22	28	12	3.01	7.12	2947	420
629	43420	08/25/22	28 (Perm)	12				
630	43421	08/25/22	Hold	12				
631	43422	08/25/22	Hold	12				
632	43423	08/25/22	Hold	12				
633	43424	08/25/22	Hold	12				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 83

Specification: ASTM D1633 **Break Dates:** 9/7, 9/9, 9/23, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell N-3 Primary Center of Cell 10% Portland/Slag 10:40 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 11.40'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
640	43431	08/26/22	11	11	2.99	7.02	2250	320
641	43432	08/26/22	14	11	3.01	7.12	2338	380
642	43433	08/26/22	28	11	2.98	6.97	2809	400
643	43434	08/26/22	28	11	2.99	7.02	3298	470
644	43435	08/26/22	28 (Perm)	11				
645	43436	08/26/22	Hold	11				
646	43437	08/26/22	Hold	11				
647	43438	08/26/22	Hold	11				
648	43439	08/26/22	Hold	11				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 85

Specification: ASTM D1633 **Break Dates:** 9/7, 9/12, 9/26, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-11 Primary Center of Cell 10% Portland/Slag 16:45 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 8.40'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
655	43446	08/29/22	7	8	2.99	7.02	1233	180
656	43447	08/29/22	14	8	3.00	7.07	1578	225
657	43448	08/29/22	28	8	3.02	7.16	2301	320
658	43449	08/29/22	28	8	3.00	7.07	2276	320
659	43450	08/29/22	28 (Perm)	8				
660	43451	08/29/22	Hold	8				
661	43452	08/29/22	Hold	8				
662	43453	08/29/22	Hold	8				
663	43454	08/29/22	Hold	8				

Note:

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Compressive Strength of Molded Soil-Cement Cylinders

3" x 6" Cylinder Data

Project #: L-22095 **Report #:** 87

Specification: ASTM D1633 **Break Dates:** 9/7, 9/13, 9/27, Hold

Client: Land Remediation, Inc.

Project: NM Troy Water St. MGP Site (Site #442029) - Troy, New York

Structure Identification: -

Section Poured: Cell C-12 Primary Center of Cell 10% Portland/Slag 15:00 0.10% Bentonite 1.25/1 Water to Reagent Ratio Elevation 6.85'

Cylinders Made By: Client **Concrete Temperature:** N/A **Spread:** N/A **Entrained Air Content:** N/A

Design Strength: N/A **Batch Ticket #:** N/A **Truck Number:** N/A

CLSM Supplier: N/A

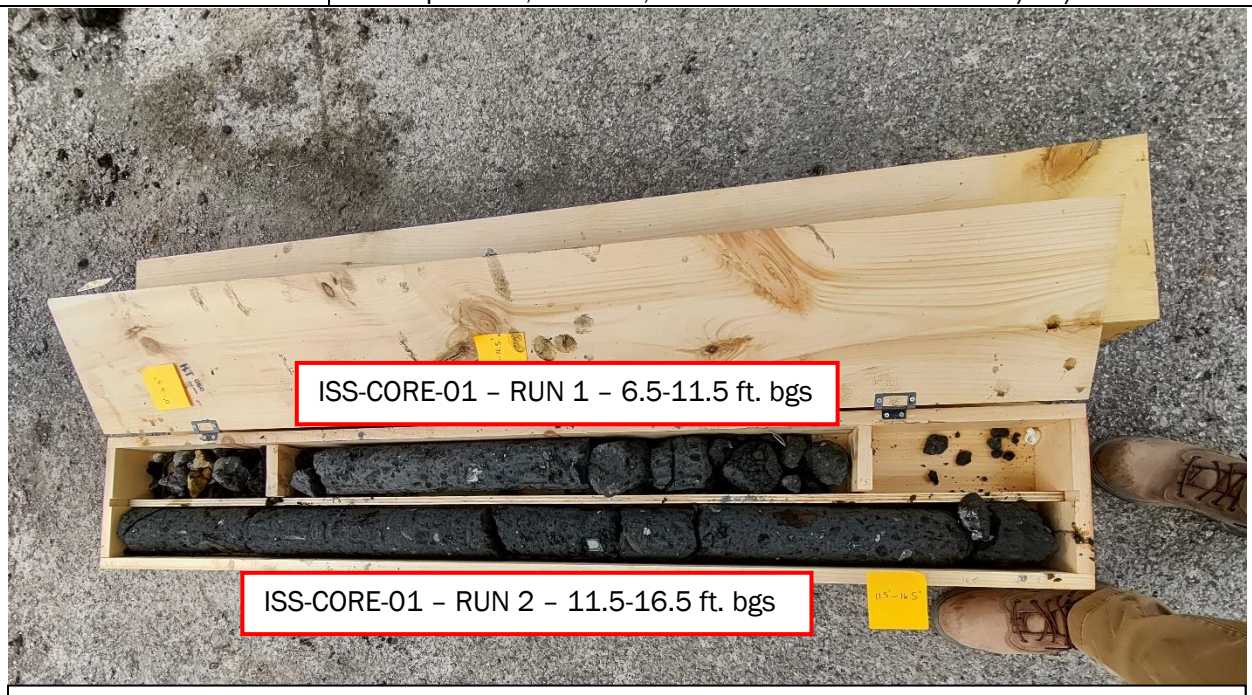
Cylinder #	Lab I.D. #	Date Cast	Age (Days)	Field Cure (Days)	Diameter of Cylinder	Cross Sectional Area of Cylinder	Maximum Load (lbs.)	Compressive Strength (Psi)
671	43461	08/30/22	8	6	2.97	6.93	975	140
671	43462	08/30/22	14	6	3.03	7.21	1580	219
672	43463	08/30/22	28	6	2.97	6.93	1761	250
673	43464	08/30/22	28	6	2.99	7.02	1880	270
674	43465	08/30/22	28 (Perm)	6				
675	43466	08/30/22	Hold	6				
676	43467	08/30/22	Hold	6				
677	43468	08/30/22	Hold	6				
678	43469	08/30/22	Hold	6				

Note:

Appendix K: In Situ Solidification Core Logs

ISS Core Log

SITE NAME	Troy (Water Street) Site – Area 2	ISS CORE ID	ISS-CORE-01
SITE LOCATION	Troy, NY	BC REPRESENTATIVE	N. Gilliam
LOCATION	ISS Cell C-39	CONTRACTOR	Parratt-Wolff, Inc.
DATE	07/05/2022	DRILLER	Joe Percy
COLLECTION METHOD	HQ Wireline Coring	EQUIPMENT	CME - 55
CORE DIAMATER (in.)	2	TOTAL DEPTH (ft. bgs)	31.5
NORTHING (ft., NAD83)	1411448.9	GS ELEV. (ft. NGVD 29)	28.3
EASTING (ft., NAD83)	706906.1	OTHERS	
NYSDEC INSPECTION	John Spellman, NYSDEC, observed ISS-CORE-01 on 07/05/2022.		



- Advanced casing to 6.5 feet bgs, to seal off unmixed material (overburden).
- ISS-CORE-01: Run 1, 6.5-11.5 feet bgs – 37 inches of recovery, with cracks (attributed to coring activities) at 21.5, 26, and 29 inches. Crumbling observed between 33 and 37 inches. The soil is adequately mixed/treated.
- ISS-CORE-01: Run 2, 11.5-16.5 feet bgs – 60 inches of recovery, with cracks (attributed to coring activities) at 4, 7, 12, 36.5, 41.5, and 56 inches. The soil is adequately mixed/treated.

ISS Core Log

SITE NAME	Troy (Water Street) Site – Area 2	ISS CORE ID	ISS-CORE-01
SITE LOCATION	Troy, NY	BC REPRESENTATIVE	N. Gilliam



- ISS-CORE-01: Run 3, 16.5-21.5 feet bgs – 60 inches of recovery, with cracks (attributed to coring activities) at 7, 19.5, 34, 37.5, 41.5, and 54 inches. The soil is adequately mixed/treated.
- ISS-CORE-01: Run 4, 21.5-26.5 feet bgs – 60 inches of recovery, with cracks (attributed to coring activities) at 4, 20.5, 27.5, 36, 43, and 53 inches. The soil is adequately mixed/treated.

ISS Core Log

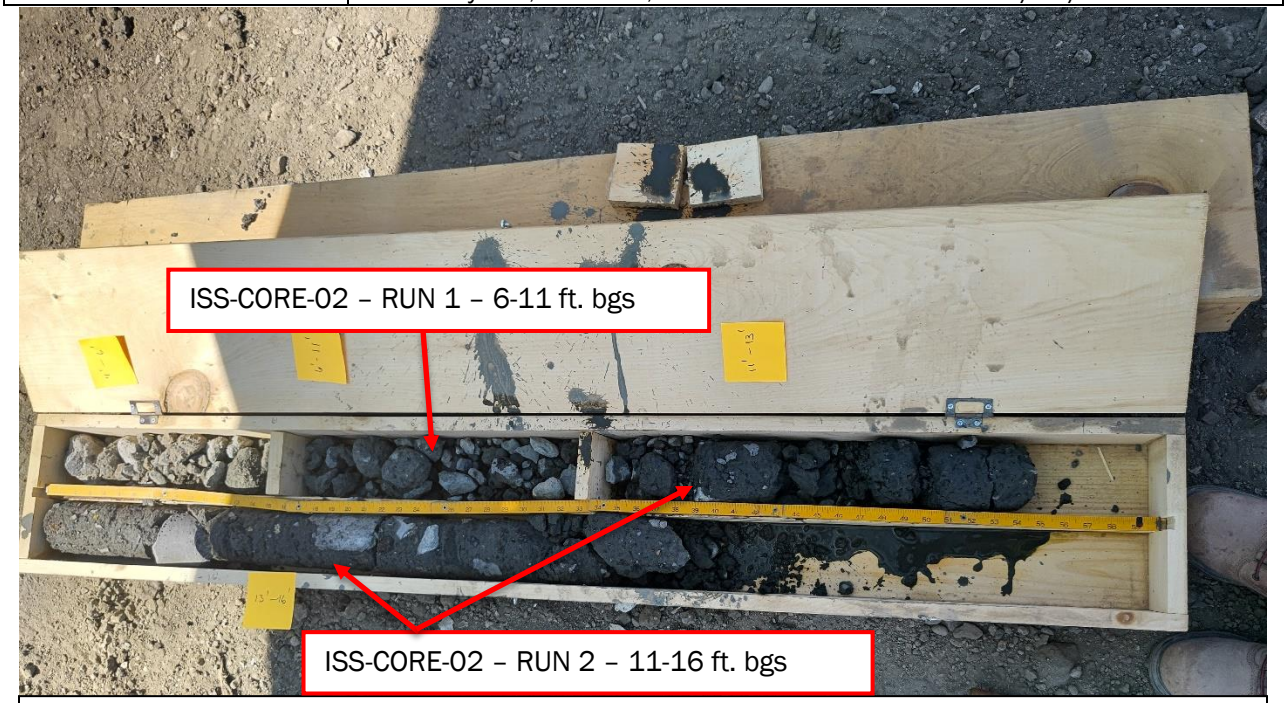
SITE NAME	Troy (Water Street) Site – Area 2	ISS CORE ID	ISS-CORE-01
SITE LOCATION	Troy, NY	BC REPRESENTATIVE	N. Gilliam



- ISS-CORE-01: Run 5, 26.5-31.5 feet bgs – 60 inches of recovery, with cracks (attributed to coring activities) at 12.5, 26, 48.5, and 55 inches. Crumbling observed between 35 and 39 inches. The soil is adequately mixed/treated.

ISS Core Log

SITE NAME	Troy (Water Street) Site – Area 2	ISS CORE ID	ISS-CORE-02
SITE LOCATION	Troy, NY	BC REPRESENTATIVE	N. Gilliam
LOCATION	Boundary between Cells C-14 and C-15	CONTRACTOR	Parratt-Wolff, Inc.
DATE	08/03/2022	DRILLER	Glenn Lansing
COLLECTION METHOD	HQ Wireline Coring	EQUIPMENT	CME - 55
CORE DIAMATER (in.)	2	TOTAL DEPTH (ft. bgs)	31
NORTHING (ft., NAD83)	1411465.1	GS ELEV. (ft. NGVD 29)	24.2
EASTING (ft., NAD83)	706844.9	OTHERS	
NYSDEC INSPECTION	Scott Deyette, NYSDEC, observed ISS-CORE-02 on 08/03/2022.		



- Advanced casing to 6 feet bgs, to seal off unmixed material (overburden).
- ISS-CORE-02: Run 1, 6-11 feet bgs – 17.2 inches of recovery. Crumbling observed between 0 and 17.2 inches. The soil is adequately mixed/treated.
- ISS-CORE-02: Run 2, 11-16 feet bgs – 60 inches of recovery, with cracks (attributed to coring activities) at 9, 16, 19, 21, 29, 32, 43, 52, and 54 inches. Crumbling observed between 0 and 5 inches and between 9 and 13 inches. The soil is adequately mixed/treated.

ISS Core Log

SITE NAME	Troy (Water Street) Site – Area 2	ISS CORE ID	ISS-CORE-02
SITE LOCATION	Troy, NY	BC REPRESENTATIVE	N. Gilliam



- ISS-CORE-02: Run 3, 16-21 feet bgs – 60 inches of recovery, with cracks (attributed to coring activities) at 3, 8, 17, 23.5, 39, 43.7, 53.5, and 55 inches. The soil is adequately mixed/treated.
- ISS-CORE-02: Run 4, 21-26 feet bgs – 60 inches of recovery, with cracks (attributed to coring activities) at 2.5, 5, 7, 9, 11, 14, 20, 31, 42, 49, 55, and 58 inches. The soil is adequately mixed/treated.

ISS Core Log

SITE NAME	Troy (Water Street) Site – Area 2	ISS CORE ID	ISS-CORE-02
SITE LOCATION	Troy, NY	BC REPRESENTATIVE	N. Gilliam

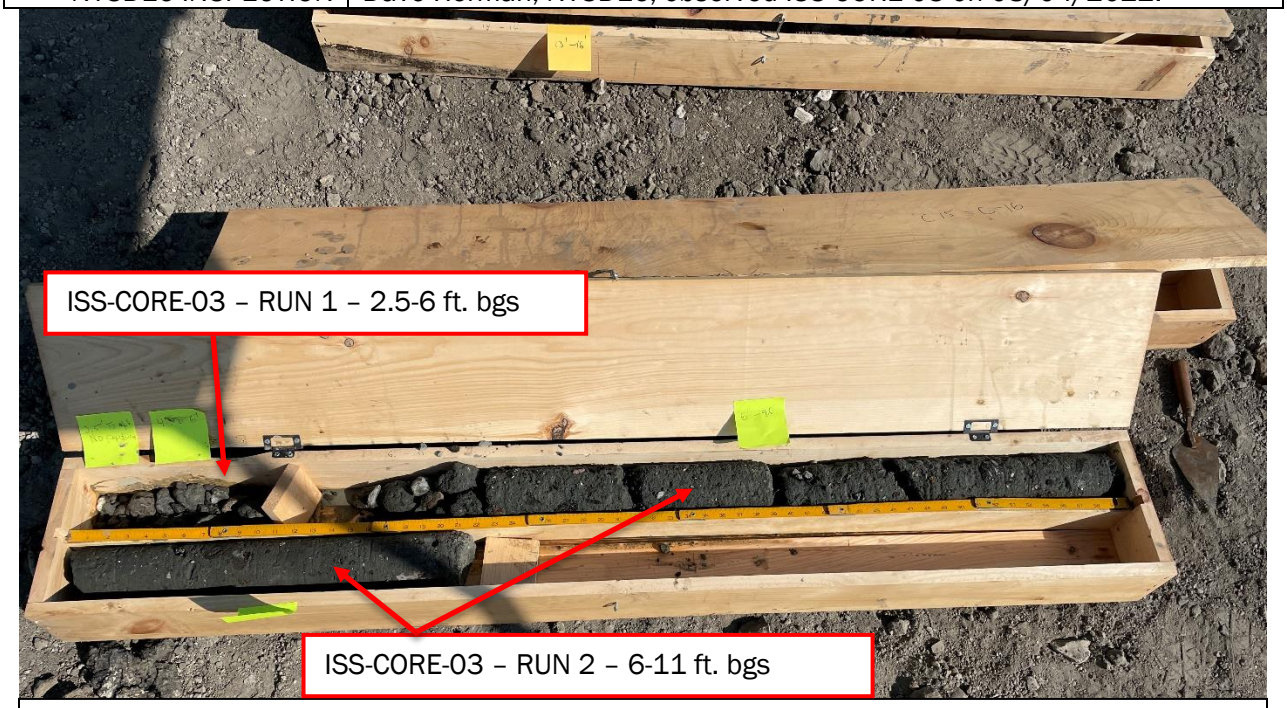


ISS-CORE-02 – RUN 5 – 26-31 ft. bgs

- ISS-CORE-02: Run 5, 26-31 feet bgs – 60 inches of recovery, with cracks (attributed to coring activities) at 2, 7, 20, 22, 32.5, 42.5, 50, 52.5, and 56.5 inches. The soil is adequately mixed/treated.

ISS Core Log

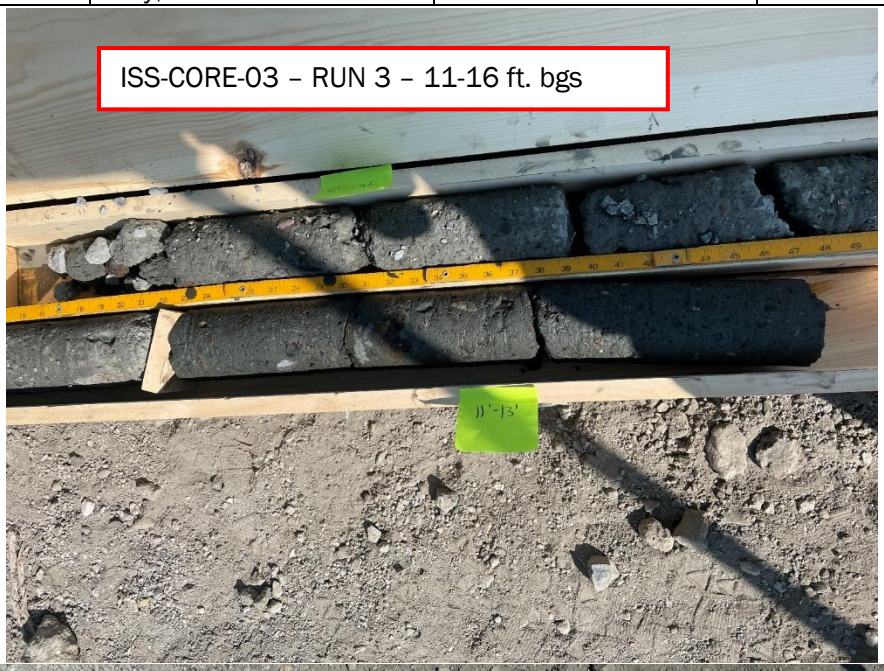
SITE NAME	Troy (Water Street) Site – Area 2	ISS CORE ID	ISS-CORE-03
SITE LOCATION	Troy, NY	BC REPRESENTATIVE	J. Braun
LOCATION	Boundary between Cells C-27 and C-28	CONTRACTOR	Parratt-Wolff, Inc.
DATE	08/04/2022	DRILLER	Glenn Lansing
COLLECTION METHOD	HQ Wireline Coring	EQUIPMENT	CME - 55
CORE DIAMATER (in.)	2	TOTAL DEPTH (ft. bgs)	27.5
NORTHING (ft., NAD83)	1411382.3	GS ELEV. (ft. NGVD 29)	26.1
EASTING (ft., NAD83)	706879.0	OTHERS	
NYSDEC INSPECTION	Dave Herman, NYSDEC, observed ISS-CORE-03 on 08/04/2022.		



- Advanced casing to 2.5 feet bgs, to seal off unmixed material (overburden).
- ISS-CORE-03: Run 1, 2.5-6 feet bgs – 24 inches of recovery. Crumbling observed between 18 and 42 inches. The soil is adequately mixed/treated.
- ISS-CORE-03: Run 2, 6-11 feet bgs – 60 inches of recovery, with cracks (attributed to coring activities) at 7, 16, 24.5, 32.5, and 45 inches. The soil is adequately mixed/treated.

ISS Core Log

SITE NAME	Troy (Water Street) Site – Area 2	ISS CORE ID	ISS-CORE-03
SITE LOCATION	Troy, NY	BC REPRESENTATIVE	J. Braun

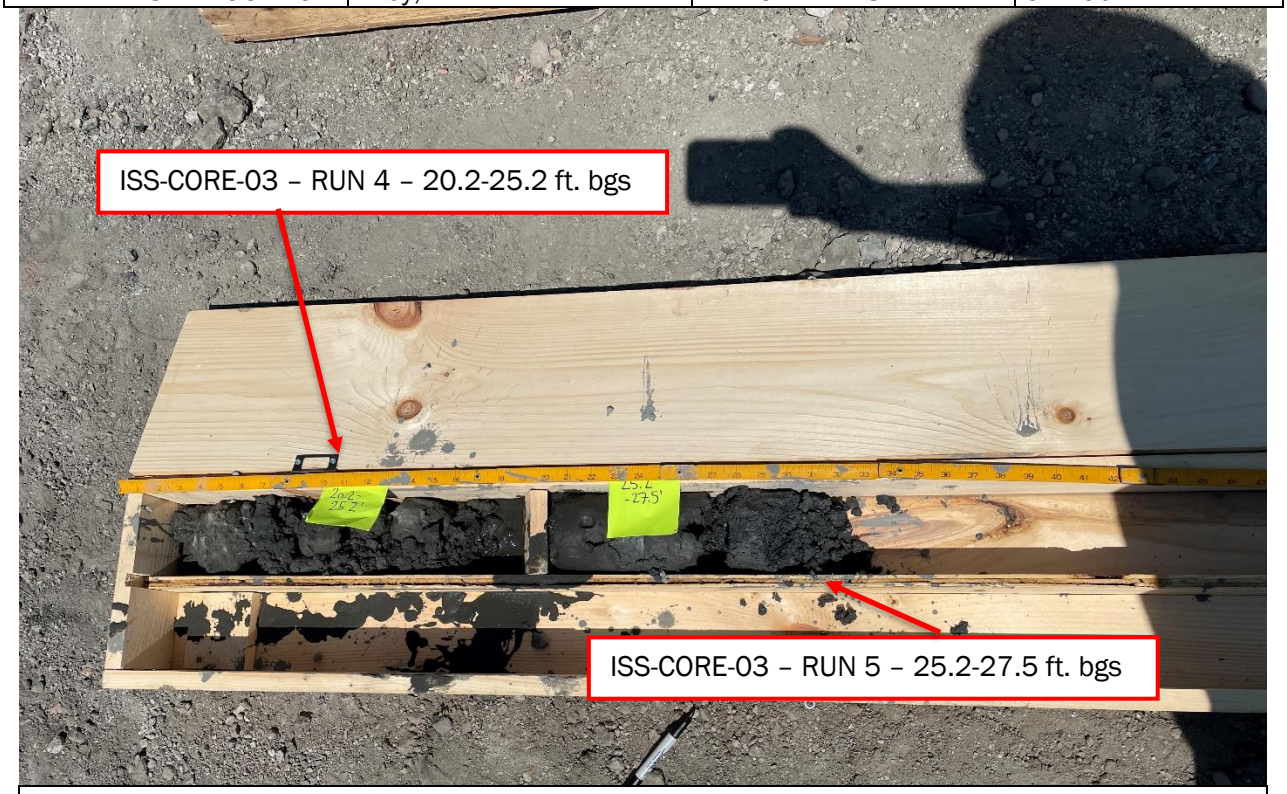




- ISS-CORE-03: Run 3, 11-16 feet bgs – 60 inches of recovery, with cracks (attributed to coring activities) at 3, 8, 17, 23.5, 39, 43.7, 53.5, and 55 inches. The soil is adequately mixed/treated.
- ISS-CORE-03: Run 4, 16-20.2 feet bgs – 60 inches of recovery, with cracks (attributed to coring activities) at 2.5, 5, 7, 9, 11, 14, 20, 31, 42, 49, 55, and 58 inches. The soil is adequately mixed/treated.

ISS Core Log

SITE NAME	Troy (Water Street) Site – Area 2	ISS CORE ID	ISS-CORE-03
SITE LOCATION	Troy, NY	BC REPRESENTATIVE	J. Braun



- ISS-CORE-03: Run 5, 20.2-25.2 feet bgs – 60 inches of recovery, with crumbling observed between 6 and 18 inches. The soil is adequately mixed/treated.
- ISS-CORE-03: Run 6, 25.2-27.5 feet bgs – 28 inches of recovery, with crumbing observed between 27 and 32 inches. The soil is adequately mixed/treated.

Appendix L: Waste Management Documentation (submitted as separate files)

Appendix L-1: Area 2 Waste Management Documentation

Appendix L-2: Area 3 Waste Management Documentation

Appendix M: Soil Compaction Results

Appendix M-1: Area 2 Soil Compaction Results

Appendix M-2: Area 3 Soil Compaction Results

Appendix M-1: Area 2 Soil Compaction Results

CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Email: constructiontech@live.com

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT NUMBER: 1 : PAGE #: 1
INSPECTION DATE: 05/25/22
OUR FILE NUMBER: 1526.016
FIELD INSPECTOR: TONY SHAHINIAN

ATT'N: MR. JONATHON BORRELLI
PROJECT: **NATIONAL GRID PHASE 1A REMEDIATION: TROY, NEW YORK**

SOIL COMPACTION VERIFICATION REPORT ::: INPLACE SOIL DENSITY

MATERIALS LABORATORY DATA

CODE	MOISTURE	MAX DENSITY PCF	MATERIAL DESCRIPTION	MATERIAL SOURCE
21841	6.2	143.2	CR STONE sized as: GRAVEL, fine; and m/c Sand; trace Silt/Clay	BORROW: CRUSHER RUN
			Temporary detour road	

FIELD COMPACTION TEST RESULTS

LOCATION OF TESTING: **PAVEMENT SUBGRADE**
ELEVATION REFERENCE: F.G. = FINISH GRADE = TOP OF PAVEMENT SUBGRADE
CO-ORDINATE REFERENCE: PER LOCATION
COMPACTION TEST METHOD ASTM D-6938
COMPACTION REQUIREMENTS **95.0** %

TEST NO.	SOIL BEARING	SOIL CODE	DEPTH OR ELEVATION	LOCATION OF TEST	MOISTURE CONTENT	INPLACE DRY DENSITY (PCF)	PERCENT COMPACT
1		21841	27.80	GRID LOCATION: 1411552.5 N x 706943.7 E	2.2 %	142.2	**99.3** %
2		21841	28.70	GRID LOCATION: 1411491.9 N x 707061.8 E	2.5 %	141.4	**98.7** %
3		21841	29.60	GRID LOCATION: 1411301.9 N x 707152.1 E	2.7 %	140.8	**98.3** %
4		21841	29.60	GRID LOCATION: 1411107.2 N x 707159.1 E	3.2 %	139.1	**97.1** %
5		21841	30.00	GRID LOCATION: 1410965.1 N x 707144.9 E	2.9 %	138.4	**96.6** %
6		21841	29.10	GRID LOCATION: 1410696.7 N x 707057.4 E	3.1 %	137.9	**96.3** %
7		21841	28.90	GRID LOCATION: 1410696.7 N x 707057.4 E	2.6 %	139.0	**97.1** %

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GENERAL NOTES:
1. D-1556 = SAND CONE METHOD OF TEST
2. D-6938 = NUCLEAR GAUGE METHOD OF TEST
3. FF = FINISH FLOOR
4. FG = FINISH GRADE
5.
6.

RESPECTFULLY SUBMITTED,
CONSTRUCTION TECHNOLOGY

Robert Behan

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CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Email: constructiontech@live.com

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT NUMBER: 5 : PAGE #: 1
INSPECTION DATE: 08/03/22
OUR FILE NUMBER: 1526.016
FIELD INSPECTOR: DAVE CASAW

ATT'N: MR. JONATHON BORRELLI
PROJECT: **NATIONAL GRID PHASE 1A REMEDIATION: TROY, NEW YORK**

SOIL COMPACTION VERIFICATION REPORT ::: INPLACE SOIL DENSITY

MATERIALS LABORATORY DATA

CODE	MOISTURE	MAX DENSITY PCF	MATERIAL DESCRIPTION	MATERIAL SOURCE
21841	6.2	143.2	CR STONE sized as: GRAVEL, fine; and m/c Sand; trace Silt/Clay	BORROW: CRUSHER RUN
21921	11.4	114.6	SAND, fine/medium; trace Silt/Clay; trace fine Gravel	BORROW: VALENTE
			Excavation Area A	

FIELD COMPACTION TEST RESULTS

LOCATION OF TESTING: **GENERAL FILL**
ELEVATION REFERENCE: DATUM
CO-ORDINATE REFERENCE: PER LOCATION

COMPACTION TEST METHOD ASTM D-6938
COMPACTION REQUIREMENTS **95.0** %

TEST NO.	SOIL BEARING	SOIL CODE	DEPTH OR ELEVATION	LOCATION OF TEST	MOISTURE CONTENT	INPLACE DRY DENSITY (PCF)	PERCENT COMPACT
1		21921	18.95	GRID LOCATION: 1411016.04 N x 706986.8 E	2.2 %	112.5	**98.2** %
2		21921	18.95	GRID LOCATION: 1411051.525 N x 706975.22 E	2.7 %	112.9	**98.5** %

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CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT NUMBER: 6 : PAGE #: 1
INSPECTION DATE: 08/08/22
OUR FILE NUMBER: 1526.016
FIELD INSPECTOR: TONY SHAHINIAN

ATT'N: MR. JONATHON BORRELLI
PROJECT: **NATIONAL GRID PHASE 1A REMEDIATION: TROY, NEW YORK**

SOIL COMPACTION VERIFICATION REPORT ::: INPLACE SOIL DENSITY

MATERIALS LABORATORY DATA

CODE	MOISTURE	MAX DENSITY PCF	MATERIAL DESCRIPTION	MATERIAL SOURCE
21841	6.2	143.2	CR STONE sized as: GRAVEL, fine; and m/c Sand; trace Silt/Clay	BORROW: CRUSHER RUN
21921	11.4	114.6	SAND, fine/medium; trace Silt/Clay; trace fine Gravel	BORROW: VALENTE
			Excavation Area A	

FIELD COMPACTION TEST RESULTS

LOCATION OF TESTING: **GENERAL FILL**
ELEVATION REFERENCE: DATUM
CO-ORDINATE REFERENCE: PER LOCATION

COMPACTION TEST METHOD ASTM D-6938
COMPACTION REQUIREMENTS **95.0** %

TEST NO.	SOIL BEARING	SOIL CODE	DEPTH OR ELEVATION	LOCATION OF TEST	MOISTURE CONTENT	INPLACE DRY DENSITY (PCF)	PERCENT COMPACT
1		21921	19.71	GRID LOCATION: 1410996.627 N x 706985.605 E	5.5 %	112.2	**97.9** %
2		21921	19.49	GRID LOCATION: 1411010.155 N x 707000.215 E	5.7 %	111.9	**97.6** %
3		21921	20.95	GRID LOCATION: 1411039.262 N x 706996.15 E	4.9 %	113.3	**98.9** %
4		21921	20.94	GRID LOCATION: 1411032.337 N x 706979.695 E	5.1 %	111.1	**96.9** %
5		21921	21.87	GRID LOCATION: 1411045.783 N x 706997.157 E	5.8 %	112.1	**97.8** %
6		21921	21.45	GRID LOCATION: 1411028.020 N x 706977.630 E	5.2 %	112.7	**98.3** %

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4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Email: constructiontech@live.com

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT NUMBER: 6-A : PAGE #: 1
INSPECTION DATE: 08/12/22
OUR FILE NUMBER: 1526.016
FIELD INSPECTOR: CLAUS CASPER

ATT'N: MR. JONATHON BORRELLI
PROJECT: **NATIONAL GRID PHASE 1A REMEDIATION: TROY, NEW YORK**

SOIL COMPACTION VERIFICATION REPORT ::: INPLACE SOIL DENSITY

MATERIALS LABORATORY DATA

CODE	MOISTURE	MAX DENSITY PCF	MATERIAL DESCRIPTION	MATERIAL SOURCE
21841	6.2	143.2	CR STONE sized as: GRAVEL, fine; and m/c Sand; trace Silt/Clay	BORROW: CRUSHER RUN
21921	11.4	114.6	SAND, fine/medium; trace Silt/Clay; trace fine Gravel	BORROW: VALENTE
			Excavation Area A	

FIELD COMPACTION TEST RESULTS

LOCATION OF TESTING: **GENERAL FILL**
ELEVATION REFERENCE: DATUM
CO-ORDINATE REFERENCE: PER LOCATION

COMPACTION TEST METHOD ASTM D-6938
COMPACTION REQUIREMENTS **95.0** %

TEST NO.	SOIL BEARING	SOIL CODE	DEPTH OR ELEVATION	LOCATION OF TEST	MOISTURE CONTENT	INPLACE DRY DENSITY (PCF)	PERCENT COMPACT
1		21921	22.75	GRID LOCATION: 1411103.325 N x 707019.991 E	3.4 %	112.2	**97.9** %
2		21921	22.25	GRID LOCATION: 1411043.654 N x 707020.463 E	3.6 %	110.2	**96.2** %
3		21921	23.42	GRID LOCATION: 1411004.974 N x 707984.440 E	3.7 %	112.5	**98.2** %
4		21921	23.11	GRID LOCATION: 1411037.117 N x 706984.440 E	6.1 %	111.4	**97.2** %
5		21921	23.59	GRID LOCATION: 14111003.102 N x 706988.3 E	3.9 %	113.0	**98.6** %
6		21921	25.26	GRID LOCATION: 1411015.885 N x 706989.200 E	4.0 %	112.6	**98.3** %
7		21921	24.85	GRID LOCATION: 1411015.885 N x 706967.519 E	4.2 %	113.5	**99.0** %
8		21921	26.27	GRID LOCATION: 1411066.050 N x 706963.472 E	3.8 %	112.4	**98.1** %

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GENERAL NOTES:
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RESPECTFULLY SUBMITTED,
CONSTRUCTION TECHNOLOGY

Robert Behan

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CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Email: constructiontech@live.com

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT NUMBER: 7 : PAGE #: 1
INSPECTION DATE: 08/15/22
OUR FILE NUMBER: 1526.016
FIELD INSPECTOR: CLAUS CASPER

ATT'N: MR. JONATHON BORRELLI
PROJECT: **NATIONAL GRID PHASE 1A REMEDIATION: TROY, NEW YORK**

SOIL COMPACTION VERIFICATION REPORT ::: INPLACE SOIL DENSITY

MATERIALS LABORATORY DATA

CODE	MOISTURE	MAX DENSITY PCF	MATERIAL DESCRIPTION	MATERIAL SOURCE
21841	6.2	143.2	CR STONE sized as: GRAVEL, fine; and m/c Sand; trace Silt/Clay	BORROW: CRUSHER RUN
21921	11.4	114.6	SAND, fine/medium; trace Silt/Clay; trace fine Gravel	BORROW: VALENTE
			Excavation Area A	

FIELD COMPACTION TEST RESULTS

LOCATION OF TESTING: **GENERAL FILL**
ELEVATION REFERENCE: DATUM
CO-ORDINATE REFERENCE: PER LOCATION

COMPACTION TEST METHOD ASTM D-6938
COMPACTION REQUIREMENTS **95.0** %

TEST NO.	SOIL BEARING	SOIL CODE	DEPTH OR ELEVATION	LOCATION OF TEST	MOISTURE CONTENT	INPLACE DRY DENSITY (PCF)	PERCENT COMPACT
1		21921	23.49	GRID LOCATION: 1411024.668 N x 707016.199 E	3.4 %	109.1	**95.2** %
2		21921	25.22	GRID LOCATION: 1411056.522 N x 707016.442 E	3.7 %	111.3	**97.1** %
3		21921	27.65	GRID LOCATION: 1411089.045 N x 707010.353 E	3.3 %	112.0	**97.7** %
4		21921	25.80	GRID LOCATION: 1411025.877 N x 706983.954 E	3.8 %	110.9	**96.8** %
5		21921	28.43	GRID LOCATION: 1411082.926 N x 706974.464 E	3.6 %	111.5	**97.3** %

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GENERAL NOTES:
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Robert Behan

ROBERT BEHAN (NICET)
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CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT NUMBER: 8 : PAGE #: 1
INSPECTION DATE: 08/19/22
OUR FILE NUMBER: 1526.016
FIELD INSPECTOR: CLAUS CASPER

ATT'N: MR. JONATHON BORRELLI
PROJECT: **NATIONAL GRID PHASE 1A REMEDIATION: TROY, NEW YORK**

SOIL COMPACTION VERIFICATION REPORT ::: INPLACE SOIL DENSITY

MATERIALS LABORATORY DATA

CODE	MOISTURE	MAX DENSITY PCF	MATERIAL DESCRIPTION	MATERIAL SOURCE
21841	6.2	143.2	CR STONE sized as: GRAVEL, fine; and m/c Sand; trace Silt/Clay	BORROW: CRUSHER RUN
21921	11.4	114.6	SAND, fine/medium; trace Silt/Clay; trace fine Gravel	BORROW: VALENTE
			Excavation Area A	

FIELD COMPACTION TEST RESULTS

LOCATION OF TESTING: **GENERAL FILL**
ELEVATION REFERENCE: DATUM
CO-ORDINATE REFERENCE: PER LOCATION

COMPACTION TEST METHOD ASTM D-6938
COMPACTION REQUIREMENTS **95.0** %

TEST NO.	SOIL BEARING	SOIL CODE	DEPTH OR ELEVATION	LOCATION OF TEST	MOISTURE CONTENT	INPLACE DRY DENSITY (PCF)	PERCENT COMPACT
1		21921	26.94	GRID LOCATION: 1411019.926 N x 707023.336 E	5.4 %	109.2	**95.3** %
2		21921	27.92	GRID LOCATION: 1411076.717 N x 707018.264 E	5.3 %	113.4	**99.0** %
3		21921	28.34	GRID LOCATION: 1411002.703 N x 706996.258 E	4.3 %	112.0	**97.7** %
4		21921	28.63	GRID LOCATION: 1411077.350 N x 706985.618 E	5.5 %	110.5	**96.4** %
5		21921	26.66	GRID LOCATION: 1411017.804 N x 706970.987 E	4.8 %	110.1	**96.1** %
6		21921	27.81	GRID LOCATION: 1411055.964 N x 706962.588 E	4.9 %	110.8	**96.7** %

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CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT NUMBER: 9 : PAGE #: 1
INSPECTION DATE: 09/02/22
OUR FILE NUMBER: 1526.016
FIELD INSPECTOR: TONY SHAHINIAN

ATT'N: MR. JONATHON BORRELLI
PROJECT: **NATIONAL GRID PHASE 1A REMEDIATION: TROY, NEW YORK**

SOIL COMPACTION VERIFICATION REPORT ::: INPLACE SOIL DENSITY

MATERIALS LABORATORY DATA

CODE	MOISTURE	MAX DENSITY PCF	MATERIAL DESCRIPTION	MATERIAL SOURCE
21841	6.2	143.2	CR STONE sized as: GRAVEL, fine; and m/c Sand; trace Silt/Clay	BORROW: CRUSHER RUN
21921	11.4	114.6	SAND, fine/medium; trace Silt/Clay; trace fine Gravel	BORROW: VALENTE
			ISS area	

FIELD COMPACTION TEST RESULTS

LOCATION OF TESTING: **GENERAL FILL**
ELEVATION REFERENCE: DATUM
CO-ORDINATE REFERENCE: PER LOCATION

COMPACTION TEST METHOD ASTM D-6938
COMPACTION REQUIREMENTS **95.0** %

TEST NO.	SOIL BEARING	SOIL CODE	DEPTH OR ELEVATION	LOCATION OF TEST	MOISTURE CONTENT	INPLACE DRY DENSITY (PCF)	PERCENT COMPACT
1		21921	21.32	GRID LOCATION: 1411463.361 N x 706889.874 E	4.8 %	112.2	**97.9** %
2		21921	22.46	GRID LOCATION: 1411438.353 N x 706881.142 E	4.7 %	111.9	**97.6** %
3		21921	23.80	GRID LOCATION: 1411422.096 N x 706898.176 E	5.1 %	111.7	**97.5** %
4		21921	26.49	GRID LOCATION: 1411387.611 N x 706873.253 E	4.7 %	113.3	**98.9** %

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CONSTRUCTION TECHNOLOGY

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CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT NUMBER: 10 : PAGE #: 1
INSPECTION DATE: 09/07/22
OUR FILE NUMBER: 1526.016
FIELD INSPECTOR: DAVE CASAW

ATT'N: MR. JONATHON BORRELLI
PROJECT: **NATIONAL GRID PHASE 1A REMEDIATION: TROY, NEW YORK**

SOIL COMPACTION VERIFICATION REPORT ::: INPLACE SOIL DENSITY

MATERIALS LABORATORY DATA

CODE	MOISTURE	MAX DENSITY PCF	MATERIAL DESCRIPTION	MATERIAL SOURCE
21841	6.2	143.2	CR STONE sized as: GRAVEL, fine; and m/c Sand; trace Silt/Clay	BORROW: CRUSHER RUN
21921	11.4	114.6	SAND, fine/medium; trace Silt/Clay; trace fine Gravel	BORROW: VALENTE
			ISS area	

FIELD COMPACTION TEST RESULTS

LOCATION OF TESTING: **GENERAL FILL**
ELEVATION REFERENCE: DATUM
CO-ORDINATE REFERENCE: PER LOCATION

COMPACTION TEST METHOD ASTM D-6938
COMPACTION REQUIREMENTS **95.0** %

TEST NO.	SOIL BEARING	SOIL CODE	DEPTH OR ELEVATION	LOCATION OF TEST	MOISTURE CONTENT	INPLACE DRY DENSITY (PCF)	PERCENT COMPACT
1		21921	24.32	GRID LOCATION: 1411489.618 N x 706811.938 E	3.7 %	110.1	**96.1** %
2		21921	23.67	GRID LOCATION: 1411481.015 N x 706790.134 E	4.2 %	110.0	**96.0** %
3		21921	26.15	GRID LOCATION: 1411492.73 N x 706822.651 E	4.7 %	110.1	**96.1** %
4		21921	26.50	GRID LOCATION: 1411499.770 N x 706846.887 E	4.3 %	109.2	**95.3** %
5		21921	27.23	GRID LOCATION: 1411495.113 N x 706878.58 E	4.4 %	109.8	**95.8** %
6		21921	27.19	GRID LOCATION: 1411517.493 N x 706869.8.9 E	3.0 %	110.4	**96.3** %

REPORT DISTRIBUTION:
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GENERAL NOTES:
1. D-1556 = SAND CONE METHOD OF TEST
2. D-6938 = NUCLEAR GAUGE METHOD OF TEST
3. FF = FINISH FLOOR
4. FG = FINISH GRADE
5.
6.

RESPECTFULLY SUBMITTED,
CONSTRUCTION TECHNOLOGY

Robert Behan

ROBERT BEHAN (NICET)
MANAGER TECHNICAL SERVICES

CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Email: constructiontech@live.com

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT NUMBER: 11 : PAGE #: 1
INSPECTION DATE: 10/10/22
OUR FILE NUMBER: 1526.016
FIELD INSPECTOR: CLAUS CASPER

ATT'N: MR. JONATHON BORRELLI
PROJECT: **NATIONAL GRID PHASE 1A REMEDIATION: TROY, NEW YORK**

SOIL COMPACTION VERIFICATION REPORT ::: INPLACE SOIL DENSITY

MATERIALS LABORATORY DATA

CODE	MOISTURE	MAX DENSITY PCF	MATERIAL DESCRIPTION	MATERIAL SOURCE
21841	6.2	143.2	CR STONE sized as: GRAVEL, fine; and m/c Sand; trace Silt/Clay	BORROW: CRUSHER RUN
21921	11.4	114.6	SAND, fine/medium; trace Silt/Clay; trace fine Gravel	BORROW: VALENTE
			ISS area	

FIELD COMPACTION TEST RESULTS

LOCATION OF TESTING: **MECHANICAL TRENCH BACKFILL: GAS LINE**
ELEVATION REFERENCE: DATUM
CO-ORDINATE REFERENCE: PER LOCATION
COMPACTION TEST METHOD ASTM D-6938
COMPACTION REQUIREMENTS **95.0** %

TEST NO.	SOIL BEARING	SOIL CODE	DEPTH OR ELEVATION	LOCATION OF TEST	MOISTURE CONTENT	INPLACE DRY DENSITY (PCF)	PERCENT COMPACT
1		21841	29.16	GRID LOCATION: 1411402.817 N x 706911.6508 E	5.5 %	137.8	**96.2** %
2		21841	29.05	GRID LOCATION: 1411450.506 N x 706897.861 E	4.7 %	136.5	**95.3** %
3		21841	28.70	GRID LOCATION: 1411491.838 N x 706890.202 E	5.6 %	137.9	**96.3** %

REPORT DISTRIBUTION:
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GENERAL NOTES:
1. D-1556 = SAND CONE METHOD OF TEST
2. D-6938 = NUCLEAR GAUGE METHOD OF TEST
3. FF = FINISH FLOOR
4. FG = FINISH GRADE
5.
6.

RESPECTFULLY SUBMITTED,
CONSTRUCTION TECHNOLOGY

Robert Behan

ROBERT BEHAN (NICET)
MANAGER TECHNICAL SERVICES

Appendix M-2: Area 3 Soil Compaction Results

CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Email: constructiontech@live.com

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT NUMBER: 2 : PAGE #: 1
INSPECTION DATE: 06/28/22
OUR FILE NUMBER: 1526.016
FIELD INSPECTOR: CLAUS CASPER

ATT'N: MR. JONATHON BORRELLI
PROJECT: **NATIONAL GRID PHASE 1A REMEDIATION: TROY, NEW YORK**

SOIL COMPACTION VERIFICATION REPORT ::: INPLACE SOIL DENSITY

MATERIALS LABORATORY DATA

CODE	MOISTURE	MAX DENSITY PCF	MATERIAL DESCRIPTION	MATERIAL SOURCE
21841	6.2	143.2	CR STONE sized as: GRAVEL, fine; and m/c Sand; trace Silt/Clay	BORROW: CRUSHER RUN
21921	11.4	114.6	SAND, fine/medium; trace Silt/Clay; trace fine Gravel	BORROW: VALENTE

FIELD COMPACTION TEST RESULTS

LOCATION OF TESTING: **GENERAL FILL**
ELEVATION REFERENCE: DATUM
CO-ORDINATE REFERENCE: PER LOCATION

COMPACTION TEST METHOD ASTM D-6938
COMPACTION REQUIREMENTS **95.0** %

TEST NO.	SOIL BEARING	SOIL CODE	DEPTH OR ELEVATION	LOCATION OF TEST	MOISTURE CONTENT	INPLACE DRY DENSITY (PCF)	PERCENT COMPACT
1		21841	26.10	GRID LOCATION: 1410158.71 N x 706966.91 E	4.6 %	137.9	**96.3** %
2		21841	26.47	GRID LOCATION: 1410187.20 N x 706976.25 E	5.0 %	136.3	**95.2** %
3		21921	22.60	GRID LOCATION: 1410241.10 N x 706972.86 E	4.8 %	113.2	**98.8** %

REPORT DISTRIBUTION:
1: FILE
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GENERAL NOTES:
1. D-1556 = SAND CONE METHOD OF TEST
2. D-6938 = NUCLEAR GAUGE METHOD OF TEST
3. FF = FINISH FLOOR
4. FG = FINISH GRADE
5.
6.

RESPECTFULLY SUBMITTED,
CONSTRUCTION TECHNOLOGY

Robert Behan

ROBERT BEHAN (NICET)
MANAGER TECHNICAL SERVICES

CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Email: constructiontech@live.com

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT NUMBER: 3 : PAGE #: 1
INSPECTION DATE: 06/29/22
OUR FILE NUMBER: 1526.016
FIELD INSPECTOR: CLAUS CASPER

ATT'N: MR. JONATHON BORRELLI
PROJECT: **NATIONAL GRID PHASE 1A REMEDIATION: TROY, NEW YORK**

SOIL COMPACTION VERIFICATION REPORT ::: INPLACE SOIL DENSITY

MATERIALS LABORATORY DATA

CODE	MOISTURE	MAX DENSITY PCF	MATERIAL DESCRIPTION	MATERIAL SOURCE
21841	6.2	143.2	CR STONE sized as: GRAVEL, fine; and m/c Sand; trace Silt/Clay	BORROW: CRUSHER RUN
21921	11.4	114.6	SAND, fine/medium; trace Silt/Clay; trace fine Gravel	BORROW: VALENTE

FIELD COMPACTION TEST RESULTS

LOCATION OF TESTING: **GENERAL FILL**
ELEVATION REFERENCE: DATUM
CO-ORDINATE REFERENCE: PER LOCATION

COMPACTION TEST METHOD ASTM D-6938
COMPACTION REQUIREMENTS **95.0** %

TEST NO.	SOIL BEARING	SOIL CODE	DEPTH OR ELEVATION	LOCATION OF TEST	MOISTURE CONTENT	INPLACE DRY DENSITY (PCF)	PERCENT COMPACT
1		21921	21.99	GRID LOCATION: 1410297.13 N x 706994.22 E	4.8 %	110.8	**96.7** %
2		21921	24.12	GRID LOCATION: 1410287.22 N x 706978.55 E	3.1 %	109.1	**95.2** %
3		21921	214.46	GRID LOCATION: 1410258.22 N x 706975.58 E	4.2 %	109.5	**95.5** %

REPORT DISTRIBUTION:
1: FILE
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GENERAL NOTES:
1. D-1556 = SAND CONE METHOD OF TEST
2. D-6938 = NUCLEAR GAUGE METHOD OF TEST
3. FF = FINISH FLOOR
4. FG = FINISH GRADE
5.
6.

RESPECTFULLY SUBMITTED,
CONSTRUCTION TECHNOLOGY

Robert Behan

ROBERT BEHAN (NICET)
MANAGER TECHNICAL SERVICES

CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
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CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT NUMBER: 4 : PAGE #: 1
INSPECTION DATE: 06/30/22
OUR FILE NUMBER: 1526.016
FIELD INSPECTOR: CLAUS CASPER

ATT'N: MR. JONATHON BORRELLI
PROJECT: **NATIONAL GRID PHASE 1A REMEDIATION: TROY, NEW YORK**

SOIL COMPACTION VERIFICATION REPORT ::: INPLACE SOIL DENSITY

MATERIALS LABORATORY DATA

CODE	MOISTURE	MAX DENSITY PCF	MATERIAL DESCRIPTION	MATERIAL SOURCE
21841	6.2	143.2	CR STONE sized as: GRAVEL, fine; and m/c Sand; trace Silt/Clay	BORROW: CRUSHER RUN
21921	11.4	114.6	SAND, fine/medium; trace Silt/Clay; trace fine Gravel	BORROW: VALENTE

FIELD COMPACTION TEST RESULTS

LOCATION OF TESTING: **GENERAL FILL**
ELEVATION REFERENCE: DATUM
CO-ORDINATE REFERENCE: PER LOCATION

COMPACTION TEST METHOD ASTM D-6938
COMPACTION REQUIREMENTS **95.0** %

TEST NO.	SOIL BEARING	SOIL CODE	DEPTH OR ELEVATION	LOCATION OF TEST	MOISTURE CONTENT	INPLACE DRY DENSITY (PCF)	PERCENT COMPACT
1		21921	26.17	GRID LOCATION: 1410305.01 N x 706984.92 E	4.6 %	114.0	**99.5** %
2		21921	25.84	GRID LOCATION: 1410346.54 N x 706984.13 E	5.0 %	111.9	**97.6** %
3		21921	24.67	GRID LOCATION: 1410376.56 N x 706976.06 E	3.5 %	109.7	**95.7** %

REPORT DISTRIBUTION:
1: FILE
2:
3:
4:
5:
6:

GENERAL NOTES:
1. D-1556 = SAND CONE METHOD OF TEST
2. D-6938 = NUCLEAR GAUGE METHOD OF TEST
3. FF = FINISH FLOOR
4. FG = FINISH GRADE
5.
6.

RESPECTFULLY SUBMITTED,
CONSTRUCTION TECHNOLOGY

Robert Behan

ROBERT BEHAN (NICET)
MANAGER TECHNICAL SERVICES

Appendix N: SWPPP Inspection Reports

PERIODIC INSPECTION REPORT

~~Cohoes (Linden Street)~~ Former MGP Site
Troy (Water Street)

Date and Time of Inspection: 5-23-22 2:00 pm

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LKJ

Weather Conditions: 66°, Sunny and Breezy

Soil Conditions (e.g., dry, wet, saturated): Dry

Description of Disturbed Areas at Time of Inspection: Material placed for access Road. ~~staging~~ area west of access road exposed to vehicle traffic causing loss of vegetation

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Initial Inspection silt sock placed on site for the first time

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Silt sock placed along west side of access road, around debris pile near Area 2, and around drain covers, wood chips and stone used to cover muddy or puddling areas on site.

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
			1. General Site Conditions:
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

No	NA		
			1. Excavation Dewatering:
[ ]	[ ]	[X]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to treatment system are secure and show no signs of leaks.
[ ]	[ ]	[X]	Run-on is being diverted from work area.
			2. Dewatering:
[ ]	[ ]	[X]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

No	NA		
			1. Stabilized Construction Entrance:
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [ ]
	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
			2. Silt Fence/Straw Bale Dike:
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[ ]	[X]	Straw bales anchored in place with two support posts that are flush with top of bale. [ ][ ]
		[X]	Straw bales are firmly packed, unrotted, with intact bailing wire.
			3. Oil Absorbent Booms
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
			4. Other
[ ]	[ ]	[ ]	
[ ]	[ ]	[ ]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: Restake silt sock where it was relocated in order to place barriers

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Heather M Cobb Date: 5-23-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 6-2-22 4:45 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer LK7

Weather Conditions: Mostly Cloudy 79°

Soil Conditions (e.g., dry, wet, saturated): Dry + Grainy

Description of Disturbed Areas at Time of Inspection: Potholes and Excavation in Area 3 looking for utilities, several 4'-8' holes inside excavation area

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Backfilled some potholes and excavations

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection:

- Fresh stone placed in driveways to prevent dirt tracking into road
- Containment Pad built in Area 3

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
			1. General Site Conditions:
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

	No	NA	
1. Excavation Dewatering:			
[ ]	[ ]	[X]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[X]	[ ]	[X]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[X]	Straw bales anchored in place with two support posts that are flush with top of bale. [X][ ]
	[X]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies:

Uncover and straighten out silt sock on north end of site where it has been partially buried during road construction

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Jonathan McCabe Date: 6-2-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 6-7-22 | PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LRI

Weather Conditions: Cloudy, Windy, 76°

Soil Conditions (e.g., dry, wet, saturated): Very Dry

Description of Disturbed Areas at Time of Inspection: - Heavy traffic area just inside construction site gets quite dusty, potholes + excavations in Area 1+2

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Backfilled several potholes, more stone placed around construction site

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection:
- Containment in North Area for Badger
- Hay Bales placed along bank by bridge abutments

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
			1. General Site Conditions:
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

	No	NA	
1. Excavation Dewatering:			
[ ]	[ ]	[X]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[ ]	[ ]	[X]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X] [ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[ ]	
[ ]	[ ]	[ ]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies:

- Place Silt sock along gates when not in use and restake silt sock along roadway

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Jonathan McCarter Date: 6-7-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 6-10-22 8 AM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LRT

Weather Conditions: Partly Cloudy, 61°, No wind

Soil Conditions (e.g., dry, wet, saturated): Dry, surface damp from dew

Description of Disturbed Areas at Time of Inspection: Excavations in Area 3 and ISS area for utility ID

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Stone placed around ends of temporary bridge. Roadway put in for Area 3 access

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Silt sock placed around stone pile in Eliot parking lot, straw bales on bank by temporary bridge preventing runoff, covered piles of potentially contaminated material

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
			1. General Site Conditions:
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	*Are facilities and equipment necessary for implementation of erosion and sediment control in* working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices **Yes**

	No	NA	
1. Excavation Dewatering:			
[ ]	[ ]	[X]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[ ]	[ ]	[X]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices **Yes**

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. *Other*			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: Stake straw bales, repair silt sock, silt sak around drain cover by in grass by SE corner of E-Lot buildings

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Jaurlea Carter Date: 6-10-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 6-14-22 2:30 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LRI

Weather Conditions: Sunny and Calm 74°

Soil Conditions (e.g., dry, wet, saturated): Dry

Description of Disturbed Areas at Time of Inspection: Excavation for material loaded in Area 3, silt sock around excavation and water sprayed on roadways and when hammering concrete.

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Secured debris piles at staging area and E-Lot utility ID excavation, Poly over piles

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Silt sock moved outside fence in Area 3, Poly in rock box for containing for

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

	No	NA	
1. Excavation Dewatering:			
[ ]	[ ]	[X]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[ ]	[ ]	[X]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X][ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: Repair silt sock, cover manhole

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Jantee Castle Date: 6-14-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 6-21-22 6:30 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LANL Remediation Inc

Weather Conditions: 70° cloudy with occasional sprinkles

Soil Conditions (e.g., dry, wet, saturated): damp but not wet, dry below surface

Description of Disturbed Areas at Time of Inspection: Excavation in Area 3 appears dry with relatively impermeable bottom, soil ~~piled~~ pile sandy on sides. ISS in Area 2, debris piles w/ berms around cells. Silt sock down stream of both activities

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: No new stabilization, ISS cells solidifying w/ berms to contain them

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Silt sock repaired at various points on site

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
			1. General Site Conditions:
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

	No	NA	
1. Excavation Dewatering:			
[ ]	[ ]	[X]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[ ]	[ ]	[X]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X][ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: Silt sock around storm drain by south end of E-lot building

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Jonathan McVeigh Date: 6-21-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 6-28-22 ~~11:30 AM~~ 1PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LAND Remediation Inc.

Weather Conditions: Partly Cloudy, 75° F

Soil Conditions (e.g., dry, wet, saturated): Dry, dusty

Description of Disturbed Areas at Time of Inspection: Excavation by Northeast corner of E-Lot building for utility IO.

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Backfill in Area 3 excavation, sand with top foot of crusher run

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Silt sock placed from North end of E-Lot building to temporary bridge, as well as South end of E-Lot building to S end of Area 2

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

No	NA		
		1. Excavation Dewatering:	
[ ]	[ ]	[X]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
		2. Dewatering:	
[ ]	[ ]	[X]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

No	NA		
		1. Stabilized Construction Entrance:	
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
		2. Silt Fence/Straw Bale Dike:	
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[X]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X][ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
		3. Oil Absorbent Booms	
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
		4. Other	
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: Dewater Area 3 containment, stake silt sock by G-lot building

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Jennifer M Cuka Date: 6-28-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 7-6-22 1:15 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LANC Remediation Inc

Weather Conditions: Sunny, humid, 76°

Soil Conditions (e.g., dry, wet, saturated): Dry on surface, damp below surface from previous days rain

Description of Disturbed Areas at Time of Inspection: ISS cells - debris piles alongside cells w/ material removed from cells. Excavation west of King Rd. in Area 2. Material is dry w/ a lot of clay at the bottom preventing/limiting flow

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Area 3 backfilled, sand with 1 foot of crusher run at the surface, silt sock remains in place around area

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Pumped water from 16" pipe in Area 2 to frack tank for storage, silt sock around Area 2 debris pile. Recovered pile in Area 3 containment. Clean stone placed for alternate roadway through site

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

	No	NA	
1. Excavation Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X] [ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: Take some silt sock off loading dock drain cover (water is pooling b/c there is too much)

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Heather M Cooke Date: 7-6-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 7-12-22 - 2 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LRI

Weather Conditions: Fair, Windy, 88°F

Soil Conditions (e.g., dry, wet, saturated): Dry

Description of Disturbed Areas at Time of Inspection: 10+ foot excavation in Area 2A, a lot of debris and tar, ~~[illegible]~~ ISS cells by E-Lot building, benched

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Area E of excavation had stone placed for truck traffic

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Stone for temporary roadway for truck access. Added fresh stone to driveways where needed, removed excess silt sock from drain cover in loading dock

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

	No	NA	
1. Excavation Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X] [ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies:

Repair silt sock on West edge of Area 2 excavation

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Heather Curtis Date: 7-12-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 7-19-22 2 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LAND Remediation Inc.

Weather Conditions: 91° F, Sunny, Breezy + Humid

Soil Conditions (e.g., dry, wet, saturated): very dry

Description of Disturbed Areas at Time of Inspection: Excavation in Area 3, a lot of concrete + dry soil. Tar sorted out when identified. Iss area all benched down for mixing.

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Fresh stone added to roadways where needed.

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Fresh stone placed on roadways, covered tar removed from Area 2A

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

Yes	No	NA	
			1. Excavation Dewatering:
[X]	[ ]	[ ]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
			2. Dewatering:
[X]	[ ]	[ ]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

Yes	No	NA	
			1. Stabilized Construction Entrance:
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
			2. Silt Fence/Straw Bale Dike:
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale [X] [ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
			3. Oil Absorbent Booms
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
			4. Other
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies:

Repair silt sock on west edge of Area 2A excavation

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Joshua M. Carter Date: 7-19-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 7-26-22 4:30 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LPI

Weather Conditions: 79° F Mostly Cloudy

Soil Conditions (e.g., dry, wet, saturated): Dry and dusty

Description of Disturbed Areas at Time of Inspection: ISS area - piles of material and debris next to ISS area. Area 2A excavation has concrete and dirt piles beside excavation

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Area 2A excavation dug down to grade, stone placed in roadways

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Fresh stone in road ways

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

	No	NA	
1. Excavation Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X][ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies:

Cover for containment, ~~clean~~ silt sock around stone piles, Fix silt sock leade Area 2A excavation

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Jaclyn McCabe Date: 7-26-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 7-29-22 12:30 PM

Inspector (Name, Title, and Affiliation): Jonathon Castle, Field Engineer, LRT

Weather Conditions: 86° Sunny + humid

Soil Conditions (e.g., dry, wet, saturated): dry and dusty off roadway, wet on roadway

Description of Disturbed Areas at Time of Inspection: ISS cells still benched down below ground surface for mixing, Area 2A excavation nearly complete with large concrete/debris pile on North end

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Nearly completed Area 2A excavation, fresh stone placed in roadways

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Silt sock on West end of Area 2A repaired. Silt sock placed around #3 stone pile north of E-Lot building. Pile has since been used up on roadway

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

	No	NA	
1. Excavation Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X] [ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: _____

place fresh stone in roadway to widen and clean it up so trucks don't track mud

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Jennifer McCarter Date: 7-29-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 8-5-22, 2 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LHI

Weather Conditions: 88°F Humid, partly cloudy

Soil Conditions (e.g., dry, wet, saturated): very dry

Description of Disturbed Areas at Time of Inspection: ISS cells in Northern part of Area 2. Bended down where working in relatively dry material with silt sock downstream.

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Began backfill in Area 2A w/ delineation

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Re-covered tar pile in Area 2 containment

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

	No	NA	
1. Excavation Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X] [ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: _____

Repair silt sock where damaged or missing

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Heather Cutler Date: 8-5-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 8-10-22, 5 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LRI

Weather Conditions: Mostly Sunny 81°

Soil Conditions (e.g., dry, wet, saturated): Dry

Description of Disturbed Areas at Time of Inspection: ISS cells, benched down in ISS area. Dug out just under 36' x 16' concrete slab in Area 2A. Clay layer underneath removed soil

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Backfilled in Area 2A. Sand on layer of demarcation

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Fresh stone placed in roadways

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

Yes	No	NA	
			1. Excavation Dewatering:
[X]	[ ]	[ ]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
			2. Dewatering:
[X]	[ ]	[ ]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

Yes	No	NA	
			1. Stabilized Construction Entrance:
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
			2. Silt Fence/Straw Bale Dike:
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X][ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
			3. Oil Absorbent Booms
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
			4. Other
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: Repair silt sock in areas where it is damaged. Replace and repair on north end by Wynantskill creek where National Grid destroyed it during pole placement.

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: [signature] Date: 8-10-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 8-18-22 6:30 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LRI

Weather Conditions: Mostly Sunny 78° F

Soil Conditions (e.g., dry, wet, saturated): Very dry

Description of Disturbed Areas at Time of Inspection: ISS area benched down for working. Significant loose material in subsurface bench, contained by silt sock on North end.

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Backfilling in Area 24, delineation fabric marking edge of excavation

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Repaired silt sock around North end of E-lot building.

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

	No	NA	
1. Excavation Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X][ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: Repair silt sock in places where it is damaged or removed. Areas include North end of F-lot and southern end of F-lot building

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Heather Carter Date: 8-18-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 8-24-22 4:45 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LFI

Weather Conditions: 87°F, Sunny

Soil Conditions (e.g., dry, wet, saturated): Very dry

Description of Disturbed Areas at Time of Inspection: Trench for PLE-20 gas line. Some debris at surface, primarily subsurface work. Exs area benched down for working, erodable material contained below surface

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Temporarily finished backfilling Area 2A. Sand generally one foot below grade limiting erosion.

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Water pumped from PLE-20 trench to frack tank. Fresh stone placed in roadway where needed. Tar removed from Area 2 containment, containers + dirty bucket placed to drain in containment.

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

	No	NA	
1. Excavation Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X] [ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: Repair silt sock where damaged in areas especially North and South of E-lot building

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Jenter Conte Date: 8-24-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 8-31-22 4:30 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LRI

Weather Conditions: 79° Mostly sunny

Soil Conditions (e.g., dry, wet, saturated): Dry + dusty

Description of Disturbed Areas at Time of Inspection: Swell being cut in ISS area. NE corner has large pile for loadout that is covered at the end of the day

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Began backfilling ISS area where swell is cut to grade.

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Expanded containment pad for decon of LB 800 excavator. Fresh stone in roadway where swell was cut for C-12

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	1. General Site Conditions:
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

	No	NA	
1. Excavation Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X][ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: Silt socks in NW corner at E-lot building removed by National Grid, west side. damaged by Mullens working at substation. Place silt sock around stockpiles when present and repair other damaged silt sock

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Jeanine Lutz Date: 8-31-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 9-7-22- 3 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LRI

Weather Conditions: 73° F, Mild + Cloudy

Soil Conditions (e.g., dry, wet, saturated): Muddy at surface + dry below surface

Description of Disturbed Areas at Time of Inspection: High traffic areas muddy from rain.

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Completed temporary backfill of sand in ISS area for shell cut.

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: ~~Fixed~~ fixed gaps in silt sock North of E.

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

No	NA		
			1. Excavation Dewatering:
[X]	[ ]	[ ]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
			2. Dewatering:
[X]	[ ]	[ ]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

No	NA		
			1. Stabilized Construction Entrance:
[ ]	[X]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [ ]
	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
			2. Silt Fence/Straw Bale Dike:
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X] [ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
			3. Oil Absorbent Booms
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
			4. Other
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies:

Put fresh stone in roadways to limit mud. Clean up area between E-601 building and PLE-20 trench that has become muddy.

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Martin Lucas Date: 9-7-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 9-13-22 2:PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LRI

Weather Conditions: 75°F Cloudy

Soil Conditions (e.g., dry, wet, saturated): Dry

Description of Disturbed Areas at Time of Inspection: Excavations backfilled, pathways around site muddy from vehicle traffic

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Complete final backfill in Area 2A with crusher run. Finished sand backfill in ISS swell cut area.

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Store placed in roadways for freshening up

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

	No	NA	
1. Excavation Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X] [ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: PLE-20 relocated silt sock for trench and tying pipe into regulator station. They placed their own erosion control but ours should be replaced after backfill is complete.

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Jaime Lute Date: 9-13-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 9-15-22 4:30 PM

Inspector (Name, Title, and Affiliation): Jonathon Castle, Field Engineer, LHJ

Weather Conditions: Sunny, Calm 71° F

Soil Conditions (e.g., dry, wet, saturated): Dry, muddy near work area

Description of Disturbed Areas at Time of Inspection: Area around concrete crusher pile. Soil wet from dust control

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: No new stabilized areas since previous inspection

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: fresh #3 stone placed in roadway

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

	No	NA	
1. Excavation Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X][ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: Replace silt sock where PLE-70 is placing pipe upon completion. Place stone in roadways to cover mud formed from spraying concrete crusher

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: [signature] Date: 9-15-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 9-20-22 4 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LRT

Weather Conditions: 75° F, Partly cloudy

Soil Conditions (e.g., dry, wet, saturated): Damp at surface, dry away from work area and muddy in work area

Description of Disturbed Areas at Time of Inspection: Area North of 2A where concrete crushing was taking place. Mud from ~~[illegible]~~. Dust control.

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: No new areas stabilized since previous inspection

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: #3 stone placed in roadway where necessary

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[x]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[x]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[x]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices **Yes**

No	NA	
		1. Excavation Dewatering:
[X]	[ ]	[ ] Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ] Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ] Run-on is being diverted from work area.
		2. Dewatering:
[X]	[ ]	[ ] Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ] Connections to tank are secure and show no signs of leaks.

Sediment Control Practices **Yes**

No	NA	
		1. Stabilized Construction Entrance:
[X]	[ ]	[ ] Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]	Installed per standards and specifications?
[X]	[ ]	[ ] Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ] Is adequate drainage provided to prevent ponding at entrance?
		2. Silt Fence/Straw Bale Dike:
[ ]	[ ]	[X] Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X] Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X] Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ] Straw bales anchored in place with two support posts that are flush with top of bale. [X][ ]
	[ ]	Straw bales are firmly packed, unrotted, with intact bailing wire.
		3. Oil Absorbent Booms
[ ]	[ ]	[X] Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X] Booms are adequate for the collection of oily sheens or product and are not spent.
		4. Other
[ ]	[ ]	[X]
[ ]	[ ]	[X]

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies:

Place silt sock around #3 stone pile off SE end of Area 2A

Put fresh stone in roadways where mud/mud puddles are present

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Sandra Curtis Date: 9-20-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 9-30-22 11:45 AM

Inspector (Name, Title, and Affiliation): Jonathon Castle, Field Engineer, LRS

Weather Conditions: 55° F, Partly Cloudy

Soil Conditions (e.g., dry, wet, saturated): Dry + dusty

Description of Disturbed Areas at Time of Inspection: Rig in Area 3 for pipe cut cap. Rig area for hardened crossing

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Backfilled area for pipe cap. Placed crane mats in area for hardened crossing

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Covered piles for loading out material

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

Yes	No	NA	
			1. Excavation Dewatering:
[X]	[ ]	[ ]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
			2. Dewatering:
[X]	[ ]	[ ]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

Yes	No	NA	
			1. Stabilized Construction Entrance:
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
			2. Silt Fence/Straw Bale Dike:
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X][ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
			3. Oil Absorbent Booms
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
			4. Other
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: Place silt sock around sand and stone piles

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: _____ Date: 9-30-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 10-6-22 3:15 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LRI

Weather Conditions: Sunny, Calm, ~73° F

Soil Conditions (e.g., dry, wet, saturated): Dry with some muddy areas near places such as the decon pad

Description of Disturbed Areas at Time of Inspection: Mud in area around decon pad. All other areas being backfilled. Boxed out along old road for paving

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Began placing crusher run in ISS area for final grade

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Crusher run pushed into low spots North of Area 21

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	1. General Site Conditions:
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

	No	NA	
1. Excavation Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[X]	[ ]	[ ]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[X]	[ ]	[ ]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X] [ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: Silt sock around stone and sand piles on South end of Area 2. Silt sock North of E-lot building along edge of parking lot

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Jonathan Carter Date: 10-6-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 10-13-22 5PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LRT

Weather Conditions: 67° Light rain

Soil Conditions (e.g., dry, wet, saturated): Wet

Description of Disturbed Areas at Time of Inspection: Debris piles on East side of temporary road.

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Finished grading area for roadway

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Fresh stone in roadways. Plastic + tarps over road to prevent runoff

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

	No	NA	
1. Excavation Dewatering:			
[X]	[ ]	[X]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[ ]	[ ]	[X]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

	No	NA	
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [N]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [N][ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: Place silt sock around material stockpiles.

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: [signature] Date: 12-13-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 10-20-22 4 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LRI

Weather Conditions: 57° F Sunny + Windy

Soil Conditions (e.g., dry, wet, saturated): Dry + dusty

Description of Disturbed Areas at Time of Inspection: Dug out ~~over~~ asphalt in roadway where it was fading + replaced crusher run for sub-base.

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Began stockpile ~~when~~ with material from Cohocs w/ silt sock around areas that don't have equipment traffic

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Silt sock placed around Cohocs stockpile

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

No	NA		
1. Excavation Dewatering:			
[ ]	[ ]	[X]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to treatment system are secure and show no signs of leaks.
[X]	[ ]	[ ]	Run-on is being diverted from work area.
2. Dewatering:			
[ ]	[ ]	[X]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[X]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

No	NA		
1. Stabilized Construction Entrance:			
[X]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [X] [
]	[ ]		Installed per standards and specifications?
[X]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [X]
	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[X]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[X]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[X]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[X]	[ ]	Straw bales anchored in place with two support posts that are flush with top of bale. [X][ ]
	[ ]		Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[X]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[X]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[X]	
[ ]	[ ]	[X]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies:

Finish placing silt sock around stock piles + cover them upon completion of material transport

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Jamie Cute Date: 10-20-22

PERIODIC INSPECTION REPORT

Troy (Water Street) Phase 1A Remediation

Date and Time of Inspection: 10-24-22 3 PM

Inspector (Name, Title, and Affiliation): Jonathan Castle, Field Engineer, LRI

Weather Conditions: 59° F Cloudy w/ Light Rain

Soil Conditions (e.g., dry, wet, saturated): Wet

Description of Disturbed Areas at Time of Inspection: No new areas disturbed

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Finished backfilling on IS2 area and reinforced roadway.

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Placed silt sock around stockpile from Cohoes

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[X]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[X]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[X]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[X]	[ ]	Is construction impacting the adjacent property?
[X]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[X]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[X]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[X]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices Yes

No NA

1. Excavation Dewatering:

[ ] [ ] [X] Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).

[ ] [ ] [X] Connections to treatment system are secure and show no signs of leaks.

[X] [ ] [ ] Run-on is being diverted from work area.

2. Dewatering:

[ ] [ ] [X] Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).

[ ] [ ] [X] Connections to tank are secure and show no signs of leaks.

Sediment Control Practices Yes

No NA

1. Stabilized Construction Entrance:

[X] [ ] [ ] Is stone clean enough to effectively remove mud from vehicles? [X] [

[ ] Installed per standards and specifications?

[X] [ ] [ ] Does all traffic use the stabilized entrance to enter and leave construction site? [X]

[ ] [ ] Is adequate drainage provided to prevent ponding at entrance?

2. Silt Fence/Straw Bale Dike:

[ ] [ ] [X] Joints constructed by wrapping the two ends together for continuous support. [ ]

[ ] [X] Fabric buried 6 inches minimum below grade.

[ ] [ ] [X] Posts are stable, fabric is tight and without rips or frayed areas.

[ ] [X] [ ] Straw bales anchored in place with two support posts that are flush with top of bale. [X][ ]

[ ] Straw bales are firmly packed, unrotted, with intact bailing wire.

3. Oil Absorbent Booms

[ ] [ ] [X] Booms are anchored/secured in-place with no gaps between connecting booms.

[ ] [ ] [X] Booms are adequate for the collection of oily sheens or product and are not spent.

4. Other

[ ] [ ] [X]

[ ] [ ] [X]

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: Replace silt sock where damaged.

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Date: 10-24-22

PERIODIC INSPECTION REPORT

Troy ~~(Water Street) Phase 1A Remediation~~

Date and Time of Inspection: November 2, 2022 @ 14:00

Inspector (Name, Title, and Affiliation): Jonathan Borrelli, LAND Remediation, PM

Weather Conditions: Mostly Sunny, High of 67 degrees F

Soil Conditions (e.g., dry, wet, saturated): Dry

Description of Disturbed Areas at Time of Inspection: Demobilization occuring across the Site, erosion control being removed for this final inspection. Site is stabilized allowing for the removal of erosion control products.

Description of Areas Stabilized (Temporary or Final) Since Previous Inspection: Chipping of trees was conducted the week prior. Those chipping will be spread across the Site for additional erosion control while the Site is vacant. Re-use stockpile was installed with additional Siltsoxx around the base.

ATTACH SKETCH SHOWING APPROXIMATE LIMITS OF DISTURBED AND NEWLY-STABILIZED AREAS

Maintenance Activities Completed/Corrective Actions Implemented Since Previous Inspection: Siltsoxx was maintaned throughout the project. This final inspection is to identify that the erosion control used for the project served its purpose and will be removed during demobilization activities.

ATTACH PHOTOGRAPHS OF AREAS/ITEMS INSTALLED, REPAIRED, OR REPLACED

General/Housekeeping

Yes	No	NA	
1. General Site Conditions:			
[✓]	[ ]	[ ]	All soil disturbance is within the limits of the approved plans?
[✓]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[✓]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[✓]	[ ]	Is construction impacting the adjacent property?
[✓]	[ ]	[ ]	Is dust adequately controlled?

Maintaining Water Quality

Yes	No	NA	
[ ]	[✓]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[✓]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[✓]	[ ]	[ ]	All disturbance is within the limits of the approved plans.

Run-Off Control Practices **Yes**

	No	NA	
1. Excavation Dewatering:			
[ ]	[ ]	[✓]	Water is being pumped to the water treatment system or the holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[✓]	Connections to treatment system are secure and show no signs of leaks.
[ ]	[ ]	[✓]	Run-on is being diverted from work area.
2. Dewatering:			
[ ]	[ ]	[✓]	Water is being pumped to the to the water holding tank for off-site treatment/disposal (as applicable).
[ ]	[ ]	[✓]	Connections to tank are secure and show no signs of leaks.

Sediment Control Practices **Yes**

	No	NA	
1. Stabilized Construction Entrance:			
[✓]	[ ]	[ ]	Is stone clean enough to effectively remove mud from vehicles? [ ] [
✓	[ ]		Installed per standards and specifications?
[✓]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave construction site? [ ]
✓	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence/Straw Bale Dike:			
[ ]	[ ]	[✓]	Joints constructed by wrapping the two ends together for continuous support. [ ]
	[ ]	[✓]	Fabric buried 6 inches minimum below grade.
[ ]	[ ]	[✓]	Posts are stable, fabric is tight and without rips or frayed areas.
[ ]	[ ]	[✓]	Straw bales anchored in place with two support posts that are flush with top of bale. [ ][ ]
	[ ]	✓	Straw bales are firmly packed, unrotted, with intact bailing wire.
3. Oil Absorbent Booms			
[ ]	[ ]	[✓]	Booms are anchored/secured in-place with no gaps between connecting booms.
[ ]	[ ]	[✓]	Booms are adequate for the collection of oily sheens or product and are not spent.
4. Other			
[ ]	[ ]	[ ]	
[ ]	[ ]	[ ]	

Maintenance Activities/Corrective Actions Required to Address Observed Deficiencies: No maintenance activities are needed as this is the final inspection to remove the erosion control product. During transport of re-use material, siltsoxx will need to be maintained along the base of the stockpile.

ATTACH PHOTOGRAPHS OF DEFICIENT AREAS/ITEMS OBSERVED DURING THE INSPECTION

Certified by Inspector:

Signature: Jonathan M Castle Jonathan M Castle (Nov 8, 2022 10:14 EST) Date: _____

Appendix O: Correspondence

Common fill sampling frequency reduction

Adam Gutta

From: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Sent: Tuesday, May 17, 2022 8:18 AM
To: Adam Gutta
Cc: Adam Sherman; Cummins, Gerald
Subject: RE: Troy Phase 1A/Gas Corridor Remediation Common Fill Sampling Frequency

Hello Adam,

The New York State Department of Environmental Conservation approves of the proposed sampling frequency you describe below.

Regards,

John

John Spellman, P.E.
Project Manager, Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7014
P: 518-402-9686| F: 518-402-9679 | john.spellman@dec.ny.gov

From: Adam Gutta <agutta@BrwnCald.com>
Sent: Monday, May 16, 2022 12:35 PM
To: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Cc: Adam Sherman <ASherman@Brwncald.com>; Cummins, Gerald <Gerald.Cummins@nationalgrid.com>
Subject: Troy Phase 1A/Gas Corridor Remediation Common Fill Sampling Frequency

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John,

We are preparing to collect samples of import fill materials for testing of DER-10 parameters and emerging contaminants (PFAS and 1,4-dioxane). Land Remediation is proposing to use the same source (Luther Forest Mine, Mine ID 50049) that is being used for the National Grid Cohoes Remediation project. To date, up to 26,000 cubic yards of common fill has been approved for Residential Use and Protection of Ecological Resources by NYSDEC (John Miller is the project manager, refer to the attached Request to Import packages). As part of the Cohoes project, numerous samples were collected for lab analytical, as follows:

- Round 1 (5 samples), Round 2 (10), Round 3 (12), Round 4 (10) = 37 discrete samples for VOC analysis
- Round 1 (2), Round 2 (3), Round 3 (6), Round 4 (5) = 16 composite samples for SVOCs, inorganics, PCBs and pesticides analysis
- Round 1 (2), Round 2 (4), Round 3 (6), Round 4 (3) = 15 composite samples for emerging contaminants (PFAS and 1,4-dioxane) analysis

For Troy Phase 1A/Gas Corridor Remediation Project, we anticipate import of approximately 9,000 cy (7,000 cy for Area 2 and 1,600 cy for Area 3) of common fill from the same source. Considering that we are planning to use the same

source, which is a permitted mine that has demonstrated a trend of compliance, would the NYSDEC be amenable to a reduction in the frequency of sampling for this project? We believe this request is consistent with DER-10 (paragraph 5.4(e)3, snapshot below).

The following table summarizes the number of samples per DER-10 and the proposed number of samples for this project.

	Number of Samples for 9,000 cy per DER-10 Table 5.4(e)10	Proposed Modified Number of Samples for Phase 1A/Gas Corridor Project
Discrete Samples (VOCs)	7 (for first 1000) + 16 (for next 8000) = 23	9 (1 sample per 1,000 cy)
Composite Samples (SVOCs, inorganics, PCBs and pesticides, and emerging contaminants)	2 (for first 1000) + 8 (for next 8000) = 10	5 (1 sample per 2,000 cy)

Please let me know if you concur or if you would like to discuss this further.

Thank you,
Adam

Snapshot from DER-10 paragraph 5.4(e)3:

3. Sampling is required for all imported soil for use as backfill or cover material. Sampling frequency of the material will be determined by the remedial design or remedial action work plan:

i. considering Table 5.4(e)10 and paragraph 10 below, and sampling will be performed consistent with sections 2.1 through 2.3;

ii. with a minimum one sample analyzed from every new source, at the following sampling frequency for:

(1) soil or sand imported from a virgin mine/pit, at least one round of characterization samples for the initial 100 cubic yards of material, in accordance with Table 5.4(e)10 below;

(2) material sources other than a virgin mine/pit (e.g., a former manufacturing site), in accordance with Table 5.4(e)10; or

(3) sites where large amounts of cover material/backfill are required, the sampling frequency can be reduced from that specified in Table 5.4(e)10 once a trend of compliance is established; and

iii. the DER project manager may modify the number of samples required by subparagraph ii above based on the site being remediated and the source of the material, in accordance with the modification provisions set forth in section 1.6.

Adam Gutta, P.E.
*Professional Engineer in New York State
Brown and Caldwell
agutta@brwncald.com
T 508.819.1410 | **C** 518.729.9363

Hydraulic Oil Leak

Adam Gutta

From: Spellman, John (DEC)
Sent: Tuesday, May 31, 2022 4:32 PM
To: Adam Sherman
Cc: Deyette, Scott (DEC); Herman, David A (DEC); Cummins, Gerald; Charles Atanasio; Keith Bogatch; Adam Gutta; Nia Gilliam; Brian F. Taylor
Subject: RE: Troy (Water Street) Site - Hydraulic Oil Leak

Thank you for the notice and response Adam. No additional information is needed.

John

John Spellman, P.E.
Project Manager, Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7014
P: 518-402-9686| F: 518-402-9679 | john.spellman@dec.ny.gov

From: Adam Sherman <ASherman@Brwncald.com>
Sent: Tuesday, May 31, 2022 4:07 PM
To: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Cc: Deyette, Scott (DEC) <scott.deyette@dec.ny.gov>; Herman, David A (DEC) <david.herman@dec.ny.gov>; Cummins, Gerald <Gerald.Cummins@nationalgrid.com>; Charles Atanasio <Catanasio@BrwnCald.com>; Keith Bogatch <KBogatch@BrwnCald.com>; Adam Gutta <agutta@BrwnCald.com>; Nia Gilliam <NGilliam@BrwnCald.com>; Brian F. Taylor <BFTaylor@BrwnCald.com>
Subject: Troy (Water Street) Site - Hydraulic Oil Leak

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Good afternoon, John.

Today at approximately 2pm on the Area 3 portion of the site (near eastern side of the boundary between Area 2 and Area 3), a hydraulic line on Land Remediation, Inc's LinkBelt 235 broke during surface demolition activities. The hose break resulted in less than 1 gallon of hydraulic oil leaking onto the ground surface. The machine was immediately stopped and the oil was cleaned up with sorbent pads. A small amount of oil-impacted soil was also removed and staged for future disposal. Note, the leak occurred in an area that will be subject to future remediation.

Although this did not meet the criteria for a reportable spill in accordance with NYSDEC requirements, we wanted to provide you with this notification. Please let me know if you need any additional information.

Regards,
Adam

Adam Sherman, P.E.
Sr. Principal
Brown and Caldwell | Albany, NY

Change in monitoring well decommissioning methods

Adam Gutta

From: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Sent: Tuesday, June 7, 2022 5:41 PM
To: Adam Sherman
Cc: Cummins, Gerald; Adam Gutta
Subject: RE: Troy - Monitoring Wells

Hi Adam,

The New York State Department of Environmental Conservation approves of your proposal.

Regards,

John

John Spellman, P.E.
Project Manager, Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7014
P: 518-402-9686| F: 518-402-9679 | john.spellman@dec.ny.gov

From: Adam Sherman <ASherman@Brwncald.com>
Sent: Tuesday, June 7, 2022 1:07 PM
To: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Cc: Cummins, Gerald <Gerald.Cummins@nationalgrid.com>; Adam Gutta <agutta@BrwnCald.com>
Subject: Troy - Monitoring Wells

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Good afternoon, John.

During site preparation and well abandonment, it has been identified that a few monitoring wells have been previously damaged or have excessive silt built up. The wells include:

- PZ-17C (Overdrill) – previously damaged, unable to access
- MW-39 (Grout in-place) – unable to field locate
- PZ-15B (Grout in-place) – filled in

We propose the following for these wells:

- PZ-17C – remove from the Phase 1A scope and address during Phase 2 when we are pre-excavating and doing ISS in this area
- MW-39 – remove from the Phase 1A scope and address during Phase 2 when we are pre-excavating and doing ISS in this area

- PZ-15b – this well is within the Phase 1A ISS footprint and within the ISS interval (well ends at El. 0.1 ft and ISS extends to El. -3 ft). Land will physically remove the well during ISS activities.

Please let us know if you are in agreement with this or if you have any comments or questions.

Thanks, Adam

Adam Sherman, P.E.
Sr. Principal
Brown and Caldwell | Albany, NY
ASherman@brwncald.com
T 518.560.5911 | **C** 201.602.0075



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Approval of sampling plan for re-use of material from the Cohoes (Linden Street) Site

Adam Gutta

From: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Sent: Wednesday, June 15, 2022 12:06 PM
To: Adam Sherman
Cc: Stucker, Steven P.; David Boram; Steve Myers; Keith Bogatch; Adam Gutta; Eric Rosenzweig; Miller, John Y (DEC); Cummins, Gerald
Subject: RE: Cohoes (Linden Street) Site Fill Re-Use at Troy (Water Street) Site

Hi Adam,

The Department of Environmental Conservation approves of your proposed re-use scenario pending analytical results, and as modified below:

1. the samples for volatile analysis are to be collected as discrete samples
2. the imported material is to be placed under the site cover system

Regards,

John

John Spellman, P.E.
Project Manager, Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7014
P: 518-402-9686| F: 518-402-9679 | john.spellman@dec.ny.gov

From: Adam Sherman <ASherman@Brwncald.com>
Sent: Tuesday, June 14, 2022 12:30 PM
To: Miller, John Y (DEC) <john.miller@dec.ny.gov>; Spellman, John (DEC) <john.spellman@dec.ny.gov>
Cc: Stucker, Steven P. <steven.stucker@nationalgrid.com>; David Boram <dboram@demaximis.com>; Steve Myers <smyers@demaximis.com>; Keith Bogatch <KBogatch@BrwnCald.com>; Adam Gutta <agutta@BrwnCald.com>; Eric Rosenzweig <Erosenzweig@BrwnCald.com>
Subject: Cohoes (Linden Street) Site Fill Re-Use at Troy (Water Street) Site

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Good afternoon, John and John.

As discussed with both of you previously, we would like to propose a clean fill re-use scenario that involves re-use of clean fill from the Cohoes (Linden Street) Site remediation project as backfill for the Troy (Water Street) Site remediation project. Common fill and crusher run was imported to the Cohoes (Linden Street) Site as part of the ongoing remediation construction to construct a temporary access road through the Site and a truck turnaround area outside of the limits of the remediation activities (primarily for city-vehicles, e.g., garbage trucks, plows, etc., to turnaround due to the closure of Whitehall and Linden Streets).

The material was brought in after NYSDEC approval of Request to Import Fill packages (the previously approved request to import packages that are associated with these materials are available for download at this OneDrive folder: Cohoes_Request_to_Import_Packages). The material was placed on top of geotextile fabric and has been kept separate from impacted materials being managed at the Cohoes project. The initial intent was to re-use the material as clean backfill on the Cohoes project. However, due to the need to keep the temporary roadway and turnaround area until the late stages of the Cohoes project, re-use of this material as backfill on the Cohoes project cannot be performed.

As an alternative, we would like to propose re-use of these materials as backfill for the next phase of remediation (Phase 1B) at the Troy (Water Street) Site. We estimate approximately 1,500 to 2,500 cubic yards of material may be eligible for re-use under this scenario. This re-use scenario presents a benefit to both projects, presents a more sustainable alternative and avoids unnecessarily disposing of clean fill at a local landfill facility.

Details of the propose re-use plan include:

- No analytical testing is proposed for crusher run material, since, in accordance with DER-10 Section 5.4(e)5, less than 10% of this material, by weight, passes the No. 80 sieve.
- In addition to the sampling already performed, additional samples of the common fill material proposed for reuse will be collected from test pits or stockpiles. Samples will be collected at a frequency of 1 composite sample per 500 cubic yards and analyzed for PAHs and BTEX. QA/QC samples will also be collected at a frequency of one round of QA/QC samples per 20 samples. Each round of QA/QC samples will consist of one duplicate, one matrix spike, one matrix spike duplicate, and one field blank.
- The results from the analytical testing will be provided to NYSDEC for review.
- After receiving NYSDEC approval of the analytical results, movement of fill materials may begin. Note, it is anticipated that the materials would be moved in the Fall of 2022.
- To be conservative, the top 6 to 12 inches of material will be removed from the existing temporary roadway and disposed off-site as part of the Cohoes project.
- The remaining fill material above the geotextile fabric layer would be removed from the Cohoes site, placed into clean haulers, and transported to the Troy (Water Street) Site. Bills of lading or other tracking forms will be used to document each shipment of fill material.
- At the Troy (Water Street) Site, the material would be stockpiled (no higher than 8 feet high) on geotextile fabric at a location to be determined. The stockpile will be surrounded by silt socks or other sediment barriers. Once importing is completed, the stockpile will be covered and secured with geotextile fabric.
- The stockpiled material will then be re-used as backfill material during Phase 1B of the Troy (Water Street) Site, which is anticipated to be completed in 2023.

Please let us know if the NYSDEC amenable to this proposed re-use scenario (pending the analytical results) or if you have any comments or questions you would like to discuss.

Thank you, Adam

Adam Sherman, P.E.
Sr. Principal
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ASherman@brwncald.com
T 518.560.5911 | **C** 201.602.0075

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Modification of Phase 1A ISS Layout

Adam Gutta

From: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Sent: Friday, June 17, 2022 3:29 PM
To: Adam Sherman
Cc: Cummins, Gerald; Adam Gutta; Deyette, Scott (DEC)
Subject: RE: Troy (Water St) Site - Phase 1A ISS Mix Layout

Hi Adam,

The New York State Department of Environmental Conservation approves of Brown and Caldwell's proposed deviation to the design. Please be reminded to document the change in the Construction Completion Report.

NYSDEC has no objections to the June 20th ISS start.

Regards,

John

John Spellman, P.E.
Project Manager, Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7014
P: 518-402-9686| F: 518-402-9679 | john.spellman@dec.ny.gov

From: Adam Sherman <ASherman@Brwncald.com>
Sent: Wednesday, June 15, 2022 3:46 PM
To: Spellman, John (DEC) <john.spellman@dec.ny.gov>; Deyette, Scott (DEC) <scott.deyette@dec.ny.gov>
Cc: Cummins, Gerald <Gerald.Cummins@nationalgrid.com>; Adam Gutta <agutta@BrwnCald.com>
Subject: Troy (Water St) Site - Phase 1A ISS Mix Layout

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Good afternoon, John.

Attached is the proposed ISS cell layout for Phase 1A. The solid red line represents the planned extent of ISS in Phase 1A and the dashed blue lines represent ISS extents for future phases of remediation. We have worked with Land to develop the cell layout that best meets NYSDEC-approved design, is compatible with the ISS equipment, and is protective of surrounding features.

Land completed test pits next to the building which revealed a footer that protrudes out approximately 14" from the side of the building. In order to protect the building during ISS, a 5-foot offset from the building footer is proposed. This is a slight deviation from the Phase 1A design, which showed a 3 foot off-set from the edge of the building. This results in an approximate 250 cy reduction in the ISS volume. However, as shown on the drawing, in some areas ISS will be completed outside of the overall ISS design limits (i.e., N1, C10, C11, C27, C30, C36) and portions of some cells will be completed to deeper depth intervals than called for in the design (i.e., N1 through N7, C16, C17, C18, C21, C30, C31,

C32, and C35). The additional ISS volume from these cells more than off-set the reduction in ISS volume resulting from the 5-foot building off-set. In addition, potential near surface impacts between the Phase 1A ISS limits and the eastern wall of the e-lot building will be excavated to the depth of the footer (approximately 5 feet bgs) prior to backfilling and restoration.

The proposed start-up cells, where mixing methods and various grout mixtures will be evaluated, will be completed at C29, C38, and C39. Potential options for start-up cells in case of subsurface conflicts are C34 or half of C37. The planned grout mixes that will be evaluated in the start-up phase are (all mixes will use a water addition ration in the range of 1:1 to 1:1.2):

1. 9% of a 60:40 blend of Portland Cement (PC):Ground Granulated Blast Furnace Slag (GGBFS) + 0.9% Bentonite (design mix)
2. 8% of a 60:40 blend of PC:GGBFS + 0.8% Bentonite
3. 10% of a 60:40 blend of PC:GGBFS

Please let us know if you have any comments or questions. As discussed in today's progress meeting, Land anticipated starting the start-up phase on Monday 6/20.

Thanks, Adam

Adam Sherman, P.E.
Sr. Principal
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ASherman@brwncald.com
T 518.560.5911 | **C** 201.602.0075



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Approval of excavation limits in southern part of Area 3

Adam Gutta

From: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Sent: Wednesday, June 22, 2022 3:35 PM
To: Adam Gutta; Cummins, Gerald
Cc: Adam Sherman; Deyette, Scott (DEC)
Subject: RE: Troy Area 3 Final Excavation Limits

Adam and Garry,

NYSDEC concurs with the excavation limits for the PL E-20 project in the southern portion of Area 3 and the excavation may be backfilled.

Regards,

John

John Spellman, P.E.
Project Manager, Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7014
P: 518-402-9686| F: 518-402-9679 | john.spellman@dec.ny.gov

From: Adam Gutta <agutta@BrwnCald.com>
Sent: Wednesday, June 22, 2022 3:18 PM
To: Spellman, John (DEC) <john.spellman@dec.ny.gov>; Deyette, Scott (DEC) <scott.deyette@dec.ny.gov>
Cc: Adam Sherman <ASherman@Brwncald.com>; Cummins, Gerald <Gerald.Cummins@nationalgrid.com>
Subject: Troy Area 3 Final Excavation Limits

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John and Scott,

Following up from our on-site conversations, Land is preparing to backfill the southern portion of Area 3 to accommodate the PL E-20 project (specifically installation of a short section of the new gas line). Backfilling is anticipated in the southern half of the excavation area, south of and not including the area around the brick structure.

The excavation has been completed in accordance with Section 2.3 of the PL E-20 Gas Pipeline Replacement Corridor Work Plan. As described in the work plan, the excavation limits are based on removal of visual tar or NAPL and soil containing polynuclear or polycyclic aromatic hydrocarbons (PAHs) greater than 500 parts per million (ppm) from within the area extending from 20 feet west of centerline of the proposed alignment of the PL E-20 gas pipeline replacement and extending to the eastern property line. The various excavation depths/elevations are based on the deepest visual observation of NAPL or interval where PAHs were detected at concentrations less than the 500 ppm criterion.

The southern portion of the Area 3 excavation has been completed to the limits and depths indicated on the drawings. Based on the excavation limits and sampling frequency during PDI, additional post-excavation sampling is not required.

As described in the work plan, the sidewalls and bottom of the excavation were inspected by on-site personnel to confirm that visual NAPL had been removed.

Does NYSDEC concur that the excavation limits in the southern portion of Area 3 are final and ready for backfilling?

If you have any questions, comments, or concerns, please let us know.

Thanks,

Adam Gutta, P.E.
*Professional Engineer in New York State
Brown and Caldwell
agutta@brwncald.com
T 508.819.1410 | **C** 518.729.9363

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Results of ISS start-up test and full-scale grout mix

Adam Gutta

From: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Sent: Friday, July 1, 2022 2:45 PM
To: Adam Sherman; Cummins, Gerald
Cc: Adam Gutta; Deyette, Scott (DEC); Charles Atanasio; Nia Gilliam
Subject: RE: Troy (Water St) Site - Phase 1A ISS Mix Layout

Thank you for the information Adam. NYSDEC has no comments.

Regards,

John

John Spellman, P.E.
Project Manager, Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7014
P: 518-402-9686| F: 518-402-9679 | john.spellman@dec.ny.gov

From: Adam Sherman <ASherman@Brwncald.com>
Sent: Friday, July 1, 2022 12:33 PM
To: Spellman, John (DEC) <john.spellman@dec.ny.gov>; Deyette, Scott (DEC) <scott.deyette@dec.ny.gov>
Cc: Cummins, Gerald <Gerald.Cummins@nationalgrid.com>; Adam Gutta <agutta@BrwnCald.com>; Charles Atanasio <Catanasio@BrwnCald.com>; Nia Gilliam <NGilliam@BrwnCald.com>
Subject: RE: Troy (Water St) Site - Phase 1A ISS Mix Layout

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Good afternoon, John and Scott.

As discussed at the weekly meeting, Land is planning to begin ISS operations at the Troy Site on Tuesday, 7/5. I wanted to pass along the ISS start-up cell results and identify the mix that we plan to move forward with to begin the ISS operations. The start-up results:

- 9% PC/slag + 0.9% Bentonite (1:1 water:cement ratio): 7-day UCS = 170 psi, 7-day perm = 1.8e-7 cm/s
- 8% PC/slag + 0.8% Bentonite (1:1 water:cement ratio): 7-day UCS = 160 psi, 7-day perm = 6.0e-8 cm/s
- 10% PC/slag (1.25:1 water:cement ratio): 7-day UCS = 170 psi, 7-day perm = 9.8e-7 cm/s
- 12% PC/slag (1.25:1 water:cement ratio): 7-day UCS = 200 psi, 7-day perm = 5.9e-7 cm/s

All mixes satisfied the performance requirements at the 7-day mark and are expected to improve as they cure. 14-day results are expected by the end of next week. The crew experienced difficulty with the start-up mixes that contained bentonite (thick, dry, difficult to mix), however, the start-up and previous testing data indicate that there are benefits to bentonite being in the mix. Based on observations of the mix and testing results, Land plans to initiate ISS operations with a mix that has slightly less bentonite. The planned mix to begin ISS is as follows:

- 10% PC/slag + 0.25% Bentonite (1.25:1 water:cement ratio)

As always, we will continue to evaluate the mix as the ISS operations progress and more testing data comes in.

Please let us know if you have any comments or would like to discuss.

Thanks and have a nice holiday weekend.

Adam

Adam Sherman, P.E.
Brown and Caldwell | Albany, NY
T 518.560.5911 | **C** 201.602.0075

Adjustment to northern ISS limits around former tar tank (Sump 4)

Nia Gilliam

From: Deyette, Scott (DEC) <scott.deyette@dec.ny.gov>
Sent: Tuesday, July 19, 2022 6:41 AM
To: Adam Sherman
Cc: Spellman, John (DEC); Omorogbe, Amen (DEC)
Subject: RE: Troy (Water Street) Site - Adjustment to Phase 1A ISS Limits North of E-Lot Limits

Adam-

I discussed this with John last week. The Department finds the adjustments to the ISS limits in the area of the former tar sump #4 acceptable. Let me know if you have any questions.

R. Scott Deyette
Chief, Section E, Remedial Bureau C, Environmental Remediation

New York State Department of Environmental Conservation
625 Broadway, 12th Floor, Albany, NY 12233-7014
P: (518) 402-9794 | C: (518) 461-3721 | scott.deyette@dec.ny.gov
www.dec.ny.gov | | |

From: Adam Sherman <ASherman@Brwncald.com>
Sent: Monday, July 18, 2022 2:07 PM
To: Deyette, Scott (DEC) <scott.deyette@dec.ny.gov>
Cc: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Subject: FW: Troy (Water Street) Site - Adjustment to Phase 1A ISS Limits North of E-Lot Limits

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Good afternoon, Scott.

I see that John is out this week (I now recall him saying that during last week's meeting). Please see the email below. Would you be able to let us know your thoughts and if the Department would be amendable to these adjustments to the Phase 1A ISS limits.

Thanks, Adam

Adam Sherman, P.E.
Brown and Caldwell | Albany, NY
T 518.560.5911 | **C** 201.602.0075

From: Adam Sherman
Sent: Monday, July 18, 2022 2:02 PM

To: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Cc: Cummins, Gerald <Gerald.Cummins@nationalgrid.com>; Adam Gutta <agutta@BrwnCald.com>
Subject: Troy (Water Street) Site - Adjustment to Phase 1A ISS Limits North of E-Lot Limits

Good afternoon, John.

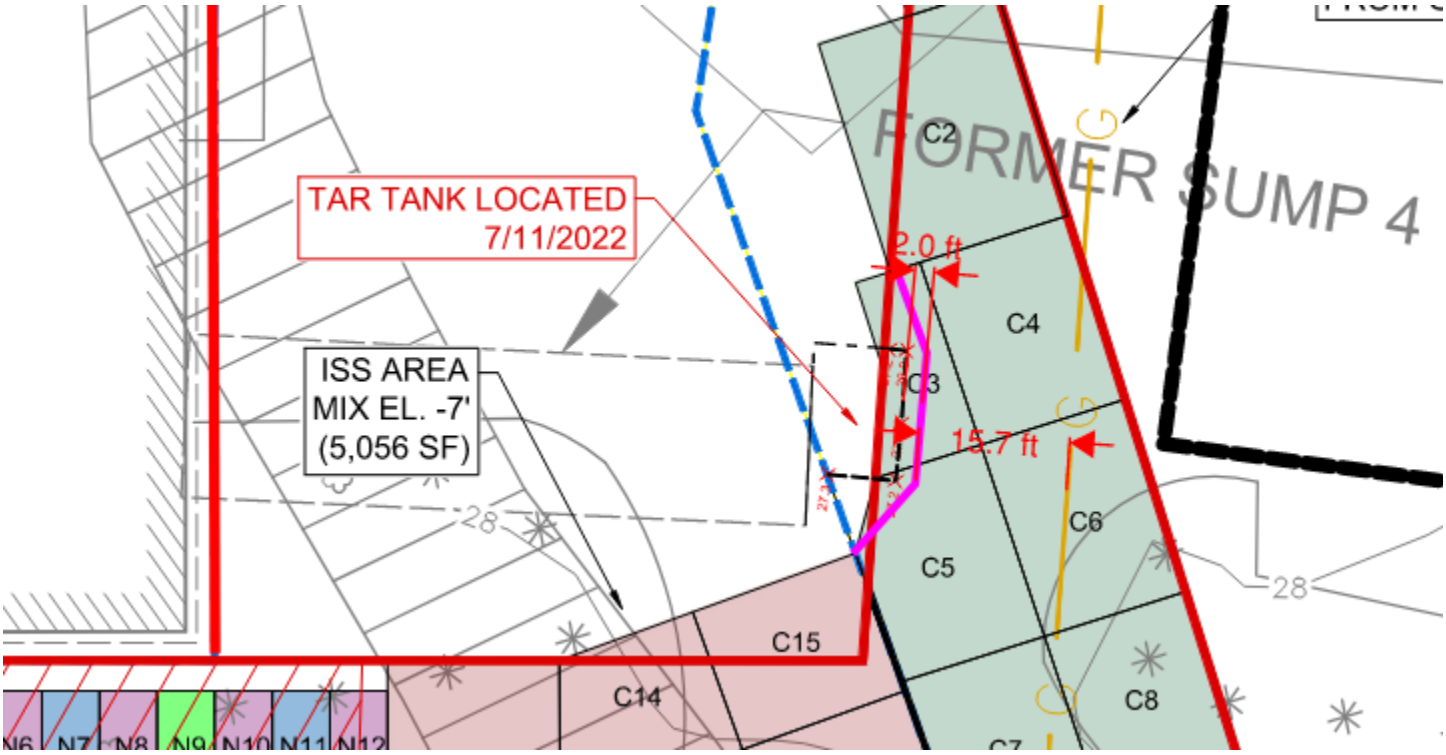
During remediation activities north of the warehouse building (former E-lot building), the form Sump 4 structure (also labeled "tar tank" in the snapshot below) was identified to have different dimensions than previously thought. The northern end of the structure extends approximately 9 feet further to the north than shown on the design drawings.

The plan has been to address Sump 4 during Phase 3 of the remediation activities along with ISS within and around the Sump 4 footprint. In order to stay clear of the structure in Phase 1A, we propose to modify the ISS limits as show by the pink line on the snapshot below. This modification will avoid the Sump 4 structure and also maintain a minimum of 15 feet from the planned alignment of the PL E-20 gas main that will be installed later this year.

The zone of ISS being removed from Phase 1A as a result of this adjustment will be included in the Phase 3 ISS.

Please let us know if the Department is amenable to this adjustment to the Phase 1A ISS limits.

Thanks, Adam



Adam Sherman, P.E.
Sr. Principal
Brown and Caldwell | Albany, NY
ASherman@brwncald.com
T 518.560.5911 | **C** 201.602.0075

30-inch pipe along west side of Excavation Area A

Adam Gutta

From: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Sent: Monday, July 25, 2022 2:31 PM
To: Adam Sherman
Cc: Deyette, Scott (DEC); Cummins, Gerald; Adam Gutta
Subject: RE: Troy (Water Street) Site - 30-36" Pipe along Excavation Area A

Hi Adam, Garry,

The New York State Department of Environmental Conservation approves of Brown and Caldwell's plan.

Regards,

John

John Spellman, P.E.
Project Manager, Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7014
P: 518-402-9686| F: 518-402-9679 | john.spellman@dec.ny.gov

From: Adam Sherman <ASherman@Brwncald.com>
Sent: Monday, July 18, 2022 2:48 PM
To: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Cc: Deyette, Scott (DEC) <scott.deyette@dec.ny.gov>; Cummins, Gerald <Gerald.Cummins@nationalgrid.com>; Adam Gutta <agutta@BrwnCald.com>
Subject: Troy (Water Street) Site - 30-36" Pipe along Excavation Area A

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John,

As a follow-up to your request during the 7/6/22 weekly construction progress meeting, we wanted to get back to you on the plan for the 30-36" pipe that was encountered near Excavation Area A (on Area 2). As discussed during the meeting, the pipe is located running parallel to the western limits of the Area A excavation and the team believes that the Area A target excavation can be completed without disturbing the pipe. As such, in order to keep the Phase 1A project on schedule and ahead of the PL E-20 project, the plan is to keep the pipe intact and complete the Area A excavation.

As part of Phase 1B remediation activities, the contractor will be required to excavate down to the pipe (in an area south of the Area A excavation) and open up the pipe to inspect its contents. Subsequent activities will be determined based on the observations and in consultation with the NYSDEC.

Please let us know if you have any comments or questions.

Thanks, Adam

Adam Sherman, P.E.
Sr. Principal
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ASherman@brwncald.com
T 518.560.5911 | **C** 201.602.0075



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Re-use of cooling tower concrete as backfill

Adam Gutta

From: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Sent: Tuesday, July 26, 2022 11:48 AM
To: Adam Sherman
Cc: Cummins, Gerald; Adam Gutta; Charles Atanasio; Nia Gilliam; Deyette, Scott (DEC)
Subject: RE: Troy (Water St) Site - Re-Use of Cooling Towner Concrete within Area A Excavation

Hi Adam,

Provided the concrete does not have visual impacts the concrete may be used as backfill within the excavation as you describe. NYSDEC finds specification 31 05 13's requirement for a 6-inch minus size to be appropriate as a manageable size piece.

Please let me know if you would like to discuss further.

Regards,

John

John Spellman, P.E.
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From: Adam Sherman <ASherman@Brwncald.com>
Sent: Monday, July 25, 2022 3:57 PM
To: Spellman, John (DEC) <john.spellman@dec.ny.gov>; Deyette, Scott (DEC) <scott.deyette@dec.ny.gov>
Cc: Cummins, Gerald <Gerald.Cummins@nationalgrid.com>; Adam Gutta <agutta@BrwnCald.com>; Charles Atanasio <Catanasio@BrwnCald.com>; Nia Gilliam <NGilliam@BrwnCald.com>
Subject: Troy (Water St) Site - Re-Use of Cooling Towner Concrete within Area A Excavation

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Hi John,

As discussed today, we would like to re-use the concrete from the former foundations of the cooling towers (see attached photo – looking N/NW) as backfill within the Area A excavation. The structure is approximately 36 feet long (north-south dimension), 16 feet wide (east-west dimension), and 8 feet thick. The concrete does not appear to have visible MGP impacts. The plan is to lay orange demarcation fabric on the bottom of the excavation adjacent to the structure (i.e., on the west side of the structure), demolish the structure into manageable size pieces, and place the pieces onto the demarcation fabric. Once the structure is demolished the excavation can be completed to the design limits. After the excavation is completed, imported common fill will be used as backfill to intermix with the concrete debris.

Please let us know if the Department is amenable to this planned concrete re-use scenario.

Thanks, Adam

Adam Sherman, P.E.
Brown and Caldwell | Albany, NY
T 518.560.5911 | **C** 201.602.0075

Re-use of concrete filled foundation piles as backfill

Adam Gutta

From: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Sent: Tuesday, July 26, 2022 5:44 PM
To: Adam Sherman
Cc: Cummins, Gerald; Adam Gutta; Charles Atanasio; Nia Gilliam; Deyette, Scott (DEC); Herman, David A (DEC)
Subject: RE: Troy (Water St) Site - Area 2: Concrete-Filled Steel Piles

Hi Adam,

I understand from our call that the piles were removed in their entirety from the ISS area; not severed, and your proposal included the placement of the piles in a single layer. Provided the piles have no visual impacts of contamination, Brown and Caldwell's proposal is acceptable to the Department of Environmental Conservation. This approval is granted specifically to the approximately 15 piles. The disposition of additional subsurface structures encountered, if any, will be reviewed on a case-by-case basis.

Regards,

John

John Spellman, P.E.
Project Manager, Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Conservation
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From: Adam Sherman <ASherman@Brwncald.com>
Sent: Tuesday, July 26, 2022 2:37 PM
To: Spellman, John (DEC) <john.spellman@dec.ny.gov>; Deyette, Scott (DEC) <scott.deyette@dec.ny.gov>
Cc: Cummins, Gerald <Gerald.Cummins@nationalgrid.com>; Adam Gutta <agutta@BrwnCald.com>; Charles Atanasio <Catanasio@BrwnCald.com>; Nia Gilliam <NGilliam@BrwnCald.com>
Subject: Troy (Water St) Site - Area 2: Concrete-Filled Steel Piles

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Hi John,

As discussed today, concrete-filled steel piles have been removed from the ISS footprint (north and east of the former E-lot building) during ISS activities. There are approximately 15 piles, which range in size from approximately 10 to 20 feet long as several of them broke into smaller segments during removal. Attached is a picture of the piles. The piles do not appear to have visible MGP impacts. The proposed plan is to lay the piles horizontally at the bottom of the Excavation Area A (i.e., 10 feet below grade) prior to backfilling. The piles would be spaced out such that imported backfill materials could be placed around and in between the piles. We would document the location of the piles in our record survey.

Please let us know if the Department is amenable to this proposed scenario for managing the piles.

Thanks, Adam

Adam Sherman, P.E.
Brown and Caldwell | Albany, NY
T 518.560.5911 | **C** 201.602.0075

Adjustment to ISS Cells around subsurface structure and former tar tank (Sump 4) footing

Adam Gutta

From: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Sent: Tuesday, August 9, 2022 10:31 AM
To: Jesse Braun; Cummins, Gerald
Cc: Deyette, Scott (DEC); Adam Gutta; Adam Sherman; Charles Atanasio; Nia Gilliam; Herman, David A (DEC)
Subject: RE: Troy (Water Street) Site- Adjustment to ISS Cells to Accommodate Encountered Structure and Tar Tank Footing
Attachments: 220803_TROY-1A_P-ISS-LAYOUT-REV3 NYSDEC question.pdf

Hello Jesse, Garry,

The New York State Department of Environmental Conservation approves of the proposed adjustment.

Please answer the questions in cloud on the attached figure.

Regards,

John

John Spellman, P.E.
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625 Broadway, Albany, NY 12233-7014
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From: Jesse Braun <JBraun@BrwnCald.com>
Sent: Monday, August 8, 2022 10:22 AM
To: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Cc: Cummins, Gerald <Gerald.Cummins@nationalgrid.com>; Deyette, Scott (DEC) <scott.deyette@dec.ny.gov>; Adam Gutta <agutta@BrwnCald.com>; Adam Sherman <ASherman@Brwncald.com>; Charles Atanasio <Catanasio@BrwnCald.com>; Nia Gilliam <NGilliam@BrwnCald.com>; Herman, David A (DEC) <david.herman@dec.ny.gov>
Subject: Troy (Water Street) Site- Adjustment to ISS Cells to Accommodate Encountered Structure and Tar Tank Footing

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John,

Please see the attached revised Phase 1A ISS layout, which shows the proposed adjustments for ISS cells C-1,C-2, C-3, and C-5.

This revised layout (shown as the red line) for cells C-1 and C-2 follows the northern edge of the large east-west oriented concrete structure that was encountered in the field. This structure reaches a depth of approximately 19 to 20 feet bgs and interferes with the southernmost limits of the original C-1 and C-2 layout.

The southernmost limits of C-3 and C-5, which were previously adjusted to avoid Sump 4, are being slightly adjusted an additional 1 to 1.5 feet to account for the footer on the northern end of Sump 4. This footer was recently exposed and was not accounted for when the initial adjustments to C-3 and C-5 were proposed and approved. Sump 4 will be addressed in a later phase of remediation (Phase 3).

Thanks,

Jesse Braun
Sr. Staff Engineer
Brown and Caldwell
jbraun@brwncald.com
T +1 (201) 574-4756 |



ISS Cores Confirmation

Adam Gutta

From: Spellman, John (DEC)
Sent: Friday, August 26, 2022 3:25 PM
To: Cummins, Gerald
Cc: Adam Sherman; Charles Atanasio
Subject: Troy Water St. MGP, 442029, Phase 1A QC ISS Cores

Hi Garry,

Relating to specification 31 32 00 3.07C, this email is to confirm that in the Department's view, based on the Department's observation of the performance monitoring ISS core samples collected on July 5, August 3 and August 4 2022, no corrective actions were needed.

Regards,

John

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Import and re-use of mixed common fill and crushed stone from the Cohoes (Linden Street) Site

Adam Gutta

From: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Sent: Monday, October 3, 2022 9:01 AM
To: Adam Sherman
Cc: Stucker, Steven P.; Miller, John Y (DEC); Cummins, Gerald; 'David Boram'; Steve Myers; Keith Bogatch; Adam Gutta; Eric Rosenzweig; Charles Atanasio
Subject: RE: Cohoes (Linden Street) Site Fill Re-Use at Troy (Water Street) Site

Good morning Adam,

Thank you for the analytical results. The Department of Environmental Conservation has no objections to proceeding per the approved plan.

Regards,

John

John Spellman, P.E.
Project Manager, Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7014
P: 518-402-9686| F: 518-402-9679 | john.spellman@dec.ny.gov

From: Adam Sherman <ASherman@Brwncald.com>
Sent: Friday, September 30, 2022 3:16 PM
To: Spellman, John (DEC) <john.spellman@dec.ny.gov>; Miller, John Y (DEC) <john.miller@dec.ny.gov>
Cc: Stucker, Steven P. <steven.stucker@nationalgrid.com>; Cummins, Gerald <Gerald.Cummins@nationalgrid.com>; 'David Boram' <dboram@demaximis.com>; Steve Myers <smyers@demaximis.com>; Keith Bogatch <KBogatch@BrwnCald.com>; Adam Gutta <agutta@BrwnCald.com>; Eric Rosenzweig <Erosenzweig@BrwnCald.com>; Charles Atanasio <Catanasio@BrwnCald.com>
Subject: RE: Cohoes (Linden Street) Site Fill Re-Use at Troy (Water Street) Site

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Good afternoon John and John,

As a follow-up to the email correspondence below, we are providing the analytical testing results for the clean fill materials at the Cohoes (Linden Street) Former MGP Site ("Cohoes Site") that we propose to re-use as fill material at the Troy (Water Street) Site ("Troy Site"). This request provides analytical sample results to support the import of up to 1,500 cubic yards of a combination of clean common fill and clean crushed stone materials to the Troy Site from Cohoes Site.

In accordance with the email correspondence below, the crushed stone materials did not require analytical testing prior to import to the Troy Site. The common fill material, although originally imported to the Cohoes Site under NYSDEC-approved Request to Import Fill packages (including extensive analytical testing - refer to the email below), required sampling and analysis of polyaromatic hydrocarbons (PAHs) and benzene, toluene, ethylbenzene, and xylenes (BTEX) at

a frequency of one sample per 500 cubic yards. Three samples of common fill were collected and analyzed for PAHs. Three discrete samples of common fill were collected and analyzed for BTEX. As presented in the attached analytical results, PAHs and BTEX were not detected in the samples. QA/QC sample results (one duplicate, one matrix spike, one matrix spike duplicate, and one field blank) are also presented in the attached analytical report.

The requirements for handling the fill materials at the Cohoes Site and staging at the Troy Site are defined in the email correspondence below.

Please let us know if you have any questions.

Thank you and have a nice weekend.

Adam

Adam Sherman, P.E.
Brown and Caldwell | Albany, NY
T 518.560.5911 | **C** 201.602.0075

From: Adam Sherman
Sent: Wednesday, June 15, 2022 1:04 PM
To: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Cc: Stucker, Steven P. <steven.stucker@nationalgrid.com>; David Boram <dboram@demaximis.com>; Steve Myers <smyers@demaximis.com>; Keith Bogatch <KBogatch@BrwnCald.com>; Adam Gutta <agutta@BrwnCald.com>; Eric Rosenzweig <Erosenzweig@BrwnCald.com>; Miller, John Y (DEC) <john.miller@dec.ny.gov>; Cummins, Gerald <Gerald.Cummins@nationalgrid.com>
Subject: RE: Cohoes (Linden Street) Site Fill Re-Use at Troy (Water Street) Site

Thank you, John and John. We will incorporate your comments into the plan. We will circle back with you in the Fall when we are preparing to collect samples.

Thanks, Adam

Adam Sherman, P.E.
Brown and Caldwell | Albany, NY
T 518.560.5911 | **C** 201.602.0075

From: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Sent: Wednesday, June 15, 2022 12:06 PM
To: Adam Sherman <ASherman@Brwncald.com>
Cc: Stucker, Steven P. <steven.stucker@nationalgrid.com>; David Boram <dboram@demaximis.com>; Steve Myers <smyers@demaximis.com>; Keith Bogatch <KBogatch@BrwnCald.com>; Adam Gutta <agutta@BrwnCald.com>; Eric Rosenzweig <Erosenzweig@BrwnCald.com>; Miller, John Y (DEC) <john.miller@dec.ny.gov>; Cummins, Gerald <Gerald.Cummins@nationalgrid.com>
Subject: RE: Cohoes (Linden Street) Site Fill Re-Use at Troy (Water Street) Site

Hi Adam,

The Department of Environmental Conservation approves of your proposed re-use scenario pending analytical results, and as modified below:

1. the samples for volatile analysis are to be collected as discrete samples
2. the imported material is to be placed under the site cover system

Regards,

John

John Spellman, P.E.
Project Manager, Remedial Bureau C
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New York State Department of Environmental Conservation
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From: Adam Sherman <ASherman@Brwncald.com>
Sent: Tuesday, June 14, 2022 12:30 PM
To: Miller, John Y (DEC) <john.miller@dec.ny.gov>; Spellman, John (DEC) <john.spellman@dec.ny.gov>
Cc: Stucker, Steven P. <steven.stucker@nationalgrid.com>; David Boram <dboram@demaximis.com>; Steve Myers <smyers@demaximis.com>; Keith Bogatch <KBogatch@BrwnCald.com>; Adam Gutta <agutta@BrwnCald.com>; Eric Rosenzweig <Erosenzweig@BrwnCald.com>
Subject: Cohoes (Linden Street) Site Fill Re-Use at Troy (Water Street) Site

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Good afternoon, John and John.

As discussed with both of you previously, we would like to propose a clean fill re-use scenario that involves re-use of clean fill from the Cohoes (Linden Street) Site remediation project as backfill for the Troy (Water Street) Site remediation project. Common fill and crusher run was imported to the Cohoes (Linden Street) Site as part of the ongoing remediation construction to construct a temporary access road through the Site and a truck turnaround area outside of the limits of the remediation activities (primarily for city-vehicles, e.g., garbage trucks, plows, etc., to turnaround due to the closure of Whitehall and Linden Streets).

The material was brought in after NYSDEC approval of Request to Import Fill packages (the previously approved request to import packages that are associated with these materials are available for download at this OneDrive folder: Cohoes Request to Import Packages). The material was placed on top of geotextile fabric and has been kept separate from impacted materials being managed at the Cohoes project. The initial intent was to re-use the material as clean backfill on the Cohoes project. However, due to the need to keep the temporary roadway and turnaround area until the late stages of the Cohoes project, re-use of this material as backfill on the Cohoes project cannot be performed.

As an alternative, we would like to propose re-use of these materials as backfill for the next phase of remediation (Phase 1B) at the Troy (Water Street) Site. We estimate approximately 1,500 to 2,500 cubic yards of material may be eligible for re-use under this scenario. This re-use scenario presents a benefit to both projects, presents a more sustainable alternative and avoids unnecessarily disposing of clean fill at a local landfill facility.

Details of the propose re-use plan include:

- No analytical testing is proposed for crusher run material, since, in accordance with DER-10 Section 5.4(e)5, less than 10% of this material, by weight, passes the No. 80 sieve.
- In addition to the sampling already performed, additional samples of the common fill material proposed for reuse will be collected from test pits or stockpiles. Samples will be collected at a frequency of 1 composite sample per 500 cubic yards and analyzed for PAHs and BTEX. QA/QC samples will also be collected at a

frequency of one round of QA/QC samples per 20 samples. Each round of QA/QC samples will consist of one duplicate, one matrix spike, one matrix spike duplicate, and one field blank.

- The results from the analytical testing will be provided to NYSDEC for review.
- After receiving NYSDEC approval of the analytical results, movement of fill materials may begin. Note, it is anticipated that the materials would be moved in the Fall of 2022.
- To be conservative, the top 6 to 12 inches of material will be removed from the existing temporary roadway and disposed off-site as part of the Cohoes project.
- The remaining fill material above the geotextile fabric layer would be removed from the Cohoes site, placed into clean haulers, and transported to the Troy (Water Street) Site. Bills of lading or other tracking forms will be used to document each shipment of fill material.
- At the Troy (Water Street) Site, the material would be stockpiled (no higher than 8 feet high) on geotextile fabric at a location to be determined. The stockpile will be surrounded by silt socks or other sediment barriers. Once importing is completed, the stockpile will be covered and secured with geotextile fabric.
- The stockpiled material will then be re-used as backfill material during Phase 1B of the Troy (Water Street) Site, which is anticipated to be completed in 2023.

Please let us know if the NYSDEC amenable to this proposed re-use scenario (pending the analytical results) or if you have any comments or questions you would like to discuss.

Thank you, Adam

Adam Sherman, P.E.
Sr. Principal
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Phase 1A Final Walk Through

Adam Gutta

From: Spellman, John (DEC)
Sent: Wednesday, November 23, 2022 12:12 PM
To: Adam Sherman
Cc: Cummins, Gerald
Subject: RE: Troy (Water Street) Site - Phase 1A Remediation

Thank you for the offer Adam.

The Department has been able to access and monitor the work and finds there are no issues at this time.

National Grid may proceed with a final walkthrough in the Department's absence.

John

John Spellman, P.E.
Project Manager, Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7014
P: 518-402-9686| john.spellman@dec.ny.gov

From: Adam Sherman <ASherman@Brwncald.com>
Sent: Wednesday, November 16, 2022 9:57 AM
To: Spellman, John (DEC) <john.spellman@dec.ny.gov>
Cc: Cummins, Gerald <Gerald.Cummins@nationalgrid.com>
Subject: Troy (Water Street) Site - Phase 1A Remediation

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Good morning, John.

We are wrapping up the work at the Site this week and early next. The Site restoration activities have been completed and barriers/fencing have been re-positioned along the sides of the restored King Road. The remaining work includes bringing in the last loads of fill from the Cohoes Site and demobilizing several pieces of equipment. We just wanted to reach out to see if you or any others from the Department would like to do a final walkthrough to see the Site conditions at the end of Phase 1A. Please let me know if this is something you would like to do and I can coordinate with you on a day/time.

Thanks, Adam

Adam Sherman, P.E.
Sr. Principal
Brown and Caldwell | Albany, NY
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Appendix P: Construction Meeting Summaries

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205

T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting
Meeting Location: Conference Call (MS Teams)
Agenda Prepared by: Brown and Caldwell Associates

Date: May 18, 2022
Time: 10:00

Meeting Summary

Attendees:

Gerald Cummins, National Grid
John Spellman, NYSDEC
Scott Deyette, NYSDEC
Justin Demings, NYSDOH
Adam Sherman, BC
Keith Bogatch, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
Will Lindheimer, LRI
Jon Borrelli, LRI
Minda Murray, LRI
Mike Evens, LRI

Safety Minute – HSE/LRI

- Biological hazards are present at the site. Snakes seen on-site yesterday (May 17, 2022). Species is unknown, but important to be alert and don't corner or be aggressive toward wildlife. Avoid wildlife to let them go on their way.
- Bees present on site, if allergic please consider informing your manager so site is prepared for emergencies.
- No incidents, accidents, or injuries last week.
- Reminder for all site visitors is to bring PPE to the site.

1. Health and Safety Update – HSE/LRI

- Work Zone Air Monitoring (previous week) – no issues.
- COVID protocols and updates – Remain vigilant and if sick talk with your manager before coming to the site.
- Good Catches and Near-Misses (previous week) – Daily Safety Observation (DSO) on 5/17/22 for snake at the site (refer to safety minute above)

- Process Hazard Analysis (PHA) update - PHA is on-going and tentative to be completed 5/25/22. Safeguards are in-place for work tasks identified so far (overhead wires and underground gas).

2. Community Air Monitoring Update - HSE/LRI
   - Baseline monitoring was completed last week, and weekly monitoring is on-going. Land is implementing dust controls to keep dust down.
   - Weekly summaries will start next week.
   - No alarm conditions/notifications, no odor complaints.
3. Site Security Update – LRI
   - Non-work hours security started night of 5/17/22. 24/7 security will start once the temporary bridge is in-place.
   - Temporary fence anticipated to be delivered today. Temporary fence and repairs to existing fence along CSX railroad to be completed this week.
4. PL E-20 Project Coordination – NG/BC
   - No major updates. Trench excavation scheduled to begin this week.
5. Project Administration - BC
   - Project Contact List – Contact List to be distributed. Please review and send additions and revisions to Adam Sherman, Charles Atanasio, and Adam Gutta.
   - Permitting updates - Building permit issued by City of Troy will be posted in Land's trailer today. City of Troy hydrant permit is in the works.
   - Previous Week's Action Items
     - National Grid, LRI, BC - PHA. This is on-going and scheduled to be completed May 25, 2022.
     - LRI (M. Murray) - contact local authorities (EMS) for notification of the project. Completed last week. Contact List and HASP updated with information.
     - LRI (M. Murray), BC (C. Atanasio) - discuss project with County Waste. Charles Atanasio to contact County Waste this week.
     - LRI (W. Lindheimer and J. Borrelli) - review ELot building electric as an option for power.
       - E-Lot building power will not be used (insufficient for project needs). A generator will be used for the ISS grout plant and a separate electric line will be dropped for the office trailers.
     - BC (A. Gutta) - circulate meeting notes, contact list, and schedules. Complete.
     - LRI (W. Lindheimer) - coordinate with NG Gas (Dan Thurn) on gas line crossing. Complete. National Grid Gas requires additional 6 inches of stone to be placed over the gas line.
   - Request for Information (RFI) updates – None.
   - Field Order updates – None.
6. Work Activities (Completed and Upcoming) – LRI/BC
   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)

- Completed last week - Pre-construction photos to document site conditions and structural assessment of E-Lot complete. Survey control established last week and existing conditions survey complete. GPR was completed last week in Area 2 and Area 3. Baseline Community Air Monitoring was completed last week. Water truck mobilized last week for dust control. Tree clearing and chipping completed.
- Ongoing/Upcoming – Erosion and Sediment Control (ESC) measures being installed and tentative to be completed next week. Trailer and temporary road subgrade preparation is on-going and tentative to be completed next week. Concrete barriers along temporary road to be completed next week. Paving of temporary road tentative to be completed next week (traffic will be switched over after Memorial Day, 5/31/22). Vibration monitoring started today adjacent to E-Lot building. Surface debris relocation to be completed next week. Temporary fence installation and repairs of existing fence along CSX railroad to be completed next week. Temporary bridge being this week and scheduled to be installed next week. Monitoring well decommissioning scheduled to begin next week.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed – None.
   - Upcoming - GPR scheduled for next week. First intrusive activity (test pitting for waste characterization and utility/cut and cap) scheduled for end of May.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed – None.
   - Upcoming – Work scheduled to begin after 5/31/22.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed – None.
   - Upcoming – Grout plant scheduled to be delivered early June 2022.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed – None.
   - Upcoming – None.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed – #2, #3, and Type II Subbase crushed stone materials approved for import by NYSDEC. Materials brought in for construction entrances, trailer pads, temp road construction.
   - Upcoming – Sampling common fill source tentatively scheduled for week of May 23.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
   - Completed – None.
   - Upcoming – None.

7. Project Schedule - LRI
   - Lookahead Schedule (covered under Item 6 above)
   - Baseline Schedule Updates/Schedule Impacts – No issues or changes to baseline schedule.

8. Submittals – BC/LRI
   - Pre-mobilization submittals and work plans – Construction Management Plan and Health and Safety Plan are being reviewed by BC and revised by LRI. These will be sent to NYSDEC and NYSDOH once finalized.
   - Weekly monitoring submittals – Summaries will be prepared starting next week.
   - Submittal log – Updated submittal log is attached to this summary.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (starting next week)
     - CMP, HASP, Traffic Plan, Project Sign Sketch will be sent once finalized.
     - Requests to Import Fill Packages – Common Fill anticipated to be submitted end of May.
9. Local Coordination (City of Troy, County of Rensselaer, Fire Dept)
   - No updates.
10. Community Interaction/Relations
   - NYSDEC fact sheet for the project was published last week. Times Union published a news story about the site earlier this week.
   - No updates regarding last week's incident with a member of the public entering the site. Site personnel have been briefed on the incident.
   - It is still stripe bass season and people may try to access the riverbank through the site.
11. NYSDEC/NYSDOH
   - John Spellman – No comments.
   - Scott Deyette – Within the last two weeks at project sites in the Capital District area there have been incidents of trucks to haul waste arriving at the site without the correct permit. All trucks must be checked against the Part 364 permit to confirm they are permitted.
   - NYSDOH – No comments.
12. Review of Action Items
   - National Grid, LRI, BC - PHA. This is on-going and scheduled to be completed 5/25/22.
   - BC (C. Atanasio) – Discuss project with County Waste. Charles Atanasio to contact County Waste this week.
   - BC (A. Sherman) to contact Brian Connors (Chevron) to provide update of schedule for Area 3 remediation. Also ask if they want to receive meeting summaries for Area 3 activities.
13. Other
   - Next meeting: Wednesday, 5/25/22 at 10am
   - Upcoming Vacations: Sherman (5/19, 5/20)
   - Upcoming Site visits

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** May 25, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
John Spellman, NYSDEC
Adam Sherman, BC
Keith Bogatch, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
Brian Taylor, BC
Will Lindheimer, LRI
Jon Borrelli, LRI
Minda Murray, LRI
Mike Evens, LRI
Brian King, HSE

Safety Minute – HSE/LRI – Discussed on-site pull-through or backup policy for parking vehicles, and best practice to do a 360-walk around before getting into a vehicle. Signage will be posted on trailers and near parking areas, and this is part of the initial site orientation for all visitors.

1. Health and Safety Update – HSE/LRI
   - Weekly Update
     - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
     - Health and Safety – No incidents during the past week. The team is implementing lessons learned for new visitor orientation.
   - COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.
2. Community Air Monitoring Update - HSE/LRI
   - Baseline monitoring completed last week.
   - Past week monitoring – there was a spike at one of the upwind monitoring locations for particulates (PM-10), but this was determined to be a false reading. Dust controls have been implemented and there have not been visual observations of dust around or leaving the site.

3. Site Security Update – LRI
   - LRI contacted Troy Police for scope of work, project contacts, and on-site security presence. The dispatcher said that a sergeant might visit the site.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - No major updates to project schedule milestone.
   - There are minor PL E-20 activities occurring on Area 3 this week but that will be done before the Phase 1A project team starts work on construction access in that area.
   - The PL E-20 contractor has been directed to not park on the Phase 1A work areas.
5. Project Administration - BC
   - Project Contact List – Gutta added Site Security (Mike Picard) to the list, no other updates.
   - Permitting – Troy building permit has been posted, no other updates.
   - Previous Week's Action Items
     - National Grid, LRI, BC – PHA is on-going and scheduled to be completed 5/25.
       - PHA review was not scheduled for 5/25, tentatively scheduled for 6/1.
     - BC (C. Atanasio) – contact County Waste to discuss project and schedule.
       - Charles Atanasio met with John Smith (facility manager) to view the project. No issues identified and John Smith offered to be a point of contact with drivers. Site Supervisors from County Waste might visit the site to be familiar with the traffic pattern.
     - BC (A. Sherman) - contact Brian Connors (Chevron) to provide update on schedule for Area 3 remediation. Ask if they want to receive meeting summaries for Area 3 activities.
       - A. Sherman updated Brian Connors on activities and project schedule. Brian responded that they would contact the team of any Chevron activities.
   - Request for Information (RFI)/Field Order (FO) updates
     - Monitoring Well Decommissioning – several wells have been identified with blockages or obstructions. LRI to provide a RFI with a list of the wells and depth to blockage.
6. Work Activities (Completed and Upcoming) – LRI/BC
   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - Construction of temporary re-route of King Road is partially completed (90% of crusher run subbase) excluding area beneath overhead wire.
        - Concrete barriers are in-place except for entrance/exits.
        - Erosion and sediment controls in-place for current work activities.
        - Monitoring well decommissioning started, see note above under future RFI.
        - Trailers have been mobilized with temporary power.
        - Temporary bridge pieces have been mobilized.
        - Excavators have been mobilized.

- Relocation of on-site debris has been partially completed.

- Upcoming
  - Traffic will be re-routed to temporary road after Memorial Day, planned for 6/1. Temporary fence will be relocated with the traffic change over.
  - Temporary bridge installation is scheduled for 6/3 pending finalization of PHA.
  - Asphalt paving for temporary road scheduled for 5/26 and 5/27.
  - Utility locating starting in Area 3 on 5/26 and moving into Area 2 next week.
  - Monitoring well decommissioning tentatively scheduled to be completed week of 6/6.
  - Settlement prisms and crack gauges to be installed on E-Lot building next week.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - None.
   - Upcoming
     - Excavation anticipated to begin in early to mid-June.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - None.
   - Upcoming
     - None.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - None.
   - Upcoming
     - Grout plant mobilization and set up beginning next week.
     - ISS start-up phase tentative to begin in mid-June.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - None.
   - Upcoming
     - Waste characterization tentative to begin next week.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - Imported crushed stone materials for temporary road construction.
     - Common fill source was sampled last week. A Request to Import form will be prepared and tentatively scheduled to be submitted to NYSDEC week of 6/6.
   - Upcoming

- Import of crushed stone materials for staging areas and support zones.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)

- Completed/Upcoming – No activities completed or planned for next week.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - PL E-20 schedule coordination - latest PL E-20 schedule shows gas work reaching Area 3 excavation by 7/13, Area 2 excavation by 7/25, and ISS area by 8/11.
8. **Submittals – BC/LRI**
   - Submittals update – BC provided submittal update. Asphalt pavement product submittal reviewed, bridge design package submittal reviewed, BC requests expediting final submission CMP and Traffic Plan.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports
     - CMP, HASP, Traffic Plan, Project Sign Sketch
     - Requests to Import Fill Packages
9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
10. **Community Interaction/Relations**
11. **NYSDEC/NYSDOH**
    - Questions, Comments, Concerns
12. **Review of Action Items**
    1. A. Sherman (BC) – contact Hartgen for archeological monitoring during excavation in Area 3 beginning early June.
    2. C. Atanasio (BC) and M. Murray (LRI) to follow up with County Waste (John Smith).
    3. A. Sherman (BC) and A. Gutta (BC) – send information to J. Spellman (NYSDEC) regarding monitoring well that are blocked or have excessive silt build up.
13. **Other**
    - Next meeting: Wednesday, 6/1/22 at 10am
    - Memorial Day holiday will be observed, site will be closed.
    - Upcoming Vacations:
      - G. Cummins will be out week of 6/6
      - M. Evens will be out week of 5/31 (W. Lindheimer will cover)
    - Upcoming Site visits: None.

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** June 1, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
John Spellman, NYSDEC
~~Scott Deyette, NYSDEC~~
~~Dave Herman, NYSDOH~~
~~Justin Deming, NYSDOH~~
Mark Sergott, NYSDOH
Adam Sherman, BC
Keith Bogatch, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
Brian Taylor, BC
Will Lindheimer, LRI
Jon Borrelli, LRI
Minda Murray, LRI
Mike Evens, LRI
Brian King, HSE

Safety Minute – HSE/LRI – Discussed cell phone use on site. It is well known that when using a cell phone, a person's attention is not on their environment. Anyone on the site using a cell phone should be outside of the work area. Discussed the incident on PL E-20 project (front-end loader struck a utility pole guywire) and the lessons learned, including spotter training, awareness of hazards, and positioning the spotter to see the work but also be out of harm's way.

1. **Health and Safety Update – HSE/LRI**
   - Weekly Update
     - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
     - Health and Safety – No incidents during the past week. The team is implementing lessons learned for new visitor orientation.
     - Hydraulic fluid spill on 5/31. Less than 1 gallon of fluid was spilled. The machine was shutoff and the area was cleaned up immediately, waste was containerized, and the incident reported to John Spellman (no further action required).
   - COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.

2. Community Air Monitoring Update - HSE/LRI
   - Past week monitoring – there was an elevated concentration of particulates near the E-Lot building while the paving contractor was preparing for work last week. The particulate concentration did not exceed notification levels and the on-site crew will continue to spray water in that area, as needed.
3. Site Security Update – LRI
   - LRI set up lights for nighttime security to see the site.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - No major updates to project schedule milestones.
   - Currently, there are no PL E-20 activities occurring on Area 3. Any future work will be coordinated with Phase 1A project team, as necessary.
   - The schedule milestones have not changed, but there have been discussions of other work that can be completed (restoration south of the Troy-Menands Bridge) should the Phase 1A project team need additional days.
5. Project Administration - BC
   - Project Contact List – A. Gutta corrected an email address, and a new list will be posted.
   - Permitting – No updates.
   - Previous Week's Action Items
     - A. Sherman (BC) – contact Hartgen for archeological monitoring during excavation in Area 3 beginning early June. Completed. C. Atanasio (BC) will coordinated directly with Matt Lesniak (Hartgen) when he is on-site for the PL E-20 work.
     - C. Atanasio (BC) and M. Murray (LRI) to follow up with County Waste (John Smith). C. Atanasio contacted John Smith, who confirmed that the County Waste drivers had been notified about the re-alignment of King Road.
     - LRI to send list of missing or blocked monitoring wells to BC. LRI is compiling this list with the drilling contractor and will send to BC when prepared.
     - A. Sherman (BC) and A. Gutta (BC) – send information to J. Spellman (NYSDEC) regarding monitoring wells that are blocked or have excessive silt build up. This will be done after LRI issues RFI.
   - Request for Information (RFI)/Field Order (FO) updates
     - Monitoring Well Decommissioning – several wells have been identified with blockages or obstructions. LRI to provide a RFI with a list of the wells and depth to blockage.
6. Work Activities (Completed and Upcoming) – LRI/BC

   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - Paving completed for the King Road temporary detour road and traffic was switched over on 5/31.

- Relocation of on-site debris has been partially completed and the remainder will be done later in the project.

- Upcoming
  - Additional relocation of surface debris will be completed in future.
  - Permanent power and internet will be established in the next week (approx.).
  - Temporary bridge installation is scheduled to begin with abutment work on 6/2, tentative bridge placement to be completed on 6/6 pending finalization of the PHA.
  - Fence contractor will be relocating the existing site fence along the temporary road beginning 6/2.
  - Continue utility locating in Area 3 and moving into Area 2 week of 6/6. Utility cut and cap in Area 3 beginning this week.
  - Monitoring well decommissioning tentatively scheduled to be completed week of 6/6.
  - Settlement prisms and crack gauges to be installed on E-Lot building week of 6/6.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - None.
   - Upcoming
     - Test pitting to collect waste characterization samples.
     - Utility cut/cap beginning today, several lines still need to be located (e.g., water line).
     - Excavation anticipated to begin 6/13.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - None.
   - Upcoming
     - Monitoring well decommissioning in King Road anticipated to be complete 6/3.
     - Preparing staging areas for grout plant.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - None.
   - Upcoming
     - Grout plant mobilization and set up beginning on 6/6.
     - ISS start-up phase tentative to begin in mid-June.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - None
   - Upcoming
     - Waste characterization tentative to begin next week in Area 3.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - Imported crushed stone materials for temporary road construction.
   - Upcoming
     - Import of crushed stone materials for staging areas and support zones.
     - Common fill source was sampled last week. A Request to Import form will be prepared and tentatively scheduled to be submitted to NYSDEC week of 6/6

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
   - Completed/Upcoming – No activities completed or planned for next week.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - PL E-20 schedule coordination - latest PL E-20 schedule shows gas work reaching Area 3 excavation by 7/13, Area 2 excavation by 7/25, and ISS area by 8/11.

8. **Submittals – BC/LRI**
   - Submittals update – BC provided submittal update. Upcoming submittals include the E-Lot Building assessment and crack/settlement locations, results from waste characterization and the waste profile, and correcting the project signage.
   - NYSDEC Submittals:
     - CMP (including Contingency Plan), Traffic Plan, HASP, and project sign submitted to NYSDEC last week via OneDrive. A. Gutta to upload submittals onto a flash-drive for NYSDEC.
     - Weekly H&S/CAMP Reports (ongoing weekly)
     - Requests to Import Fill Packages (ongoing as needed)

9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - City of Troy Water Department representative visited the site on 6/1. The representative reported that the water line extending through Area 3 is shut-off and offered that they will work with LRI to coordinate closing valves or other needs.

10. **Community Interaction/Relations**
    - A representative from Chevron visited the site on 5/31 to observe activities on the Chevron property (south of the Rt. 378 bridge). The representative had no comments or concerns with the work.

11. **NYSDEC/NYSDOH Comments**
    - None.

12. **Review of Action Items**
    1. LRI to prepare RFI with list of monitoring wells that are blocked/obstructed. BC will send the list to J. Spellman with proposed plan to address the listed wells.
    2. A. Gutta and LRI to correct project sign with correct name for Troy Mayor.
13. **Other**
    - Next meeting: Wednesday, 6/8/22 at 10am
    - Upcoming Vacations
        - G. Cummins out week of 6/6
        - B. Taylor out week of 6/20
        - N. Gilliam out 7/21 and 7/22
    - Upcoming Site visits

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** June 8, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

~~Gerald Cummins, National Grid~~
John Spellman, NYSDEC
Scott Deyette, NYSDEC
Dave Herman, NYSDEC
~~Justin Deming, NYSDOH~~
~~Mark Sergott, NYSDOH~~
Adam Sherman, BC
Keith Bogatch, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
~~Brian Taylor, BC~~
Will Lindheimer, LRI
Jon Borrelli, LRI
Minda Murray, LRI
~~Mike Evens, LRI~~
Brian King, HSE

Safety Minute – HSE/LRI – Discussed the safety procedures and hazards, and methods to mitigate hazards related to hot work (cutting, grinding, etc.) including atmosphere monitoring, monitoring potential for flammable gas in enclosed areas or flammable materials withing 35 feet of the work area, and have a fire watch to confirm that no smoldering or fires have started.

1. Health and Safety Update – HSE/LRI
   - Weekly Update
     - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
     - Health and Safety – No incidents or injuries during the past week.
   - COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.
2. Community Air Monitoring Update - HSE/LRI
   - Past week monitoring – There has been a significant amount of wind in the past few days and LRI has been diligent with spraying water to keep dust down.

3. Site Security Update – LRI
   - Full-time security has started, no incidents or issues.
   - A member of public did enter the site looking for bricks. LRI intercepted the person and escorted them off-site.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - No major updates to project schedule milestones.
   - Currently, there are no PL E-20 activities occurring on Area 3. Any future work will be coordinated with Phase 1A project team, as necessary.
   - The schedule milestones have not changed, but there have been discussions of other work that can be completed (restoration south of the Troy-Menands Bridge) should the Phase 1A project team need additional days.
   - Coal tar observed on CSX site that may expand the PL E-20 excavation footprint but is not anticipated to impact PL E-20 schedule.
5. Project Administration - BC
   - Project Contact List – A. Gutta will add the new Site Safety Office (SSO, HSE), and a new list will be posted.
   - Permitting – No updates.
   - Previous Week's Action Items
     - C. Atanasio (BC) – contact Hartgen for archeological monitoring during excavation in Area 3 beginning early June. This was completed and C. Atanasio discussed the scope of work and schedule with Hartgen.
     - LRI to prepare RFI with list of monitoring wells that are blocked/obstructed. BC will send the list to J. Spellman with proposed plan to address the listed wells.
       - RFI No. 2 was issued by LRI with the monitoring wells unable to be decommissioned as indicated on the drawings. The wells and proposed modifications to the decommissioning were submitted to and approved by the NYSDEC. A field order will be issued by BC.
     - A. Gutta and LRI to correct project sign with correct name for Troy Mayor.
       - The revision to sign is ordered and will be post next week.
   - Request for Information (RFI)/Field Order (FO) updates
     - Monitoring Well Decommissioning – BC to issue the FO (see action item above).
6. Work Activities (Completed and Upcoming) – LRI/BC
   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - Temporary bridge was installed.
        - Received power for temporary trailers, temporary generator has been disconnected.
        - LRI is working with Verizon to establish internet for the temporary trailers.

- Temporary fence has been relocated to be along the west side of the relocated King Road.

- Upcoming
  - Settlement and vibration monitoring locations to be installed on E-Lot building week of 6/13.
  - Utility cut/cap anticipated to begin in Area 3 week of 6/13.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - Test pitting to collect waste characterization samples. Results were received.
     - Utility locating was completed.
       - Two small diameter pipes were identified with non-friable asbestos containing material (ACM) pipe wrap. These pipes are within portions of the excavation limits.
   - Upcoming
     - Waste profile to be prepared for Area 3 waste to go to Greenridge Landfill.
     - ACM abatement scheduled for Friday 6/10.
     - Test pitting to be completed around subsurface concrete tank foundations to confirm depth. Demolition anticipated to begin 6/13.
     - Excavation anticipated to begin 6/13.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - Vacuum excavation completed to identify utilities. City of Troy Water Department on-site 6/8 to confirm water line is abandoned.
     - Monitoring well decommissioning in King Road anticipated to be complete 6/3.
   - Upcoming
     - Test pitting to collect waste characterization samples schedule for week of 6/13.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - E-Lot building foundation exposed with vacuum excavation, estimated to be 5 feet below existing grade and extends approximately 12 inches from edge of building. ISS layout plan is being revised to offset the ISS area 5 feet from the edge of the foundation.
   - Upcoming
     - Grout plant mobilization and set up is on-going. Preparing staging areas for grout plant silos.
     - ISS start-up phase tentative to begin on 6/16.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - Waste characterization completed in Area 3.
   - Upcoming
     - Loadout of waste from Area 3 tentative to begin week of 6/13.
     - Waste characterization in Area 2.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - Common fill source was sampled last week.
     - Continued import of crushed stone materials for temporary road construction, material staging areas, and temporary bridge abutments and approaches.
   - Upcoming
     - Import of crushed stone materials for staging areas and support zones.
     - A Request to Import form will be prepared and tentatively scheduled to be submitted to NYSDEC week of 6/13.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
   - Completed/Upcoming – No activities completed or planned for next week.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - PL E-20 schedule coordination - latest PL E-20 schedule shows gas work reaching Area 3 excavation by 7/13, Area 2 excavation by 7/25, and ISS area by 8/11.

8. **Submittals – BC/LRI**
   - Submittals update – BC provided submittal update. Asphalt compaction, results from waste characterization test pitting, signed HASP, E-Lot building assessment were received. Upcoming submittals include the E-Lot Building assessment and crack/settlement locations, results from waste characterization and the waste profile, and correcting the project signage.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly)
     - Requests to Import Fill Packages (ongoing as needed)

9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - City of Troy Water Department to confirm if pipes near former E-Lot building are water mains (active or inactive).
   - After installation of the temporary bridge across the Wynantskill Creek, including clearing of vegetation in the area, a portion of the creek wall (concrete wall that channelizes the flow) was observed to be damaged. The damage is located where two section of the concrete channel meet. One section appears to be moving (rotating and/or sliding) into the creek flow area.

10. Community Interaction/Relations
    - A. Atanasio spoke with County Waste after the traffic was re-routed and no issues or complaints were reported.
11. NYSDEC/NYSDOH Comments
    - None.
12. Review of Action Items
    1. BC and LRI to prepare ISS layout drawing with off-set from E-Lot building.
    2. A. Atanasio to contact Hartgen for beginning of Area 3 excavation.
13. Other
    - Next meeting: Wednesday, 6/15/22 at 10am
    - Upcoming Vacations
      - B. Taylor out week of 6/20
      - A. Gutta out week of 7/4
      - B. King out 6/21 through 6/23
      - N. Gilliam out 7/21 and 7/22
    - Upcoming Site visits

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** June 15, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
John Spellman, NYSDEC
Scott Deyette, NYSDEC
Dave Herman, NYSDEC
~~Justin Deming, NYSDOH~~
Mark Sergott, NYSDOH
Adam Sherman, BC
Keith Bogatch, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
Brian Taylor, BC
Will Lindheimer, LRI
Jon Borrelli, LRI
Minda Murray, LRI
~~Mike Evens, LRI~~
Brian King, HSE

Safety Minute – HSE/LRI –

- Discussed hot weather and humid conditions. We are in the start of summer weather, and we need to pay attention to staying hydrated.
- Discussed an incident at the PL E-20 project where a worker was performing cutting and a particle (debris) hit the worker's eye. The worker was wearing the prescribed personal protective equipment, but this is a reminder that PPE is not 100% effective. The resolution was to use safety glasses with foam to further prevent these types of incidents.
- Discuss hazards with traffic on and around the site. We share several public roads and have to be aware of construction and public vehicles that might not be familiar with the construction activities.

1. Health and Safety Update – HSE/LRI
   - Weekly Update
     - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
     - Health and Safety – No incidents or injuries during the past week.

- COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.

2. Community Air Monitoring Update - HSE/LRI
   - Past week monitoring – No elevated levels of VOCs or particulates during the past week. LRI has been spraying water to prevent visible dust.
3. Site Security Update – LRI
   - Full-time security has started, no incidents or issues.
   - Non-construction traffic has gotten used to the detour road and have been driving relatively fast. Construction personnel are briefed during site orientation and during morning tail gate meetings to be cautious merging with traffic or crossing the temporary road.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - Coal tar observed on CSX site that may expand the PL E-20 excavation footprint but is not anticipated to impact PL E-20 schedule. The PL E-20 project team is developing a plan to manage that waste.
   - Currently, there are no PL E-20 activities occurring on Area 3. Any future work will be coordinated with Phase 1A project team, as necessary.
   - The schedule milestones have changed (see below), but there have been discussions of other work that can be completed (restoration south of the Troy-Menands Bridge) should the Phase 1A project team need additional days.
   - PL E-20 access road south of the Menands bridge will be extended north through Area 3, but this is anticipated to be after remediation is completed.
5. Project Administration - BC
   - Project Contact List – Zachary Hilt (HSE) has started full-time at the site for SSO and CAMP implementation.
   - Permitting – No updates.
   - Previous Week's Action Items
     - BC and LRI to prepare ISS layout drawing with off-set from E-Lot building.
       - This has been revised and will be submitted to NYSDEC this week.
     - A. Atanasio to contact Hartgen for beginning of Area 3 excavation.
       - Hartgen has been on-site during Area 3 excavation activities. No notable findings to date.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - Monitoring Well Decommissioning – BC to issue the FO.
     - Field clarification regarding the kerosene aboveground storage tank near Former E-Lot building. The impacted soil near the ISS area will be excavated during the remediation project for off-site disposal.
6. Work Activities (Completed and Upcoming) – LRI/BC
   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)

- Completed
  - Settlement and vibration monitoring locations were installed on E-Lot building.
  - Permanent power to security trailer has been completed.
  - Goal posts at temporary bridge were installed on 6/10 to mark overhead wires.
- Upcoming
  - Continue maintenance of the temporary road.
  - Vibration, settlement, and crack movement monitoring will be performed during intrusive activities near former E-Lot building.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - Waste profile completed for Area 3 waste to go to Greenridge Landfill.
     - ACM abatement completed for two pipes in Area 3 excavation on Friday 6/10.
     - Demolition of former concrete tank foundation and soil excavation began 6/13. The tank foundation extends to approximately 7 feet below ground surface and the portion within limits of current remediation footprint will be demolished and removed.
   - Upcoming
     - Waste characterization of coal tar-impacted soils from Area 3 (thermal desorption at Clean Earth).
     - ACM waste will be transported for off-site disposal next week.
     - Investigation of unknown subsurface brick structure will be completed next week. Resolution to be determined once the structure is identified/confirmed as active utility or not.
     - Excavation in Area 3 anticipated to be completed week of 6/20. Backfilling anticipated to begin week of 6/27.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - City of Troy Water Department confirmed water line in Area 2 is abandoned. LRI completed cut and cap of three pipes west of King Road that extend through the ISS area. The northern portion of these pipes will be investigated during pre-ISS excavation.
     - Crack and settlement monitoring locations installed.
     - Monitoring well decommissioning in King Road anticipated to be complete 6/3.
   - Upcoming
     - Test pitting to collect samples for waste characterization will be completed to prepare the waste profile (anticipated off-site disposal at Greenridge Landfill).

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - None.
   - Upcoming
     - Grout plant mobilization and set up is on-going. First delivery of grout reagents (portland cement and blast furnace slag today).
     - ISS layout being revised by LRI and will be submitted to NYSDEC. ISS start-up phase tentative to begin on Monday 6/20.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - Waste characterization and profile completed for Area 3 soil waste to Greenridge Landfill.
   - Upcoming
     - Loadout of waste from Area 3 began on 6/13 and will continue next week.
     - Waste characterization and profile to be completed for coal tar-impacted soil from Area 3.
     - Waste characterization in Area 2.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - Common fill source was sampled last week.
     - Continued import of crushed stone materials for temporary road construction, material staging areas, and temporary bridge abutments and approaches.
   - Upcoming
     - Import of crushed stone materials for staging areas and support zones.
     - A Request to Import form will be prepared and tentatively scheduled to be submitted to NYSDEC week of 6/13.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
   - Completed/Upcoming – No activities completed or planned for next week.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - PL E-20 schedule coordination - latest PL E-20 schedule (updated 6/8) shows gas work reaching Area 3 excavation by 7/15, Area 2 excavation by 8/15, and ISS area by 9/1.

8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals, certifications for subcontractors were submitted last week. The ISS layout plan will be revised and results from waste characterization for Area 2 (and corresponding waste profile) are anticipated next week.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly)
     - Requests to Import Fill Packages (ongoing as needed)

- ISS Layout to be submitted this week.

9. Local Coordination (City of Troy, County of Rensselaer, Fire Dept)
   - City of Troy to visit the site regarding the unknown brick structure on Area 3.
10. Community Interaction/Relations
    - None.
11. NYSDEC/NYSDOH Comments
    - None.
12. Review of Action Items
    1. BC to prepare request to import form for common fill.
13. Other
    - Next meeting: Wednesday, 6/22/22 at 10 am
    - Upcoming Vacations
      - B. Taylor out week of 6/20
      - B. King out 6/21 through 6/23
      - K. Bogatch out 6/28 through 7/1
      - A. Gutta out week of 7/4
      - N. Gilliam out 7/21 and 7/22
      - K. Bogatch out 7/25 through 7/29
    - Upcoming Site visits

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** June 22, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
John Spellman, NYSDEC
Scott Deyette, NYSDEC
Dave Herman, NYSDEC
~~Justin Deming, NYSDOH~~
Mark Sergott, NYSDOH
~~Adam Sherman, BC~~
Keith Bogatch, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
~~Brian Taylor, BC~~
Will Lindheimer, LRI
Jon Borrelli, LRI
Minda Murray, LRI
Mike Evens, LRI
~~Brian King, HSE~~
Zachary Hill, HSE

Safety Minute – HSE/LRI –

- Discussed a near miss at a site where personnel used their stop authority halted an emergency repair situation that was unsafe. It is important to know that everyone has authority for large and small issues because there are lots of small decisions during a project that affect the H&S of all workers.

1. Health and Safety Update – HSE/LRI
   - Weekly Update
     - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
     - Health and Safety – No incidents or injuries during the past week.
   - COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.
2. Community Air Monitoring Update - HSE/LRI
   - Past week monitoring – No elevated levels of VOCs or particulates during the past week. LRI has been spraying water to prevent visible dust.

3. Site Security Update – LRI
   - Full-time security has started, no incidents or issues.
   - Non-construction traffic has gotten used to the detour road and have been driving relatively fast. Construction personnel are briefed during site orientation and during morning tail gate meetings to be cautious merging with traffic or crossing the temporary road.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - A portion of the new gas line is scheduled to be installed the week of 6/27. This is the "S" bend of portion of the pipe near the fence between Area 3 and Water Street.
   - PL E-20 traffic will use the Phase 1A temporary bridge between 6/27 and 6/30 during CSX closure of Water Street.
5. Project Administration - BC
   - Project Contact List – Jenna Albretch (HSE) will be added to the Contact List.
   - Permitting – No updates.
   - Previous Week's Action Items
     - BC to prepare request to import form for common fill.
       - This was submitted and import material was approved by NYSDEC on 6/22.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - Field clarification regarding ISS mix design – During mixing of the start-up cells that included bentonite, the mix was observed to be very thick and unworkable. If a design mix is selected with bentonite the team will discuss increasing the water addition rate to improve the workability.
6. Work Activities (Completed and Upcoming) – LRI/BC
   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - ESC measures continue to be installed as work areas change (Area 2 excavation and ISS areas).
        - Settlement, crack, and vibration monitoring has begun, and weekly submittals are ongoing.
      - Upcoming
        - CAMP implementation will continue.
        - Internet for construction trailers will be set up next week.
   b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
      - Completed
        - Video inspection of brick structure extending east-west across Area 3 was completed on 6/17. The structure appears to extend further west and east of the limits of the remote camera (debris blocking the structure). The structure will be capped at the limits of the excavation area.

- Excavation is ongoing and anticipated to be completed next week.

- Upcoming
  - Demolition and removal of the concrete Tarvia tank will be completed next week. Concrete is being resized and processed for off-site disposal/recycling.
  - Placement of orange demarcation geotextile and backfilling scheduled to begin 6/23, working south to north.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - None.
   - Upcoming
     - Utility cut and cap (abandoned water lines) anticipated for next week.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - ISS start-up started 6/21 (2 cells) and is estimated to be completed this week.
     - Telecommunications line and electric line from E-Lot building have been identified and will be cut/capped next week.
     - Septic tank was pumped out, electric was locked out, and is ready for removal/demolition.
   - Upcoming
     - Utility cut/cap will continue along perimeter of the ISS areas, including 1 pipe with ACM wrap.
     - A approx. 4" PVC pipe extends from septic manhole (presumably to leach field)
     - The project team may install 1 additional ISS start-up cell with a higher water addition rate (refer to Field Clarification above).

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - Waste characterization sampling completed for coal tar-impacted soil from Area 3.
     - Waste characterization and profile completed for Area 2 soil waste to Greenridge Landfill.
   - Upcoming
     - Loadout of waste from Area 3 began on 6/13 and will continue next week.
     - ACM (pipes) management in Area 2 ISS Area, anticipated to be 1 pipe.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - Continued import of crushed stone materials for temporary road construction, material staging areas, and temporary bridge abutments and approaches.
   - Upcoming
     - Import of crushed stone materials for staging areas and support zones.

- Import of common fill to backfill Area 3 excavations.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)

- Completed/Upcoming – No activities completed or planned for next week.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - PL E-20 schedule coordination - latest PL E-20 schedule (updated 6/8) shows gas work reaching Area 3 excavation by 7/15, Area 2 excavation by 8/15, and ISS area by 9/1.
     - Tentative to complete a short portion of new gas line installation on Area 3 (tentative for 6/27).
8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals. Expecting ISS start-up cell results week of 6/27.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly)
     - Requests to Import Fill Packages (ongoing as needed)
     - ISS Layout to be submitted this week.
9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - City of Troy visited the site regarding the unknown brick structure on Area 3, no indications of what the structure is or was connected to.
10. **Community Interaction/Relations**
    - Several members of the public have gone by the construction site interested in the work. Project personnel explained the project overview and the interested people left with no issues.
11. **NYSDEC/NYSDOH Comments**
    - John Spellman – Please send the video inspection report of the Area 3 brick structure since that extends into the next remediation area.
      - How many start-up cells are there? LRI responds that there are three start-up cells as of today, but today's cell has 2 reagent addition rates. a fourth cell may be installed 6/23 based on observations today of mix workability.
    - NYSDOH – no comments.
12. **Review of Action Items**
    1. None.

13. **Other**

- Next meeting: Wednesday, 6/22/22 at 10 am
- Upcoming Vacations
  - B. King out 6/21 through 6/23
  - K. Bogatch out 6/28 through 7/1
  - A. Gutta out week of 7/4
  - N. Gilliam out 7/21 and 7/22
  - K. Bogatch out 7/25 through 7/29
  - A. Sherman out 6/30 and 7/1
- Upcoming Site visits

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
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T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** June 29, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
Brian Stearns, National Grid
~~John Spellman, NYSDEC~~
Scott Deyette, NYSDEC
~~Dave Herman, NYSDEC~~
~~Justin Deming, NYSDOH~~
~~Mark Sergott, NYSDOH~~
Adam Sherman, BC
~~Keith Bogatch, BC~~
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
~~Brian Taylor, BC~~
Will Lindheimer, LRI
Jon Borrelli, LRI
Minda Murray, LRI
Mike Evens, LRI
~~Brian King, HSE~~
Zachary Hill, HSE
Jenna Albrecht, HSE

Safety Minute – HSE/LRI –

- Discussed seeing changed behaviors as a result of near miss incidences and positive reinforcement. Safety alerts and safety observations help to build a strong safety culture.

1. Health and Safety Update – HSE/LRI
   - Weekly Update
     - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
     - Health and Safety – No incidents or injuries during the past week.
   - COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.
2. Community Air Monitoring Update - HSE/LRI
   - Past week monitoring – No elevated levels of VOCs or particulates during the past week. LRI has been spraying water to prevent visible dust.

3. Site Security Update – LRI
   - Full-time security has started, no incidents or issues.
   - Non-construction traffic has gotten used to the detour road and have been driving relatively fast. Construction personnel are briefed during site orientation and during morning tail gate meetings to be cautious merging with traffic or crossing the temporary road.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - A portion of the new gas line is scheduled to be installed the week of 6/27. This is the "S" bend of portion of the pipe near the fence between Area 3 and Water Street.
5. Project Administration - BC
   - Project Contact List – Jenna Albrecht (HSE) and Zach Hill (HSE) were added to the Contact List.
   - Permitting – No updates.
   - Previous Week's Action Items
     - Project Contact List.
       - Jenna Albrecht and Zach Hill (HSE) were added to the Contact List.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - No upcoming RFIs to discuss.
6. Work Activities (Completed and Upcoming) – LRI/BC
   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - ESC measures continue to be installed as work areas change (Area 2 excavation and ISS areas).
        - Settlement, crack, and vibration monitoring has begun, and weekly submittals are ongoing.
        - Internet for construction trailers was set up.
      - Upcoming
        - CAMP implementation will continue.
   b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
      - Completed
        - Load out of soil was completed on 6/28.
        - Demolition and removal of concrete Tarvia tank has been completed. Concrete was resized. It is anticipated to be processed for off-Site disposal/recycling later in the project.
        - Start-up cells C-37A, C-38, and C-39 were completed and we are waiting on results. The anticipated mix going forward will be 10% Portland cement:slag ratio (60/40), 1.25:1 water addition rate, and 0.25% Bentonite.

- Upcoming
  - Placement of orange demarcation geotextile and backfilling in Area 3 is anticipated to be complete the week of 7/5.
  - Classic will perform asbestos abatement on the ACM piping in Area 2.
  - Backfilling Area 3 and compacting in lifts. A subcontractor is coming in to perform density testing as needed.
  - Concrete will be sent off Site for disposal/recycling the week of 7/5.
  - Rock box with tar lens will get answers to see how it can be shipped off Site
  - Area 2: ISS, cut/cap of utilities, test pitting, and waste characterization. Will get out the Overburden from ISS and excavated soils will be loaded out for off-Site disposal.
  - No work on July 4
  - Next week: production of ISS is anticipated to start Tuesday of next week (7/5), truck traffic for excavation for Area 2.
  - First coring event is scheduled for July 6 and the second coring event is scheduled for the first week of August.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - None.
   - Upcoming
     - Utility cut and cap (abandoned water lines) anticipated for next week.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - ISS start-up started 6/21 (2 cells) and is estimated to be completed this week.
     - Telecommunications line and electric line from E-Lot building have been identified and will be cut/capped next week.
     - Septic tank was pumped out, electric was locked out, and is ready for removal/demolition.
   - Upcoming
     - Utility cut/cap will continue along perimeter of the ISS areas, including 1 pipe with ACM wrap.
     - A approx. 4" PVC pipe extends from septic manhole (presumably to leach field)
     - The project team may install 1 additional ISS start-up cell with a higher water addition rate (refer to Field Clarification above).

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - Waste characterization sampling completed for coal tar-impacted soil from Area 3.
     - Waste characterization and profile completed for Area 2 soil waste to Greenridge Landfill.
   - Upcoming
     - Loadout of waste from Area 3 began on 6/13 and will continue next week.
     - ACM (pipes) management in Area 2 ISS Area, anticipated to be 1 pipe.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - Continued import of crushed stone materials for temporary road construction, material staging areas, and temporary bridge abutments and approaches.
   - Upcoming
     - Import of crushed stone materials for staging areas and support zones.
     - Import of common fill to backfill Area 3 excavations.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
   - Completed/Upcoming – No activities completed or planned for next week.

7. Project Schedule - LRI
   - Baseline Schedule Updates/Schedule Impacts
     - PL E-20 schedule coordination - latest PL E-20 schedule (updated 6/8) shows gas work reaching Area 3 excavation by 7/15, Area 2 excavation by 8/15, and ISS area by 9/1.
     - Tentative to complete a short portion of new gas line installation on Area 3 (tentative for 6/27).

8. Submittals – BC/LRI
   - Submittals update – Weekly monitoring submittals. Expecting ISS start-up cell results this week.

- NYSDEC Submittals:
  - Weekly H&S/CAMP Reports (ongoing weekly)
  - Requests to Import Fill Packages (ongoing as needed)
  - ISS Layout to be submitted this week.

9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - No updates.
10. **Community Interaction/Relations**
    - No updates.
11. **NYSDEC/NYSDOH Comments**
    - John Spellman – Please send the video inspection report of the Area 3 brick structure since that extends into the next remediation area.
      - How many start-up cells are there? LRI responds that there are three start-up cells as of today, but today's cell has 2 reagent addition rates. a fourth cell may be installed 6/23 based on observations today of mix workability.
    - Scott Deyette – The plan for the first foot of backfill in Area 3 for pipeline
      - Mullen will restore the top foot using Land's products.
    - NYSDOH – no comments.
12. **Review of Action Items**
    1. Results of ISS start-up cells
    2. Selecting a mix design to send to DEC for review
13. **Other**
    - Next meeting: Wednesday, 6/6/22 at 10 am
    - Upcoming Vacations
      - B. King out 6/21 through 6/23
      - K. Bogatch out 6/28 through 7/1
      - A. Gutta out week of 7/4
      - N. Gilliam out 7/21 and 7/22
      - K. Bogatch out 7/25 through 7/29
      - A. Sherman out 7/8
      - Mike Evens out 7/5
    - Upcoming Site visits

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** July 6, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
~~Brian Stearns, National Grid~~
John Spellman, NYSDEC
Scott Deyette, NYSDEC
Dave Herman, NYSDEC
~~Justin Deming, NYSDOH~~
Mark Sergott, NYSDOH
Adam Sherman, BC
Keith Bogatch, BC
Charles Atanasio, BC
~~Adam Gutta, BC~~
Nia Gilliam, BC
Brian Taylor, BC
Will Lindheimer, LRI
Jon Borrelli, LRI
Minda Murray, LRI
Mike Evens, LRI
~~Brian King, HSE~~
~~Zachary Hill, HSE~~
Jenna Albrecht, HSE
Ben Gamache, LRI

Safety Minute – HSE/LRI

- Discussed occupational noise induced hearing loss - 85dB noise is hazardous. Preventative measures include noise cancelling headphones and ear plugs. Hearing loss is irreversible but amplifying technology is available. Ear plugs are available on the job site and they are rated at 33dB hearing reduction.

1. Health and Safety Update – HSE/LRI

- Weekly Update
  - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
  - Health and Safety – No incidents or injuries during the past week.
- COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.

2. Community Air Monitoring Update - HSE/LRI
   - On June 29 there was an exceedance recorded on air monitoring station DW-1 due to crushing/processing concrete. HSE explained there was a failure in alert system software. Troubleshooting was performed the next day and each day to confirm it is working properly. Discussed procedures such as adequately using the water hose.
3. Site Security Update – LRI
   - Full-time security has started, no incidents or issues.
   - No indications of illicit activity or illegal dumping.
   - Stray dog sighting early morning on 7/5
4. PL E-20 Project Coordination – NG/BC
   - PL E-20 is closing in on Area 3, still waiting on direction from CSX on working in the trench area containing tar-like material.
5. Project Administration - BC
   - Project Contact List – No updates.
   - Permitting – No updates.
   - Previous Week's Action Items
     - Results of ISS start-up cells.
     - Selecting a mix design to send to DEC for review.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - No upcoming RFIs to discuss.
     - Waste characterization sampling for tar-like material from Area 3 is upcoming. Land is waiting for the facility (Clean Earth) to indicate if they are comfortable with the blending of material in Area 3. Next Land will perform waste characterization sampling of tar-like material in Area 2.
6. Work Activities (Completed and Upcoming) – LRI/BC
   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well de-commissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - ESC measures continue to be installed as work areas change (Area 2 excavation and ISS areas).
        - Settlement, crack, and vibration monitoring has begun, and weekly submittals are ongoing.
        - ISS is ongoing. On 7/5 coring was done on ISS cell C-39 by Parratt Wolff.
        - Two ACM pipes were removed starting on 7/1 and finished on 7/5.
      - Upcoming
        - CAMP implementation will continue.
        - A ~36-inch pipe was located in Area 2 Excavation Area A. It is not believed to be linked with the sewer. Land contacted Green Bush Water Authority, Rensselaer County and City of Troy and none of these entities claimed the pipe. The pipe runs along the slope

and Land states that it should be able to stay in place and continue with excavation. The pipe has been surveyed.

- East of C-39 a vault was uncovered and it is 8 to 10 inches below grade just east of the ISS limits. Inside the vault were electrical cables. NG is on Site looking into the vault. There is nothing taking power from it, but power may be drawn to it.
- Waste characterization sampling for county landfill and the resized concrete.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - Load out of soil was completed on 6/28.
     - Demolition and removal of concrete Tarvia tank has been completed. Concrete was resized. It is anticipated to be processed for off-Site disposal/recycling this week.
     - Placement of orange demarcation geotextile and backfilling in Area 3 was completed the week of 7/5.
   - Upcoming
     - Concrete will be sent off Site for disposal/recycling the week of 7/5.
     - Rock box with tar lens will get answers to see how it can be shipped off Site

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - (ongoing) Excavated soils will be loaded out for off-Site disposal.
   - Upcoming
     - Utility cut and cap (abandoned water lines) anticipated for next week
     - There is one outstanding ACM pipe in Area 2 (east of King Road) that hasn't been removed yet.
     - Temporary construction road for truck traffic during excavation in Area 2.
     - Second coring event scheduled for the first week of August.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - ISS start-up cells were completed.
     - (ongoing) production of ISS started on 7/5.
     - Coring event was completed on 7/5.
     - (ongoing) Overburden from ISS and excavated soils will be loaded out for off-Site disposal.

- Septic tank was removed/demolished.
- Classic Environmental Inc performed asbestos abatement on the ACM piping (2 pipes) in Area 2.

- Upcoming
  - Utility cut/cap will continue along perimeter of the ISS areas.
  - A approx. 4" PVC pipe extends from septic manhole (presumably to leach field).

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - Waste characterization sampling completed for coal tar-impacted soil from Area 3.
     - Waste characterization and profile completed for Area 2 soil waste to Greenridge Landfill.
   - Upcoming
     - None.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - (ongoing) Continued import of crushed stone materials for temporary road construction and material staging areas.
   - Upcoming
     - None.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
   - Completed/Upcoming – Crushed stone cover in Area was completed the week of 7/5.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - PL E-20 schedule coordination - latest PL E-20 schedule (updated 6/8) shows gas work reaching Area 3 excavation by 7/15, Area 2 excavation by 8/15, and ISS area by 9/1.
     - Area 3 should be turned over this week for the PL E-20 project. Excavation should be completed in late July/early August for Excavation Area A.

8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals.
     - Submittals 63, 72, 90, and 91 were received on 7/5.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly)
     - Requests to Import Fill Packages (ongoing as needed)

9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - City of Troy (Andrew Kreshik) was here on 7/1 to see the Wynantskill Creek wall. No major comments.
   - The train had been shut down all last week. This week normal traffic pattern is restored.

10. **Community Interaction/Relations**

- No updates.

11. NYSDEC/NYSDOH Comments
    - John Spellman – Expressed to Garry Cummins that he would like to know what is in the ~36-inch pipe for future purposes. Garry Cummins said he will consult with BC on this.
    - Scott Deyette – Please make sure to survey the ~36-inch pipe that is in the slope of Excavation Area A.
    - NYSDOH – No comments.
12. Review of Action Items
    - Waste characterization results and approval from waste facility for tar-like material.
13. Other
    - Next meeting: Wednesday, 7/13/22 at 10 am
    - Upcoming Vacations
        - A. Gutta out week of 7/4
        - N. Gilliam out 7/21 and 7/22
        - K. Bogatch out 7/25 through 7/29
        - A. Sherman out 7/8
    - Upcoming Site visits

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** July 13, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

~~Gerald Cummins, National Grid~~
~~Brian Stearns, National Grid~~
John Spellman, NYSDEC
~~Scott Deyette, NYSDEC~~
~~Dave Herman, NYSDEC~~
~~Justin Deming, NYSDOH~~
~~Mark Sergott, NYSDOH~~
Adam Sherman, BC
Keith Bogatch, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
Brian Taylor, BC
Will Lindheimer, LRI
Jon Borrelli, LRI
Minda Murray, LRI
Mike Evens, LRI
Brian King, HSE
Zachary Hill, HSE
~~Jenna Albrecht, HSE~~
Ben Gamache, LRI

Safety Minute – HSE/LRI

- Discussed the definition of safety and what safety looks like in the workplace.

1. Health and Safety Update – HSE/LRI

- Weekly Update
  - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
  - Health and Safety – No incidents or injuries during the past week.
- COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.

2. Community Air Monitoring Update - HSE/LRI

- No exceedances
- Work was paused for 30 minutes yesterday (7/12) due to lightning.

3. Site Security Update – LRI
   - Full-time security is on-going, no incidents or issues.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - Pipeline installation started late Friday (7/8) and is ongoing in Area 3. The pipe is tentatively planned to be installed by early tomorrow (7/14), then the trench will be backfilled and pipeline installation will continue northward from there.
   - The PL E-20 team is waiting on resolution for waste management plans for the section of pipeline on CSX property where tar-like material was located.
   - A permanent hard crossing (air bridge) has been installed over the gas line in Area 3 as per the PL E-20 drawings. If needed, a temporary hard crossing (air bridge) will be installed for access to Area 3.
   - *Refer to #7 for additional comments on schedule coordination.*
5. Project Administration - BC
   - Project Contact List – No updates.
   - Permitting – No updates.
   - Previous Week's Action Items
     - 36-inch pipe in the slope of Excavation Area A:
       - The pipe was surveyed by Land and control points were recorded.
     - Results of ISS start-up cells:
       - 9% PC/slag + 0.9% Bentonite (1:1 water:cement ratio): 7-day UCS = 170 psi, 7-day perm = 1.8e-7 cm/s
       - 8% PC/slag + 0.8% Bentonite (1:1 water:cement ratio): 7-day UCS = 160 psi, 7-day perm = 6.0e-8 cm/s
       - 10% PC/slag (1.25:1 water:cement ratio): 7-day UCS = 170 psi, 7-day perm = 9.8e-7 cm/s
       - 12% PC/slag (1.25:1 water:cement ratio): 7-day UCS = 200 psi, 7-day perm = 5.9e-7 cm/s
     - Selecting a mix design to send to DEC for review:
       - DEC approved the planned mix as follows: 10% PC/slag + 0.25% Bentonite (1.25:1 water:cement ratio). The mix will continue to be evaluated as ISS operations progress and more testing data becomes available.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - No upcoming RFIs to discuss.
     - Upcoming FO for the adjustment of ISS limits in ISS Areas C-3 and C-5.
     - Land will perform waste characterization sampling of tar-like material in Area 2 next week.
6. Work Activities (Completed and Upcoming) – LRI/BC
   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)

- Completed
  - ESC measures continue to be installed as work areas change (Area 2 excavation and ISS areas).
  - Settlement, crack, and vibration monitoring has begun, and weekly submittals and SWPPP inspections are ongoing.
- Upcoming
  - CAMP implementation will continue.
  - Work activities the week of 7/18 will include ISS mixing, excavation in Excavation Area A, and demolition of subsurface concrete.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - Placement of orange demarcation geotextile and backfilling in Area 3 was completed the week of 7/4.
     - Waste profile of soil containing tar-like material in Area 3 was approved for shipment to Clean Earth for off-site thermal treatment.
   - Upcoming
     - Concrete will be sent off-Site for disposal/recycling.
     - Off-site disposal of soil containing tar-like material to Clean Earth is anticipated to occur after PL E-20 construction activities are completed in Area 3.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - (ongoing) Excavated soils will be loaded out for off-Site disposal.
     - Temporary construction road for truck traffic during excavation of Excavation Area A.
   - Upcoming
     - Waste characterization samples will be collected today (7/13). Soil with tar-like impacts will be segregated from other soil and transferred to a separate Temporary Waste Containment Area. Soil in this area will be blended before transport to Clean Earth similar to tar-like impacts from Area 3.
     - There is one outstanding ACM pipe in Area 2 (east of King Road) that has not been removed yet. Removal is planned for next week.
     - Concrete will be sent off Site for disposal/recycling. Land estimates concrete removal is approximately 1/3 complete.
     - Backfilling is scheduled to begin the first week of August.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - (ongoing) Full-scale ISS production started on 7/5. To date a total of 2,709 CY (17%) have been completed. 9 of 30 ISS Areas have been mixed.
     - Coring event was completed on 7/5. 1 core was drilled from ISS Area C-39.

- (ongoing) Overburden from ISS and excavated soils will be loaded out for off-Site disposal.
- Septic tank was removed/demolished.
- Classic Environmental Inc performed asbestos abatement on the ACM piping (2 pipes) in Area 2. These two pipes were removed between 7/1 and 7/5. The pipes have been cut into short segments and staged in roll offs located on the south side of the E-Lot building and are ready for transport off-site.
- The 5-day and 7-day results from hydraulic conductivity testing look good (on the order of 1e-7 cm/s). The ISS mix is very thick, and Land may slightly vary the addition rate of bentonite and water. Changes may include reducing bentonite addition rate from 0.25% to 0.1-0.15% due to the thick mix and silt content of the soil, and may increase the water addition rate.
- On Friday (7/8), during mixing in ISS Area C-40, Land encountered a 24-inch steel, cast iron pipe about 15 feet below grade surface. The pipe was struck while mixing ISS Area C-40 with the excavator machine and approximately 25 batches (5,080 gallons) of grout mix was inadvertently diverted from the cell into the pipe. There was a significant amount of tar in the pipe indicating that it may have been a former MGP pipe. The Wynantskill Creek and the Hudson River were observed to confirm there was no discharge to the water bodies. ISS Area C-40 was overcut on the north and south end and the pipe was cut and plugged with soil to create a barrier. Prior to performing ISS mixing in ISS Area C-23, the pipe will be plugged with soil on the northern end to prevent additional grout mix loss.
- During pre-clearing and cut and cap, the former MGP structure referred to as "Former Sump 4" was encountered and is located approximately 9 feet further north than depicted on the Drawings. The tank is located within ISS Areas C-3 and C-5. These ISS Areas will be revised to not overlap with the tank (remediation of this structure and ISS within and around the structure footprint will be completed during a future phase of work).

- Upcoming
  - Continued ISS operations.
  - Second ISS coring event is scheduled for the first week of August.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - Waste characterization sampling and profile completed for coal tar-impacted soil from Area 3.
     - Waste characterization and profile completed for Area 2 soil waste to Greenridge Landfill.
   - Upcoming
     - Waste characterization sampling results for Area 2 Excavation Area A.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed

- (ongoing) Continued import of crushed stone materials for temporary road construction and material staging areas.

- Upcoming
  - None.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
- Completed/Upcoming – Crushed stone cover in Area was completed the week of 7/4.

7. **Project Schedule - LRI**
- Baseline Schedule Updates/Schedule Impacts
  - PL E-20 schedule coordination - latest PL E-20 schedule (updated 6/8) shows gas work reaching Area 2 excavation by 8/15 and ISS area by 9/1.
  - Area 3 C&D debris load out is upcoming. Pending proper approvals for tar-like material, blending and load out of tar-like material is upcoming.
  - Excavation in Area 2 is scheduled to be completed in the first week of August. Backfill will follow in the second week of August.
  - ISS is scheduled to be completed the first or second week of September, during which restoration and clean-up will also be occurring.

8. **Submittals – BC/LRI**
- Submittals update – Weekly monitoring submittals.
  - Submittals 19 (vibration, crack, and settlement monitoring results), 70 (ISS daily reports), 87 (confirmation from Ontario County landfill accepting C&D debris), 90 (completed weight tickets), and 91 (counter-signed manifests) were received on 7/12.
- NYSDEC Submittals:
  - Weekly H&S/CAMP Reports (ongoing weekly)
  - Requests to Import Fill Packages (ongoing as needed)

9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
- No updates.

10. **Community Interaction/Relations**
- No updates.

11. **NYSDEC/NYSDOH Comments**
- John Spellman – Requested to be informed of the plans for Former Sump 4 and the ISS limits in that area.
  - Adam Sherman discussed that the ISS areas will be revised for this phase and remediation of the tank and ISS in the vicinity of the tank will be completed as part of a later phase. This will all be communicated to the NYSDEC when the plan is finalized.
- NYSDOH – No comments.

12. **Review of Action Items**
- Waste characterization results and approval from waste facility for tar-like material.
- FO for the adjustment of ISS limits in ISS Areas C-3 and C-5.

13. Other

- Next meeting: Wednesday, 7/20/22 at 10 am
- Upcoming Vacations
  - N. Gilliam out 7/21 and 7/22
  - K. Bogatch out 7/25 through 7/29
  - A. Sherman out 7/27 through 7/29, 8/5 through 8/12
- Upcoming Site visits

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
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T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** July 20, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
~~Brian Stearns, National Grid~~
~~John Spellman, NYSDEC~~
~~Scott Deyette, NYSDEC~~
Dave Herman, NYSDEC
~~Justin Deming, NYSDOH~~
~~Mark Sergott, NYSDOH~~
Adam Sherman, BC
Keith Bogatch, BC
Charles Atanasio, BC
Adam Gutta, BC
~~Nia Gilliam, BC~~
Brian Taylor, BC
~~Will Lindheimer, LRI~~
Jon Borrelli, LRI
~~Minda Murray, LRI~~
Mike Evens, LRI
~~Brian King, HSE~~
~~Zachary Hill, HSE~~
Jenna Albrecht, HSE
Ben Gamache, LRI

Safety Minute – HSE/LRI

- Discussed heat stress and heat exhaustion, symptoms and visual cues, safe work practices to mitigate risks (e.g., drinking water and electrolytes, taking breaks in shade/cool areas), and emergency responses.

1. **Health and Safety Update – HSE/LRI**
   - Weekly Update
     - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
     - Health and Safety – No incidents or injuries during the past week.
   - COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.
2. **Community Air Monitoring Update - HSE/LRI**
   - No exceedances

3. Site Security Update – LRI
   - Full-time security is on-going, no incidents or issues.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - Pipeline installation started on Area 3 on 7/8. The pipe on Area 3 was installed and the trench was backfilled. Excess common fill from the trench is staged in Area 3 and may be used as backfill in Area 2 (to be discussed with NYSDEC at a later date).
   - The PL E-20 team is waiting on resolution for waste management plans for the section of pipeline on CSX property where tar-like material was encountered.
   - *Refer to #7 for additional comments on schedule coordination.*
5. Project Administration - BC
   - Project Contact List – No updates.
   - Permitting – No updates.
   - Previous Week's Action Items
     - Waste characterization results and approval from waste facility for tar-like material.
       - Clean Earth (ESMI of New York) approved the tar-like material if blended with other soil to lower BTU content.
     - FO for the adjustment of ISS limits in ISS Areas C-3 and C-5
       - Field Order #2 was issued on 7/19 revising the limits of these areas.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - Refer to Field Order #2 above. No other upcoming RFIs/FOs to discuss.
6. Work Activities (Completed and Upcoming) – LRI/BC

   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well de-commissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - ESC measures continue to be installed as work areas change (Area 2 excavation and ISS areas).
        - Settlement, crack, and vibration monitoring has begun, and weekly submittals and SWPPP inspections are ongoing.
      - Upcoming
        - CAMP implementation will continue.
        - Work activities this week will include ISS mixing, excavation in Excavation Area A, and demolition of subsurface concrete.

   b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
      - Completed – Excavation and backfilling are 100% complete.
      - Upcoming
        - Concrete will be sent off-Site for disposal/recycling.

- Off-site disposal of soil containing tar-like material to Clean Earth is anticipated to occur after PL E-20 construction activities are completed in Area 3.
- A stockpile of imported clean fill is leftover after the gas line was installed. This is anticipated to be transferred to Area 2 for use as backfill (to be discussed with NYSDEC at a later date).

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - (ongoing) Excavation of soil, demolition and removal of subsurface structures, and transportation of waste for off-Site disposal. Excavation is approximately 60% complete.
     - Temporary construction road for truck traffic during excavation of Excavation Area A.
     - Soil with tar-like impacts is being segregated from other soil and transferred to a separate Temporary Waste Containment Area. Soil in this area will be blended to lower BTU content before transport to Clean Earth (similar to tar-like impacts from Area 3).
   - Upcoming
     - There is one outstanding ACM pipe in Area 2 (east of King Road) that has not been removed. Removal is planned for next week.
     - Concrete will be sent off Site for disposal/recycling. Land estimates concrete removal is approximately 33% complete.
     - Backfilling is scheduled to begin the first week of August.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - (ongoing) Full-scale ISS production started on 7/5. To date a total of 3,698 CY (27% complete by volume) have been completed. 15 of 53 ISS Areas have been mixed.
     - (ongoing) Overburden from ISS and excavated soils will be loaded out for off-Site disposal.
     - Full-scale ISS is continuing with a cement/slag addition rate of 9% and bentonite addition rate of 0.1%.
     - On Tuesday (7/19), during pre-ISS excavation, the telecommunication line in the western portion of the ISS Area was identified and removed at the limits of ISS. Land will contact the provider for direction on capping this. BC will confirm with National Grid Gas that this activity will not impact the gas regulator station.
     - During pre-clearing and cut and cap, an unknown structure was encountered in the western portion of the ISS Area. The structure is located approximately 5 feet below ground surface with bottom at approximately 18 feet below ground surface. Additional investigation will be completed to determine the extent of the structure.

- Upcoming
  - Continue full-scale ISS mixing and begin post-ISS excavation of completed cells in early August.
  - Second ISS coring event is scheduled for the first week of August.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
- Completed
  - (ongoing) Loadout of waste from Area 2 excavation and ISS activities.
- Upcoming
  - Waste characterization sampling results for Area 2 Excavation Area A.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
- Completed
  - (ongoing) Continued import of crushed stone materials for temporary road construction (access around Excavation Area A and around ISS Area) and material staging areas.
- Upcoming
  - None.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
- Area 3 Completed/Upcoming
  - Crushed stone cover in the southern portion of Area 3 was completed the week of 7/4.
  - The remaining crushed stone cover will be completed after the PL E-20 project does not need access to this area.
- Area 2 Completed/Upcoming
  - Construction of site cover in Excavation Area A is tentatively planned for late August after the PL E-20 gas line is installed.

7. Project Schedule - LRI
- Baseline Schedule Updates/Schedule Impacts
  - PL E-20 schedule coordination - latest PL E-20 schedule (updated 6/8) shows gas work reaching Area 2 excavation by 8/15 and ISS area by 9/1.
  - Area 3 C&D debris load out is upcoming. Pending proper approvals blending and load out of soil containing tar-like material is upcoming.
  - Excavation in Area 2 is scheduled to be completed in the first week of August. Backfilling will follow in the second week of August.
  - ISS is scheduled to be completed the first or second week of September, during which restoration and clean-up will also be occurring.

8. Submittals – BC/LRI
- Submittals update – Weekly monitoring submittals.
  - Submittals 19 (vibration, crack, and settlement monitoring results), 70 (ISS daily reports), 73 (ISS performance sample results), and 87 (approval from Clean Earth for blending tar-rich material from Area 3) were received on 7/20.
- NYSDEC Submittals:

- Submitted email on 7/18 to NYSDEC to document the adjustment to the Phase 1A ISS limits to avoid the former Sump 4 structure. Former Sump 4 and ISS in the vicinity of Sump 4 will addressed in a later phase of remediation.
- Submitted email on 7/18 to NYSDEC to provide plans for addressing the 30-36" pipe on the western portion of Excavation Area A. Phase 1B will include scope to open up and inspect the pipe at a location south of Excavation Area A.
- Weekly H&S/CAMP Reports (ongoing weekly)
- Requests to Import Fill Packages (ongoing as needed)

9. Local Coordination (City of Troy, County of Rensselaer, Fire Dept)
   - The City of Troy performed tree clearing last week along Main Street north of the Wynantskill to improve sightlines for trucks as they approach the remediation project.
10. Community Interaction/Relations
    - No updates.
11. NYSDEC/NYSDOH Comments
    - Dave Herman – No comments or questions.
    - NYSDOH – No comments or questions.
12. Review of Action Items
    - Adam Sherman to contact Dan Thurn (National Grid) to confirm that terminating the tele-communication line will not impact the gas regulator station.
    - BC will coordinate with NYSDEC regarding the use of stockpiled clean fill material on Area 3 as backfill on Area 2.
13. Other
    - Next meeting: Wednesday, 7/27/22 at 10 am
    - Upcoming Vacations
      - N. Gilliam out 7/21 and 7/22 & 8/15 through 8/19
      - K. Bogatch out 7/25 through 7/29
      - A. Sherman out 7/27 through 7/29, 8/5 through 8/12
      - C. Atanasio out 8/18 & 8/19
      - M. Evens out 8/15 through 8/19
      - B. Gamache out 8/8 through 8/12 & 8/18 through 8/23
    - Upcoming Site visits

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** July 27, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
~~Brian Stearns, National Grid~~
~~John Spellman, NYSDEC~~
~~Scott Deyette, NYSDEC~~
Dave Herman, NYSDEC
~~Justin Deming, NYSDOH~~
Mark Sergott, NYSDOH
~~Adam Sherman, BC~~
~~Keith Bogatch, BC~~
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
Brian Taylor, BC
~~Will Lindheimer, LRI~~
Jon Borrelli, LRI
~~Minda Murray, LRI~~
Mike Evens, LRI
~~Brian King, HSE~~
~~Zachary Hill, HSE~~
Jenna Albrecht, HSE
Ben Gamache, LRI

Safety Minute – HSE/LRI

- Discussed silicosis - a long term lung disease related to exposure to respirable silica dust. The materials on-site, including bentonite and Portland cement, can cause exposure to respirable silica dust. Standards for silica dust exposure and action levels are located in the OSHA standards section 29 CFR Part 1926.1153.
- National Grid held a corporate safety standdown today (7/27). Gerald Cummins elaborated on the following topics:
  - Falling loads and crushing hazards
  - Pay close attention when driving
  - Electrocution
  - Complacency
  - Change in conditions – stop and reassess when work conditions change (weather, new employees, worker fatigue)

    - Consider surroundings when an emergency occurs to prevent having a second victim
- The PL E-20 project observed National Grid's safety standdown yesterday (7/26).

1. Health and Safety Update – HSE/LRI
    - Weekly Update
        - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
        - Health and Safety – No incidents or injuries during the past week.
    - COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.
2. Community Air Monitoring Update - HSE/LRI
    - No exceedances.
3. Site Security Update – LRI
    - Full-time security is on-going, no incidents or issues.
    - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
    - Pipeline installation started on Area 3 on 7/8. The pipe on Area 3 was installed and the trench was backfilled. Excess common fill from the trench is staged in Area 3 and may be approved for use as backfill in Area 2 (to be discussed with NYSDEC at a later date).
    - Pipeline installation started on Area 2 on 7/12 and is on-going south of Phase 1A Excavation Area A. The pipeline installation will reach the barrier that was set just south of Excavation Area A this week.
    - The PL E-20 team is awaiting resolution for waste management plans for the section of pipeline on CSX property where tar-like material was encountered. Additional housekeeping tasks may be performed by the PL E-20 team while awaiting the resolution.
    - *Refer to #7 for additional comments on schedule coordination.*
5. Project Administration - BC
    - Project Contact List – No updates.
    - Permitting – No updates.
    - Previous Week's Action Items
        - Adam Sherman to contact Dan Thurn (National Grid) to confirm that terminating the telecommunication line will not impact the gas regulator station.
            - Charles Atanasio spoke with Dan Thurn who confirmed that the gas regulator station is operational. It is assumed that the telecommunication line is related to the former E-Lot building and Land is identifying the utility owner.
        - BC will coordinate with NYSDEC regarding the use of stockpiled clean fill material on Area 3 as backfill on Area 2
    - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
        - No upcoming RFIs/FOs to discuss.

6. Work Activities (Completed and Upcoming) – LRI/BC

a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)

- Completed
  - ESC measures continue to be installed as work areas change (Area 2 excavation and ISS areas). Several sections of SiltSoxx required replacement with new SiltSoxx (mostly tears related to construction activities).
  - The construction entrance to and from the temporary bridge over the Wynantskill Creek and the temporary access road in Area 2 periodically gets filled with soil and mud from truck traffic and has been refreshed several times with new No. 3 crushed stone.
  - Settlement, crack, and vibration monitoring has begun, and weekly submittals and SWPPP inspections are ongoing.
- Upcoming
  - CAMP implementation will continue.
  - Work activities this week will include ISS mixing, excavation in Excavation Area A, and demolition of subsurface concrete.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)

- Completed – Excavation and backfilling are 100% complete.
- Upcoming
  - Concrete will be sent off-Site for disposal/recycling.
  - Off-site disposal of soil containing tar-like material to Clean Earth is anticipated to occur after PL E-20 construction activities are completed in Area 3.
  - A stockpile of imported clean fill is leftover after the gas line was installed. This is anticipated to be transferred to Area 2 for use as backfill (to be discussed with NYSDEC at a later date).

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)

- Completed
  - (ongoing) Excavation of soil, demolition and removal of subsurface structures, and transportation of waste for off-Site disposal. Excavation is approximately 60% complete.
  - Temporary construction road for truck traffic during excavation of Excavation Area A.
  - Soil with tar-like impacts is being segregated from other soil and transferred to a separate Temporary Waste Containment Area. Soil in this area will be blended to lower BTU content before transport to Clean Earth (similar to tar-like impacts from Area 3).
  - Removal of ACM pipe in Area 2 (east of King Road) has been completed.

- Upcoming
  - Concrete will be sent off Site for disposal/recycling. Concrete is being processed concrete and Land is coordinating to have concrete trucks to the Site to haul out the processed concrete. This may be pushed down the schedule until they can get a larger availability of trucks.
  - Backfilling is scheduled to begin the first week of August.
  - Final inspection of Excavation Area A to be performed by NYSDEC and BC this week.
  - Matt Lesniak will go into Excavation Area A today (7/27) and will perform some documentation of stone and brick foundation structures related to a historical steel mill.
  - The concrete from the cooling tower in Excavation Area A will be reused as backfill over geotextile demarcation fabric in Excavation Area A. BC discussed this with the NYSDEC in an email dated 7/26.
  - Excavation activities in Excavation Area A are anticipated to be completed in the first week of August. The second week of August, the backfilling of Excavation Area A will begin. By the week of 8/15, Excavation Area A should be completely backfilled.
  - Reuse of common fill from Area 3 as backfill on Area 2 (pending discussion with NYSDEC).

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)

- Completed
  - (ongoing) Full-scale ISS production started on 7/5. 20 of 53 ISS Cells have been mixed.
  - (ongoing) Overburden from ISS and excavated soils will be loaded out for off-Site disposal.
  - Full-scale ISS is continuing with a cement/slag addition rate of 10% and bentonite addition rate of 0.10% with a water to reagent ratio of 1.25 to 1.
  - On 7/21 during pre-ISS excavation, a brick tunnel was encountered at approximately 14 feet below ground surface. The tunnel is approximately 4 feet wide and 5-6 feet tall, and the inside does not have visual signs of staining or tar impacts. The tunnel is oriented towards Former Sump 4 and turns to follow the sump (adjacent to but does not penetrate nor is connect to the sump). The tunnel was demolished in-place, and the southern end was plugged with soil and a piece of concrete. The southern portion of the tunnel will be removed during a later Phase of work.
  - On 7/22 during ISS mixing, an obstruction was encountered in the southwest corner of ISS Area C-14. The top and bottom of the obstruction was at elevation 7 and 4, respectively (i.e., approximately 3 feet thick). The obstruction extended into the ISS area by approximately 4-5 feet. The ISS Operator was able to mix soil beneath and around the obstruction but was unable to dislodge/remove it. It is assumed that it is a concrete structure and extends to the south (into the adjacent ISS area and to the west beneath Former Sump 4).

- Upcoming
  - Continue full-scale ISS mixing and begin post-ISS excavation of completed cells in early August.
  - Second ISS coring event is scheduled for the first week of August. Core locations are to be determined.
  - Land will take survey shots of an unknown subsurface concrete structure in the north-western portion of the ISS footprint today (7/28) and the information will be sent in an email.
  - It has been determined that the telecommunication line that was severed is supplying the E-Lot building. The two ends of the utility line will be protected in order to restore it at a later date in the project.
  - Steel piles will be laid down as backfill in ISS Areas in Area 2. BC discussed this with the NYSDEC in email dated 7/26.
  - Land to provide additional information on ISS cells regarding their approach for pre-excavation activities and subsurface obstructions.
  - ISS is scheduled to be completed the first or second week of September, during which restoration and clean-up will also be occurring.
  - Parratt-Wolff will be on Site next Wednesday (8/3) to perform coring. The coring locations are to be determined. Land will propose two cells for coring next week which would make this the final coring event on the Site.
  - The cutting post-ISS swell and disposing of the material is upcoming.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - (ongoing) Loadout of waste from Area 2 excavation and ISS activities.
     - Overburden ISS material in Area 2 was sampled last week. The results were received and sent over to Green Ridge landfill. Land will post the results on OneDrive.
   - Upcoming
     - Waste characterization results and profiling for tar-like material in Excavation Area A.
     - Area 3 C&D debris load out is upcoming. Pending proper approvals blending and load out of soil containing tar-like material is upcoming.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - (ongoing) Continued import of crushed stone materials for temporary road construction (access around Excavation Area A and around ISS Area) and material staging areas.
   - Upcoming
     - Import and placement of common fill to backfill Excavation Area A anticipated to begin this week.
     - A Request to Import form has been submitted to the NYSDEC for another 200 CY of #3 stone in an email dated 7/27.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)

- Area 3 Completed/Upcoming
  - Crushed stone cover in the southern portion of Area 3 was completed the week of 7/4.
  - The remaining crushed stone cover on Area 3 will be completed after the PL E-20 project does not need access to this area.
- Area 2 Completed/Upcoming
  - Construction of site cover in Excavation Area A is tentatively planned for late August after the PL E-20 gas line is installed.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - PL E-20 schedule coordination - latest PL E-20 schedule (updated 6/8) shows gas work reaching Area 2 excavation by 8/15 and ISS area by 9/1.
8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals.
     - Submittals 19 (vibration and crack monitoring results) and 70 (ISS daily reports) were received on 7/27.
   - NYSDEC Submittals:
     - Submitted email on 7/25 to NYSDEC to propose re-use of concrete from the foundation of the former cooling towers (approximately 170 CY). The concrete foundation will be demolished, crushed to 6-inch minus, and re-used as backfill at the bottom of Excavation Area A (outside of the footprint of King Road).
     - Submitted email on 7/26 to NYSDEC to propose placement of concrete-filled steel piles removed from the ISS footprint. The piles do not have visible MGP impacts and will be laid on the bottom of Excavation Area A. Imported backfill will be placed around and in between the piles.
     - Weekly H&S/CAMP Reports (ongoing weekly)
     - Requests to Import Fill Packages (ongoing as needed)
9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - Andrew Kreshik, from City of Troy LDC, asked Charles Atanasio about the approximately 30-inch to 36-inch diameter pipe that was encountered in Excavation Area A and whether the pipe would be included on the construction completion report/as-builts. Charles responded that the pipe would be captured in the construction completion report.
10. **Community Interaction/Relations**
    - No updates.
11. **NYSDEC/NYSDOH Comments**
    - Dave Herman (NYSDEC) – None.
    - Mark Sergott (NYSDOH) – None.
12. **Review of Action Items**
    - Land to provide survey shots of the unknown subsurface concrete structure and possibly discuss realignment of ISS Areas if necessary.
    - Land to provide additional information on ISS panels regarding their approach for pre-excavation activities and subsurface obstructions.

13. Other

- Next meeting: Wednesday, 8/3/22 at 10 am
- Upcoming Vacations
  - K. Bogatch out 7/25 through 7/29
  - A. Sherman out 7/27 through 7/29, 8/5 through 8/12
  - N. Gilliam out 8/4 & 8/5, and 8/25 & 8/26
  - B. Gamache out 8/5 through 8/15, and 8/18 through 8/22
  - M. Evens out 8/15 through 8/19
  - C. Atanasio out 8/18 & 8/19
- Upcoming Site visits

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** August 3, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
~~Brian Stearns, National Grid~~
John Spellman, NYSDEC
~~Scott Deyette, NYSDEC~~
~~Dave Herman, NYSDEC~~
~~Justin Deming, NYSDOH~~
~~Mark Sergott, NYSDOH~~
Adam Sherman, BC
Keith Bogatch, BC
Charles Atanasio, BC
~~Adam Gutta, BC~~
Nia Gilliam, BC
Brian Taylor, BC
Will Lindheimer, LRI
Jon Borrelli, LRI
Jon Castle, LRI
~~Minda Murray, LRI~~
Mike Evens, LRI
~~Brian King, HSE~~
~~Zachary Hill, HSE~~
Jenna Albrecht, HSE
Ben Gamache, LRI

Safety Minute – HSE/LRI

- Discussed self-care in the workplace and at home. Maintenance of mental and physical health can help with stress management in the workplace and can help prevent burnout. Self-care may increase focus, clarity, assessment of your surroundings, and awareness during emergency situations. Bring enough food to the site and bring food that is fueling. Other components of self-care include the length and quality of sleep, alternating between long and short working days, ergonomics, stretching, exercise, and staying up to date on medical assessments.

1. Health and Safety Update – HSE/LRI

- Weekly Update
  - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
  - Health and Safety – No incidents or injuries during the past week.

- COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.

2. Community Air Monitoring Update - HSE/LRI
   - No exceedances.
3. Site Security Update – LRI
   - Full-time security is on-going, no incidents or issues.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - Pipeline installation started on Area 3 on 7/8. The pipe on Area 3 was installed and the trench was backfilled.
   - Excess clean imported common fill from the PL E-20 trench is staged in Area 3. Request made during this meeting to re-use this fill material as backfill on Area 2 and approved by John Spellman (NYSDEC).
   - Pipeline installation started on Area 2 on 7/12 and is on-going south of Phase 1A Excavation Area A. This week the pipeline installation reached the barrier that was set south of Excavation Area A.
   - PL E-20 pipeline retirement and pipeline installation is taking place on CSX property this week.
   - As part of the PL E-20 project, the former gas pipeline will be retired which will involve trenching to expose, cut, and cap the gas pipeline at two locations (one on Area 3 and one spanning the boundary between Area 2 and Area 3). Soil generated from these activities will be transported by Land to the stockpile on Area 2 and will be managed under the Phase 1A remediation project. Area 2 and Area 3 soils will be segregated, tracked separately, and shipped off-site under separate manifests. As a possible alternate, soil from Area 3 may be used to blend with the tar-like material currently staged on Area 3 (to lower BTU content to meet facility requirements) prior to shipment to Clean Earth (ESMI of NY).
   - As of yesterday (8/2), PL E-20 is back on CSX property and the installation of new pipe will continue on the CSX property for this week.
   - *Refer to #7 for additional comments on schedule coordination.*
5. Project Administration - BC
   - Project Contact List – No updates.
   - Permitting – No updates.
   - Previous Week's Action Items
     - Land to provide survey shots of the unknown subsurface concrete structure and possibly discuss realignment of ISS Areas if necessary.
       - Concrete obstructions in ISS Areas C-1, C-2, C-3, and C-4 were surveyed yesterday (8/2) and will be sent out in an email today.
     - Land to provide additional information on ISS panels regarding their approach for pre-excavation activities and subsurface obstructions.
       - No additional information on the ISS panels near the E-Lot building.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - No upcoming RFIs/FOs to discuss.

6. Work Activities (Completed and Upcoming) – LRI/BC

a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)

- Completed
  - ESC measures continue to be installed as work areas change (Area 2 excavation and ISS areas). Several sections of SiltSoxx required replacement with new SiltSoxx (mostly tears related to construction activities).
  - The construction entrance to and from the temporary bridge over the Wynantskill Creek and the temporary access road in Area 2 periodically gets filled with soil and mud from truck traffic and has been refreshed several times with new No. 3 stone.
  - Settlement, crack, and vibration monitoring has begun, and weekly submittals and SWPPP inspections are ongoing.
- Upcoming
  - CAMP implementation will continue.
  - Work activities this week will include ISS mixing, excavation/backfilling in Excavation Area A, and demolition of subsurface concrete.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)

- Completed – Excavation and backfilling are 100% complete.
- Upcoming
  - Concrete will be sent off-Site for disposal/recycling.
  - Off-site disposal of soil containing tar-like material to Clean Earth is anticipated to occur by the end of August.
  - A stockpile of imported clean fill is leftover after the gas line was installed. During this meeting, John Spellman (NYSDEC) approved the use of this fill material as backfill for the Area 2 excavation.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)

- Completed
  - (ongoing) Excavation, backfilling, demolition and removal of subsurface structures, and transportation of waste for off-Site disposal.
  - Temporary construction road for truck traffic during excavation of Excavation Area A.
  - Soil with tar-like impacts has been segregated from other soil and transferred to a separate Temporary Waste Containment Area. Soil in this area will be blended to lower BTU content to meet facility requirements before transport to Clean Earth (similar to tar-like impacts from Area 3).
  - Removal of ACM pipe in Area 2 (east of King Road) has been completed.
- Upcoming

- Concrete to be sent off Site for disposal/recycling. Concrete is being processed concrete and Land is coordinating to have concrete trucks to the Site to haul out the processed concrete. This may be pushed down the schedule until they can get a larger availability of trucks.
- The concrete from the cooling tower foundation in Excavation Area A will be reused as backfill at the bottom of the excavation (outside the road footprint) and placed over geotextile demarcation fabric. During this meeting, a request was made to adjust the processing size of the concrete from the cooling tower foundation from the approved 6-inch minus to 12-inch minus size. John Spellman (NYSDEC) approved the 12-inch minus size for processing the cooling tower concrete foundation.
- The currently stockpiled concrete-filled steel casing piles will be placed at the bottom Excavation Area A (outside the road footprint). This was approved by NYSDEC in a 7/26/22 email.
- 75% of the excavation has been approved by BC and NYSDEC. A section of concrete in the southeast corner of the excavation and approximately 2 feet of soil beneath the cooling tower foundation will be removed.
- Excavation Area A is anticipated to be completely backfilled by the end of the week of 8/15.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)

- Completed
  - (ongoing) Full-scale ISS production started on 7/5. 24 of 53 ISS Cells have been mixed. Full-scale ISS will be ongoing and is expected to be completed the first week of September. Permeability testing results have consistently been in the 10^{-7} cm/s range.
  - (ongoing) Load out and off-site disposal of pre-ISS excavation soils.
  - Full-scale ISS is continuing with a cement/slag addition rate of 10% and bentonite addition rate of 0.10% with a water to reagent ratio of 1.25 to 1.
  - Coring locations were sent out to the NYSDEC. During this meeting, John Spellman (NYSDEC) approved the coring locations. Parratt-Wolff will be on site today and tomorrow (8/4) to complete the second and final ISS coring event.
- Upcoming
  - Continue full-scale ISS mixing.
  - ISS is scheduled to be completed around the first week of September.
  - The cutting post-ISS swell and disposing of the material is scheduled to begin the last week of August/first week of September.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)

- Completed
  - (ongoing) Loadout of waste and debris from Area 2 excavation and ISS activities.
  - Pre-ISS excavation material in Area 2 was sampled last week. The results were received and sent over to Green Ridge landfill. Land will post the results on OneDrive.
- Upcoming
  - Waste characterization results and profiling for tar-like material in Excavation Area A.

- Area 3 C&D debris load out is upcoming. Pending proper approvals blending and load out of soil containing tar-like material is upcoming and is anticipated to begin after backfilling of Excavation Area A is complete.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - (ongoing) Continued import of crushed stone materials for temporary road construction (access around Excavation Area A and around ISS Area) and material staging areas.
     - (ongoing) Import and placement of common fill to backfill Excavation Area A began on Monday (8/1). This will be ongoing for the next 2 weeks.
     - Request to Import form for #3 stone import has been approved for an additional 200 cubic yards (400 cubic yards total) by the NYSDEC in an email dated 8/1.
   - Upcoming
     - None.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
   - Area 3 Completed/Upcoming
     - Crushed stone cover in the southern portion of Area 3 was completed the week of 7/4.
     - The remaining crushed stone cover on Area 3 will be completed after the PL E-20 project no longer needs access to this area.
   - Area 2 Completed/Upcoming
     - Construction of site cover in Excavation Area A is tentatively planned for late August after the PL E-20 gas line is installed.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - PL E-20 schedule coordination - latest PL E-20 schedule (updated 6/8) shows PL E-20 gas work reaching Area 2 excavation by 8/15 and ISS area by 9/1. These dates will likely need to be adjusted to allow for completion of the remediation activities.

8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals.
     - Submittals 19 (vibration and crack monitoring results), 70 (ISS daily reports), 73 (ISS QC test results), 90 (completed weight tickets), and 91 (counter-signed manifests) were received on 8/2.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly)
     - Requests to Import Fill Packages (ongoing as needed)

9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - National Grid requested support from the remediation project team for the replacement of two utility poles (in order to raise overhead wires) at the north end of Area 2. Garry Cummins agreed to assist and Land will coordinate directly with National Grid for constructing a "clean corridor" (soft dig excavation and installation of a pipe sleeve) for the new pole installation.

10. **Community Interaction/Relations**

- No updates.

11. NYSDEC/NYSDOH Comments
    - John Spellman (NYSDEC) – None.
        - Approved re-use of clean imported fill from Area 3 (resulting from the PL E-20 project trenching through recently placed clean backfill) as backfill on the Area 2 Excavation Area A.
        - Approved adjustment of the concrete processing from 6-inch minus to 12-inch minus for the cooling tower concrete foundation. Crushed debris to be placed at the bottom of the excavation and outside the road footprint.
        - Approved the proposed ISS coring locations.
        - No additional comments.
12. Review of Action Items
    - Land to provide survey shots of the unknown subsurface concrete structure and possibly discuss realignment of ISS Areas if necessary.
13. Other
    - Next meeting: Wednesday, 8/10/22 at 10 am
    - Upcoming Vacations
        - A. Sherman out 8/8 through 8/12
        - N. Gilliam out 8/4 & 8/5 and 8/25 & 8/26
        - B. Gamache out 8/5 through 8/15 and 8/18 through 8/22
        - M. Evens out 8/15 through 8/19
        - C. Atanasio out 8/18 & 8/19
    - Upcoming Site visits
        - None.

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** August 10, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
~~Brian Stearns, National Grid~~
John Spellman, NYSDEC
~~Scott Deyette, NYSDEC~~
Dave Herman, NYSDEC
~~Justin Deming, NYSDOH~~
Mark Sergott, NYSDOH
~~Adam Sherman, BC~~
Keith Bogatch, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
Brian Taylor, BC
Will Lindheimer, LRI
Jon Borrelli, LRI
~~Jon Castle, LRI~~
Minda Murray, LRI
Mike Evens, LRI
~~Brian King, HSE~~
~~Zachary Hill, HSE~~
Jenna Albrecht, HSE
~~Ben Gamache, LRI~~

Safety Minute – HSE/LRI

- Discussed a lightning standdown that occurred last week on Thursday (8/4). The lightning standdown lasted for approximately 2.5 hours. Heat and moisture affect the intensity of lightning. Once a standdown occurs, 30 minutes must elapse without any visual lightning or audible thunderclap before work can continue.

1. Health and Safety Update – HSE/LRI

- Weekly Update
  - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
  - Health and Safety – No incidents or injuries during the past week.
- COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.

2. Community Air Monitoring Update - HSE/LRI
   - No exceedances.
3. Site Security Update – LRI
   - Full-time security is on-going, no incidents or issues.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - Pipeline installation started on Area 3 on 7/8. The pipe on Area 3 was installed and the trench was backfilled.
   - Pipe welding is taking place on CSX property today. Backfilling and maintenance activities will be performed following the pipe welding. PL E-20 is anticipating entering Excavation Area A on 8/23.
   - *Refer to #7 for additional comments on schedule coordination.*
5. Project Administration - BC
   - Project Contact List – No updates.
   - Permitting – No updates.
   - Previous Week's Action Items
     - Land to provide survey shots of the unknown subsurface concrete structure and possibly discuss realignment of ISS Areas if necessary.
       - Refer to #8 for comments on this action item.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - No upcoming RFIs/FOs to discuss.
6. Work Activities (Completed and Upcoming) – LRI/BC

   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - ESC measures continue to be installed as work areas change (Area 2 excavation and ISS areas).
        - The construction entrance to and from the temporary bridge over the Wynantskill Creek and the temporary access road in Area 2 periodically gets filled with soil and mud from truck traffic and has been refreshed several times with new No. 3 stone.
        - Settlement, crack, and vibration monitoring has begun, and weekly submittals and SWPPP inspections are ongoing.
      - Upcoming
        - CAMP implementation will continue.
        - Work activities this week will include ISS mixing, excavation/backfilling in Excavation Area A, and demolition of subsurface concrete.

   b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
      - Completed – Excavation and backfilling are 100% complete.

- Upcoming
  - Concrete will be sent off-Site for disposal/recycling.
  - Off-site disposal of soil containing tar-like material to Clean Earth (ESMI of NY) is anticipated to occur by the end of August.
  - A stockpile of imported clean fill is leftover after the gas line was installed. This fill material will be used as backfill in the Area 2 Excavation or the ISS area.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - (ongoing) Excavation, backfilling, demolition and removal of subsurface structures, and transportation of waste for off-Site disposal.
     - Temporary construction road for truck traffic during excavation of Excavation Area A.
     - Soil with tar-like impacts has been segregated from other soil and transferred to a separate Temporary Waste Containment Area. Soil in this area will be blended to lower BTU content to meet facility requirements before transport to Clean Earth (similar to tar-like impacts from Area 3).
   - Upcoming
     - Concrete loadout is delayed due to trucking/supply issues. Land proposed to possibly downsize the concrete 6-inch minus with the use of a concrete crusher. The concrete resized debris would be suitable for transportation to Green Ridge Landfill. This would allow the stockpiled material to loaded out quicker. Land to evaluate if this would result in a cost savings for the project.
     - A section of concrete will be removed from southeast corner and approximately 2 feet of soil beneath the former cooler tower foundation will be removed this week. Following soil removal NYSDEC and BC will perform a final inspection of the eastern portion of Excavation Area A. Excavation of Excavation Area A is anticipated to be completed the week.
     - The demolished concrete from the former cooling tower foundation in Excavation Area A will be reused as backfill at the bottom of the excavation (outside the footprint of King Road) and placed over geotextile demarcation fabric. This was approved by NYSDEC in the previous meeting on 8/3/22.
     - The currently stockpiled concrete-filled steel casing piles will be placed at the bottom Excavation Area A (outside the road footprint). This was approved by NYSDEC in a 7/26/22 email.
     - Backfilling of Excavation Area A is anticipated to be completed the week of 8/15.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - (ongoing) Full-scale ISS production started on 7/5. 31 of 53 ISS Areas have been mixed. Approximately 59% of the ISS (by volume) has been completed. Full-scale ISS is ongoing with a cement/slag addition rate of 10% and bentonite addition rate of 0.10% with a water to reagent ratio of 1.25 to 1. Hydraulic conductivity results have consistently been in the range of 10^{-7} cm/s.
     - (ongoing) Load out and off-site disposal of pre-ISS excavation soils.

  - The final ISS coring event was completed last week on 8/3 and 8/4.
- Upcoming
  - Continue full-scale ISS mixing.
  - ISS is scheduled to be completed around the first week of September.
  - The excavation of post-ISS swell and off-Site disposal of the material is scheduled to begin the last week of August/first week of September. The swell cut is designed to be at 4 feet below grade for the top monolith but will likely be closer to an average of5 feet below grade.
  - The ISS panels adjacent to the E-Lot Building are scheduled to begin at the end of this week (may start with ISS panels N-9 and N-7).

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
- Completed
  - (ongoing) Loadout of waste and debris from Area 2 excavation and ISS activities.
  - Waste profiling for pre-ISS excavation material in Area 2.
  - Waste characterization results for tar-like material in Excavation Area A.
- Upcoming
  - Waste profiling for tar-like material in Excavation Area A.
  - Area 3 C&D debris load out is upcoming. Pending proper approvals blending and load out of soil containing tar-like material is upcoming and is anticipated to begin after backfilling of Excavation Area A is complete.
  - Land may blend tar material in Area 2 with soil from the southern portion of the pre-ISS stockpile in Area 2 and perform waste characterization sampling on that later this week or next week.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
- Completed
  - (ongoing) Continued import of crushed stone materials for temporary road construction (access around Excavation Area A and around ISS Area) and material staging areas.
  - (ongoing) Import and placement of common fill to backfill Excavation Area A began on Monday (8/1). This will be ongoing for the next 2 weeks.
- Upcoming
  - None.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
- Area 3 Completed/Upcoming
  - Crushed stone cover in the southern portion of Area 3 was completed the week of 7/4.
  - The remaining crushed stone cover on Area 3 will be completed after the PL E-20 project no longer needs access to this area.
- Area 2 Completed/Upcoming
  - Construction of site cover in Excavation Area A is tentatively planned for late August after the PL E-20 gas line is installed.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - PL E-20 schedule coordination - latest PL E-20 schedule (updated 6/8) shows PL E-20 gas work reaching Area 2 excavation by 8/23 and ISS area by 9/2. These dates will likely need to be adjusted to allow for completion of the remediation activities.
8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals.
     - Submittals 19 (vibration and crack monitoring results), 63 (compaction test results), 70 (ISS daily reports), and 73 (ISS QC test results) were received on 8/9.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly)
     - Requests to Import Fill Packages (ongoing as needed)
     - BC sent an email dated 8/8 to John Spellman (NYSDEC) and he approved the revised ISS layout regarding concrete obstructions in ISS Areas C-1, C-2, C-3, and C-4 in an email dated 8/9.
9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - (ongoing) National Grid (electric group) requested support from the remediation project team for the replacement of two utility poles (in order to raise overhead wires) at the north end of Area 2. Garry Cummins agreed to assist and Land will coordinate directly with National Grid for constructing a "clean corridor" (soft dig excavation and installation of a pipe sleeve) for the new pole installation.
10. **Community Interaction/Relations**
    - No updates.
11. **NYSDEC/NYSDOH Comments**
    - John Spellman (NYSDEC) – None.
    - Dave Herman (NYSDEC) – Commented that although the core taken on the interface between C-27 and C-28 had poor recovery, the core, drilling tools, and wash water in the drilling tub had no odor, no indications of unmixed/untreated material, and no indications of sheen or tar-like product and therefore was approved by the NYSDEC.
    - Mark Sergott (NYSDOH) – None.
12. **Review of Action Items**
    - None.

13. Other

- Next meeting: Wednesday, 8/17/22 at 10 am
- Upcoming Vacations
  - A. Sherman out 8/8 through 8/12
  - N. Gilliam out 8/25 & 8/26
  - B. Gamache out 8/5 through 8/15 and 8/18 through 8/22
  - M. Evens out 8/15 through 8/19
  - C. Atanasio out 8/18 & 8/19
  - G. Cummins out 9/1 through 9/9
- Upcoming Site visits
  - None.

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** August 17, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
~~Brian Stearns, National Grid~~
John Spellman, NYSDEC
Scott Deyette, NYSDEC
Dave Herman, NYSDEC
~~Justin Deming, NYSDOH~~
~~Mark Sergott, NYSDOH~~
Adam Sherman, BC
Keith Bogatch, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
Brian Taylor, BC
Will Lindheimer, LRI
Jon Borrelli, LRI
~~Jon Castle, LRI~~
Minda Murray, LRI
~~Mike Evens, LRI~~
~~Brian King, HSE~~
~~Zachary Hill, HSE~~
Jenna Albrecht, HSE
Ben Gamache, LRI

Safety Minute – HSE/LRI

- Discussed chemical safety. The applicable hazards on site include grout plant operation, cement, slag, and airborne particulates. The most common means of exposure is inhalation followed by absorption through the skin. Other methods of exposure include ingestion through the mouth and injection into the bloodstream. Some chemicals can be irritants and allergens so it is important to have SDSs on site. Applicable PPE includes respirators, safety glasses/face shields for splashes, gloves, and long sleeve shirts. Institutional (non-engineering) controls include hazard communication, labeling, and inventory. Exposure to certain chemicals can cause chronic illnesses such as COPD and silicosis. It is good practice to review the SDSs associated with the materials you may work with on the site. The SDSs are printed out and pinned to the wall in the LRI trailer and the SDSs for cement and slag material are posted on the on-site storage silos as well.

1. Health and Safety Update – HSE/LRI
   - Weekly Update
     - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
     - Health and Safety – No incidents or injuries during the past week.
   - COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.
2. Community Air Monitoring Update - HSE/LRI
   - No exceedances.
3. Site Security Update – LRI
   - Full-time security is on-going, no incidents or issues.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - Pipeline installation started on Area 3 on 7/8. The pipe on Area 3 was installed and the trench was backfilled.
   - Pipeline activities south of Excavation Area A have been completed. The PL E-20 project is anticipating beginning pipeline installation activities in Excavation Area A starting on Monday (8/22).
   - Increased coordination will be required with PL E-20 project as the work areas get closer together. LRI will coordinate with PL E-20 project team for locations where hardened crossings and/or air bridges are needed to cross installed pipeline.
   - *Refer to #7 for additional comments on schedule coordination.*
5. Project Administration - BC
   - Project Contact List – No updates.
   - Permitting – No updates.
   - Previous Week's Action Items
     - No action items from the previous week.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - No upcoming RFIs/FOs to discuss.
6. Work Activities (Completed and Upcoming) – LRI/BC
   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - (ongoing) CAMP implementation will continue.
        - ESC measures continue to be installed as work areas change (Area 2 excavation and ISS areas).
        - The construction entrance to and from the temporary bridge over the Wynantskill Creek and the temporary access road in Area 2 periodically gets filled with soil and mud from truck traffic and has been refreshed several times with new No. 3 stone.

- Settlement, crack, and vibration monitoring has begun, and weekly submittals and SWPPP inspections are ongoing.

- Upcoming
  - Work activities this week will include ISS mixing, backfilling in Excavation Area A, and demolition of subsurface concrete.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed – Excavation and backfilling are 100% complete.
   - Upcoming
     - Concrete will be sent off-Site for disposal/recycling.
     - Off-site disposal of soil containing tar-like material to Clean Earth (ESMI of NY) is anticipated to occur by the end of August.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - (ongoing) Backfilling and compaction.
     - Excavation has been completed.
     - Temporary construction road for truck traffic during excavation of Excavation Area A.
     - Soil with tar-like impacts has been segregated from other soil and transferred to a separate Temporary Waste Containment Area. Soil in this area was blended with soil in the southern portion of the stockpile containing pre-ISS excavation material in Area 2 to lower BTU content to meet facility requirements before transport to Clean Earth (similar to tar-like impacts from Area 3).
     - The concrete-filled steel casing piles were placed at the bottom Excavation Area A (outside the road footprint).
     - The demolished concrete from the former cooling tower foundation in Excavation Area A was reused as backfill at the bottom of the excavation (outside the footprint of King Road) and placed over geotextile demarcation fabric.
     - A section of concrete was removed from southeast corner and approximately 2 feet of soil beneath the former cooler tower foundation was removed. NYSDEC and BC performed a final inspection of the eastern portion of Excavation Area A and it was approved.
   - Upcoming
     - Transportation of waste (soil with tar-like impacts) for off-Site disposal is anticipated for the end of this week.
     - Concrete loadout is delayed due to trucking/supply issues. Land proposed to possibly downsize the concrete 6-inch minus with the use of a concrete crusher. The concrete resized debris would be suitable for transportation to Green Ridge Landfill. This would allow the stockpiled material to loaded out quicker. Land to evaluate if this would result in a cost savings for the project.
     - Backfilling of Excavation Area A is anticipated to be completed this week.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - (ongoing) Full-scale ISS production started on 7/5. 37 of 53 ISS Areas have been mixed. Approximately 73% of the ISS (by volume) has been completed. Full-scale ISS is ongoing with a cement/slag addition rate of 10% and bentonite addition rate of 0.10% with a water to reagent ratio of 1.25 to 1. Hydraulic conductivity results have consistently been in the range of 10^{-7} cm/s.
     - (ongoing) Load out and off-site disposal of pre-ISS excavation soils.
     - The final ISS coring event was completed last week on 8/3 and 8/4.
   - Upcoming
     - ISS is scheduled to be completed around the first week of September.
     - The excavation of post-ISS swell and off-Site disposal of the material is scheduled to begin the last week of August/first week of September. The swell cut is designed to be at 4 feet below grade for the top monolith but will likely be closer to an average of 5 feet below grade.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - (ongoing) Loadout of waste and debris from Area 2 excavation and ISS activities.
     - Waste profiling for pre-ISS excavation material in Area 2.
     - Waste characterization results for tar-like material in Excavation Area A.
     - Waste characterization results for tar blend material in Area 2.
   - Upcoming
     - Waste profiling for tar-like material in Area 2.
     - Waste characterization results for post-ISS swell.
     - Area 3 C&D debris load out is upcoming. Pending proper approvals blending and load out of soil containing tar-like material is upcoming and is anticipated to begin after backfilling of Excavation Area A is complete.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - (ongoing) Continued import of crushed stone materials for temporary road construction (access around Excavation Area A and around ISS Area) and material staging areas.
     - (ongoing) Import and placement of common fill to backfill Excavation Area A began on Monday (8/1).
     - A stockpile of imported clean fill in Area 3 was re-used as backfill in Excavation Area A in Area 2.
   - Upcoming
     - None.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
   - Area 3 Completed/Upcoming
     - Crushed stone cover in the southern portion of Area 3 was completed the week of 7/4.
     - The remaining crushed stone cover on Area 3 will be completed after the PL E-20 project no longer needs access to this area.
   - Area 2 Completed/Upcoming
     - Construction of site cover in Excavation Area A is tentatively planned for late August after the PL E-20 gas line is installed.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - PL E-20 schedule coordination - latest PL E-20 schedule (updated 6/8) shows PL E-20 gas work reaching Area 2 excavation by 8/22 and ISS area by 9/2. These dates will likely need to be adjusted to allow for completion of the remediation activities.
8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals.
     - Submittals 16 (updated master schedule), 19 (vibration and crack monitoring results), 63 (compaction test results), 70 (ISS daily reports), 73 (ISS QC test results), and 86 (waste characterization results for tar blend material in Area 2) were received on 8/17.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly)
     - Requests to Import Fill Packages (ongoing as needed)
9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - None.
10. **Community Interaction/Relations**
    - No updates.
11. **NYSDEC/NYSDOH Comments**
    - John Spellman (NYSDEC) – None.
    - Dave Herman (NYSDEC) – None.
    - Scott Deyette (NYSDEC) – None.
12. **Review of Action Items**
    - None.

13. **Other**
    - Next meeting: Wednesday, 8/24/22 at 10 am
    - Upcoming Vacations
        - N. Gilliam out 8/25 & 8/26
        - B. Gamache out 8/18 through 8/22
        - M. Evens out 8/15 through 8/19
        - C. Atanasio out 8/18 & 8/19
        - G. Cummins out 9/1 through 9/9
        - A. Sherman out 8/26
    - Upcoming Site visits
        - None.
14. **Lessons Learned**
    - Coordination and communication with truck drivers delivering cement and slag (ISS reagents) to the storage silos must be maintained.

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** August 24, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
~~Brian Stearns, National Grid~~
John Spellman, NYSDEC
Scott Deyette, NYSDEC
Dave Herman, NYSDEC
~~Justin Deming, NYSDOH~~
Mark Sergott, NYSDOH
Adam Sherman, BC
Keith Bogatch, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
~~Brian Taylor, BC~~
Will Lindheimer, LRI
Jon Borrelli, LRI
~~Jon Castle, LRI~~
~~Minda Murray, LRI~~
Mike Evens, LRI
Brian King, HSE
~~Zachary Hill, HSE~~
Ben Gamache, LRI

Safety Minute – HSE/LRI

- Discussed lightning. There have been several thunderstorms in the Troy area recently. Most lightning fatalities occur when someone is caught outdoors or goes back outside too soon. When on the site, 30 minutes must past from the last visible or audible lightning before work is permitted to resume. Safe refuge includes fully enclosed metal vehicles or large permanent buildings. If you are caught outdoors, do not be the tallest object, avoid open areas, never lie flat on the ground, retreat to a dense area of smaller trees that are surrounded by larger trees, avoid bodies of water, and seek a fully enclosed shelter.

1. **Health and Safety Update – HSE/LRI**
   - Weekly Update
     - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
     - Health and Safety – No incidents or injuries during the past week.
   - COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.
2. **Community Air Monitoring Update - HSE/LRI**
   - No exceedances.
3. **Site Security Update – LRI**
   - Full-time security is on-going, no incidents or issues.
   - No indications of illicit activity or illegal dumping.
4. **PL E-20 Project Coordination – NG/BC**
   - Pipeline installation started on Area 3 on 7/8. Pipe in Area 3 was installed and the trench was backfilled.
   - Pipeline activities south of Excavation Area A have been completed. The PL E-20 project began pipeline installation activities in Excavation Area A starting on Monday (8/22).
   - Increased coordination will be required with PL E-20 project as the work areas get closer together. LRI will coordinate with PL E-20 project team for locations where hardened crossings and/or air bridges are needed to cross installed pipeline.
   - *Refer to #7 for additional comments on schedule coordination.*
5. **Project Administration - BC**
   - Project Contact List – No updates.
   - Permitting – No updates.
   - Previous Week's Action Items
     - No action items from the previous week.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - No upcoming RFIs/FOs to discuss.
6. **Work Activities (Completed and Upcoming) – LRI/BC**

   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
   - Completed
     - (ongoing) CAMP implementation will continue.
     - ESC measures continue to be installed as work areas change (Area 2 excavation and ISS areas).
     - The construction entrance to and from the temporary bridge over the Wynantskill Creek and the temporary access road in Area 2 periodically gets filled with soil and mud from truck traffic and has been refreshed several times with new No. 3 stone.

- Settlement, crack, and vibration monitoring has begun, and weekly submittals and SWPPP inspections are ongoing.

- Upcoming
  - Work activities this week will include ISS mixing and demolition of subsurface concrete.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed – Excavation and backfilling are 100% complete.
   - Upcoming
     - Concrete will be sent off-Site for disposal/recycling.
     - Off-site disposal of soil containing tar-like material to Clean Earth (ESMI of NY) is anticipated to occur in early September.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - (ongoing) Backfilling and compaction.
     - Excavation has been completed.
     - Temporary construction road for truck traffic during excavation of Excavation Area A.
     - Soil with tar-like impacts has been segregated from other soil and transferred to a separate Temporary Waste Containment Area. Soil in this area was blended with soil in the southern portion of the stockpile containing pre-ISS excavation material in Area 2 to lower BTU content to meet facility requirements before transport to Clean Earth (similar to tar-like impacts from Area 3). Transportation of this blended soil for off-Site disposal was completed last week.
   - Upcoming
     - Concrete loadout is delayed due to trucking/supply issues. Land proposed to possibly downsize the concrete 6-inch minus with the use of a concrete crusher. The concrete resized debris would be suitable for transportation to Green Ridge Landfill. This would allow the stockpiled material to loaded out quicker. Land to evaluate if this would result in a cost savings for the project.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - (ongoing) Full-scale ISS production started on 7/5. 43 of 52 ISS Areas have been mixed. Approximately 86% of the ISS (by volume) has been completed. Full-scale ISS is ongoing with a cement/slag addition rate of 10% and bentonite addition rate of 0.10% with a water to reagent ratio of 1.25 to 1. Hydraulic conductivity results have consistently been in the range of 10^{-7} cm/s.
     - (ongoing) It is anticipated for the "piano key" cells (east of the former E-Lot building) to be completed by Friday (8/26) and the last two ISS Areas C-11 and C-12 to be completed Tuesday (8/30).
     - (ongoing) Load out and off-site disposal of pre-ISS excavation soils.

- Upcoming
  - The excavation of post-ISS swell and off-Site disposal of the material is scheduled to begin the last week of August/first week of September.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
- Completed
  - (ongoing) Loadout of waste and debris from Area 2 excavation and ISS activities.
  - Waste profiling for tar blend material in Area 2.
  - Waste characterization results for post-ISS swell.
- Upcoming
  - Area 3 C&D debris load out is upcoming pending approval from Clean Earth for blending of soil containing tar-like material. Load out is anticipated to begin in early September.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
- Completed
  - (ongoing) Continued import of crushed stone materials for temporary road construction (access around Excavation Area A and around ISS Area) and material staging areas.
  - (ongoing) Import and placement of common fill to backfill Excavation Area A began on Monday (8/1). This activity was paused on 8/22 to allow the PL E-20 project team access to this area.
  - A stockpile of imported clean fill in Area 3 was re-used as backfill in Excavation Area A in Area 2.
- Upcoming
  - Common fill importing for backfilling the ISS area is anticipated to begin next week.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
- Area 3 Completed/Upcoming
  - Crushed stone cover in the southern portion of Area 3 was completed the week of 7/4.
  - The remaining crushed stone cover on Area 3 will be completed after the PL E-20 project no longer needs access to this area.
- Area 2 Completed/Upcoming
  - Construction of site cover in Excavation Area A is tentatively planned for late August to September after the PL E-20 gas line is installed.

7. **Project Schedule - LRI**
- Baseline Schedule Updates/Schedule Impacts
  - PL E-20 schedule coordination - The PL E-20 gas work began in Excavation Area 2A on 8/22 and the latest schedule shows gas work reaching the ISS area by 9/12. These dates will likely need to be adjusted to allow for completion of the remediation activities.

8. **Submittals – BC/LRI**
- Submittals update – Weekly monitoring submittals.

  - Submittals 19 (vibration and crack monitoring results), 63 (compaction test results), 70 (ISS daily reports), 73 (ISS QC test results), and 87 (written communication from ESMI/Clean Earth confirming waste is acceptable) were received on 8/24.
- NYSDEC Submittals:
  - Weekly H&S/CAMP Reports (ongoing weekly)
  - Requests to Import Fill Packages (ongoing as needed)

9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - None.
10. **Community Interaction/Relations**
    - No updates.
11. **NYSDEC/NYSDOH Comments**
    - John Spellman (NYSDEC) – None.
    - Dave Herman (NYSDEC) – None.
    - Scott Deyette (NYSDEC) – None.
    - Mark Sergott (NYSDOH) – None.
12. **Review of Action Items**
    - PL E-20 coordination regarding gas work reaching the ISS area.
13. **Other**
    - Next meeting: Wednesday, 8/31/22 at 10 am
    - Upcoming Vacations
      - N. Gilliam out 8/25 & 8/26
      - G. Cummins out 9/1 through 9/9
      - A. Sherman out 8/26
      - B. Taylor out 9/19 through 9/23
    - Upcoming Site visits
      - None.
14. **Lessons Learned**
    - Coordination and communication with new truck drivers and new personnel on Site must be maintained.
    - As construction activities continue, we should not become complacent and strive to finish the project with no incidences.

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** August 31, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
~~Brian Stearns, National Grid~~
~~John Spellman, NYSDEC~~
~~Scott Deyette, NYSDEC~~
Dave Herman, NYSDEC
~~Justin Deming, NYSDOH~~
Mark Sergott, NYSDOH
Adam Sherman, BC
Keith Bogatch, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
Brian Taylor, BC
Will Lindheimer, LRI
Jon Borrelli, LRI
~~Jon Castle, LRI~~
Minda Murray, LRI
Mike Evens, LRI
Brian King, HSE
~~Zachary Hill, HSE~~
Ben Gamache, LRI

Safety Minute – HSE/LRI

- Discussed identifying the scope of work and individual steps to complete a task. Hazards should then be assigned to each step, then risks should be assessed for high/low consequence and high/low probability. Then the hazards should be eliminated, controlled, or otherwise mitigated as best as possible (engineering controls, administrative controls, PPE, etc.).

1. Health and Safety Update – HSE/LRI

- Weekly Update
  - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
  - Health and Safety – No incidents or injuries during the past week.
- COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.

2. Community Air Monitoring Update - HSE/LRI
   - No exceedances.
3. Site Security Update – LRI
   - Full-time security is on-going, no incidents or issues.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - Pipeline installation has progressed to within 40-feet south of the ISS area and will not progress further north until the remediation area is ready (anticipated to be the week of 9/12).
   - There has been increased coordination with PL E-20 project (daily check-ins and/or daily on-site meetings) as the work areas get closer together. LRI will coordinate with PL E-20 project team for locations where hardened crossings and/or air bridges are needed to cross installed pipeline.
   - *Refer to #7 for additional comments on schedule coordination.*
5. Project Administration - BC
   - Project Contact List
     - Scott Ryan (HSE) will be added to the Project Contact List.
   - Permitting – No updates.
   - Previous Week's Action Items
     - No action items from the previous week.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - Field Order 3 was issued on 8/24 to remove two drawings that were inadvertently added to the Issued for Construction set from the current Phase 1A Drawings. No further action is needed for this FO.
6. Work Activities (Completed and Upcoming) – LRI/BC
   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - (ongoing) CAMP implementation will continue.
        - ESC measures continue to be installed as work areas change (Area 2 excavation and ISS areas).
        - The construction entrance to and from the temporary bridge over the Wynantskill Creek and the temporary access road in Area 2 periodically gets filled with soil and mud from truck traffic and has been refreshed several times with new No. 3 stone.
        - Settlement, crack, and vibration monitoring has begun, and weekly submittals and SWPPP inspections are ongoing.
      - Upcoming
        - Work activities this week will include ISS mixing and demolition of subsurface concrete.
   b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)

- Completed – Excavation and backfilling are 100% complete.
- Upcoming
  - Concrete will be sent off-site for disposal/recycling.
  - Off-site disposal of soil containing tar-like material to Clean Earth (ESMI of NY) is anticipated to occur in September.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - (ongoing) Backfilling and compaction.
     - Excavation has been completed.
     - Temporary construction road for truck traffic during excavation of Excavation Area A.
     - Soil with tar-like impacts has been segregated from other soil and transferred to a separate Temporary Waste Containment Area. Soil in this area was blended with soil in the southern portion of the stockpile containing pre-ISS excavation material in Area 2 to lower BTU content to meet facility requirements before transport to Clean Earth (similar to tar-like impacts from Area 3). Transportation of this blended soil for off-site disposal was completed last week.
   - Upcoming
     - Concrete loadout is delayed due to trucking/supply issues. The current plan is to mobilize a concrete crusher and to downsize the concrete to 6-inch minus. The resized concrete debris would then be suitable for transportation to Green Ridge Landfill and stockpiled material could be loaded out quicker. Mobilization of the concrete crusher to the Site and concrete crushing is anticipated to begin the week of September 12.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - Full-scale ISS production has been completed as of 8/30. 52 of 52 ISS cells have been mixed. Approximately 100% of the ISS (by volume) has been completed. Hydraulic conductivity results have consistently been in the range of 10^{-7} cm/s.
     - Load out and off-site disposal of pre-ISS excavation soils has been completed as of 8/29.
     - (ongoing) Post-ISS excavation and off-site disposal of the material will continue into next week.
   - Upcoming
     - Backfilling of the ISS area (following post-ISS excavation) is anticipated to begin on 9/1.
     - Demobilization of the grout plant and material storage silos is anticipated to be completed by September 19.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - (ongoing) Loadout of waste and debris from Area 2 excavation and ISS activities.
   - Upcoming
     - Area 3 C&D debris load out is upcoming pending approval from Clean Earth for blending of soil containing tar-like material. Load out is anticipated to begin in September.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - (ongoing) Continued import of crushed stone materials for temporary road construction (access around Excavation Area A and around ISS Area) and material staging areas.
     - (ongoing) Import and placement of common fill to backfill Excavation Area A began on Monday (8/1). This activity was paused on 8/22 to allow the PL E-20 project team access to this area.
     - A stockpile of imported clean fill in Area 3 was re-used as backfill in Excavation Area A in Area 2.
     - Samples were collected on 8/30 for an additional 2,000 cubic yards of common fill import.
   - Upcoming
     - Common fill importing to backfill the ISS Area will begin on 9/1 and is anticipated to continue for the next two weeks.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
   - Area 3 Completed/Upcoming
     - Crushed stone cover in the southern portion of Area 3 was completed the week of 7/4.
     - The remaining crushed stone cover on Area 3 will be completed after the PL E-20 project no longer needs access to this area.
   - Area 2 Completed/Upcoming
     - Construction of site cover in Excavation Area A is tentatively planned for September after the PL E-20 gas line is installed.

7. Project Schedule - LRI
   - Baseline Schedule Updates/Schedule Impacts
     - PL E-20 schedule coordination - The PL E-20 project is currently 40-feet south of the ISS footprint and is anticipating to begin installation in the ISS footprint starting the week of 9/12, pending the completion of remediation activities (waste loadout and backfilling) in the ISS footprint.

8. Submittals – BC/LRI
   - Submittals update – Weekly monitoring submittals.
     - Submittals 19 (vibration and crack monitoring results), 70 (ISS daily reports), 73 (ISS QC test results), and 90 (completed weight tickets and countersigned manifests for disposal of soils at Green Ridge landfill) were received on 8/31.
   - NYSDEC Submittals:

- Weekly H&S/CAMP Reports (ongoing weekly)
- Requests to Import Fill Packages (ongoing as needed)

9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - None.
10. **Community Interaction/Relations**
    - Rensselaer County asked for an update on the temporary detour road and whether it is still in use. Rensselaer County may reach for an additional update in October.
11. **NYSDEC/NYSDOH Comments**
    - Dave Herman (NYSDEC) – None.
    - Mark Sergott (NYSDOH) – None.
12. **Review of Action Items**
    - None.
13. **Other**
    - Next meeting: Wednesday, 9/7/22 at 10 am
    - Upcoming Vacations
      - G. Cummins out 9/1 through 9/9
      - B. Taylor out 9/19 through 9/23
    - Upcoming Site visits
      - None.
14. **Lessons Learned**
    - Coordination and communication with the PL E-20 project will be maintained. A lesson learned is to have daily check-ins with one person from each project, typically C. Atanasio from the Phase 1A project and B. Taylor from the PL E-20 project, to decide if a meeting is necessary. This allows for sufficient coordination between the projects and prevents conducting unnecessary meetings.

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** September 7, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

~~Gerald Cummins, National Grid~~
~~Brian Stearns, National Grid~~
John Spellman, NYSDEC
~~Scott Deyette, NYSDEC~~
Dave Herman, NYSDEC
~~Justin Deming, NYSDOH~~
Mark Sergott, NYSDOH
Adam Sherman, BC
Keith Bogatch, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
~~Brian Taylor, BC~~
Will Lindheimer, LRI
Jon Borrelli, LRI
~~Jon Castle, LRI~~
Minda Murray, LRI
~~Mike Evens, LRI~~
Brian King, HSE
~~Zachary Hill, HSE~~
Ben Gamache, LRI

Safety Minute – HSE/LRI

- Discussed a tragic event that occurred in Redfield, NY. A personal vehicle crashed into a fallen tree entangled with live power lines. Two people were electrocuted after they stepped on the fallen power lines. Once the incident was reported, National Grid took 30 minutes to shut the power down. Relay safety information that you may know to your friends and family to prevent such tragedies from occurring.

1. Health and Safety Update – HSE/LRI

- Weekly Update
  - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
  - Health and Safety – No incidents or injuries during the past week.
- COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.

2. Community Air Monitoring Update - HSE/LRI
   - No exceedances.
3. Site Security Update – LRI
   - Full-time security is on-going, no incidents or issues.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - Pipeline installation has progressed to within 40-feet south of the ISS area and will not progress further north until the remediation area is ready (anticipated to be the week of 9/12).
   - There has been increased coordination with PL E-20 project (daily check-ins and/or daily on-site meetings) as the work areas get closer together. LRI will coordinate with PL E-20 project team for locations where hardened crossings and/or air bridges are needed to cross installed pipeline.
   - *Refer to #7 for additional comments on schedule coordination.*
5. Project Administration - BC
   - Project Contact List
     - Scott Ryan (HSE) was added to the Project Contact List.
   - Permitting – No updates.
   - Previous Week's Action Items
     - No action items from the previous week.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - No upcoming RFIs to discuss.
     - A FO may be issued for additional asphalt pavement restoration along the PL E-20 gas line.
6. Work Activities (Completed and Upcoming) – LRI/BC

   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - (ongoing) CAMP implementation will continue.
        - ESC measures continue to be installed as work areas change (Area 2 excavation and ISS areas).
        - The construction entrance to and from the temporary bridge over the Wynantskill Creek and the temporary access road in Area 2 periodically gets filled with soil and mud from truck traffic and has been refreshed several times with new No. 3 stone.
        - Settlement, crack, and vibration monitoring has begun, and weekly submittals and SWPPP inspections are ongoing.
      - Upcoming
        - Work activities this week will include post-ISS excavation, backfilling, compaction and demolition of subsurface concrete.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed – Excavation and backfilling are 100% complete.
   - Upcoming
     - Concrete will be sent off-site for disposal/recycling.
     - Off-site disposal of soil containing tar-like material to Clean Earth (ESMI of NY) is anticipated to occur in October during or after the PL E-20 project generates additional waste while decommissioning the old gas pipe on Area 3.
     - *Refer to #6e for additional comments on Area 3 waste management.*

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - (ongoing) Backfilling and compaction.
   - Upcoming
     - Crushed stone restoration is anticipated to be begin next week.
     - Concrete loadout is delayed due to trucking/supply issues. The current plan is to mobilize a concrete crusher and to downsize the concrete to 6-inch minus. The resized concrete debris would then be suitable for transportation to Green Ridge Landfill and stockpiled material could be loaded out quicker. Mobilization of the concrete crusher to the Site and concrete crushing is anticipated to begin the week of September 12.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - (ongoing) Post-ISS excavation and off-site disposal of the material is anticipated to be completed this week.
     - (ongoing) Backfilling and compaction.
   - Upcoming
     - Crushed stone restoration is anticipated to begin next week.
     - Demobilization of the grout plant and material storage silos is anticipated to be completed the week of September 19.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - (ongoing) Loadout of waste and debris from post-ISS excavation.
     - Waste characterization samples were collected for analytical testing for additional waste tonnage to be sent to Green Ridge Landfill.
   - Upcoming
     - Area 3 C&D debris load out is upcoming pending approval from Clean Earth for blending of soil containing tar-like material. Load out is anticipated to begin in October.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed

- (ongoing) Continued import of crushed stone materials for temporary road construction (access around Excavation Area A and around ISS Area) and material staging areas.
- (ongoing) Import and placement of common fill to backfill the ISS Area.
- (ongoing) Import and placement of common fill to backfill Excavation Area A resumed today.

- Upcoming
  - None.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)

- Area 3 Completed/Upcoming
  - The remaining crushed stone cover on Area 3 will be completed after the PL E-20 project no longer needs access to this area.
- Area 2 Completed/Upcoming
  - Construction of site cover in Excavation Area A is tentatively planned for September after the PL E-20 gas line is installed.
  - Crushed stone restoration in the ISS Area is anticipated to begin next week.
  - Asphalt pavement restoration is anticipated to be begin in October.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - PL E-20 schedule coordination - The PL E-20 project is currently 40-feet south of the ISS footprint and is anticipating to begin installation in the ISS footprint starting the week of 9/12, pending the completion of remediation activities (waste loadout and backfilling) in the ISS footprint.
8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals.
     - Submittals 19 (vibration and crack monitoring results), 63 (compaction test results), and 73 (ISS QC test results) were received on 9/7.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly)
     - Requests to Import Fill Packages (ongoing as needed)
9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - None.
10. **Community Interaction/Relations**
    - None.
11. **NYSDEC/NYSDOH Comments**
    - Dave Herman (NYSDEC) – None.
    - Mark Sergott (NYSDOH) – None.
    - John Spellman (NYSDEC) – None.
12. **Review of Action Items**
    - Land to provide an update on the schedule of the asphalt pavement subcontractor.

- Land to contact the telecommunications service provider (Verizon) regarding restoring the utility line after construction activities have been completed in that area and relay the information to BC.
- PL E-20 project team to construct an air bridge/hardened crossing for construction vehicles to cross the installed pipeline.

13. Other
    - Next meeting: Wednesday, 9/14/22 at 10 am
    - Upcoming Vacations
        - G. Cummins out 9/1 through 9/9
        - B. Taylor out 9/19 through 9/23
    - Upcoming Site visits
        - None.
14. Lessons Learned
    - Coordination and communication with the PL E-20 project will be maintained. It is important for the site safety officers to coordinate with one another each day to ensure construction activities performed in close proximity can be carried out safely. Stop Work Authority can always be used when work cannot be performed safely.

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** September 14, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
~~Brian Stearns, National Grid~~
~~John Spellman, NYSDEC~~
Scott Deyette, NYSDEC
~~Dave Herman, NYSDEC~~
~~Justin Deming, NYSDOH~~
~~Mark Sergott, NYSDOH~~
Adam Sherman, BC
Keith Bogatch, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
Brian Taylor, BC
Will Lindheimer, LRI
Jon Borrelli, LRI
~~Jon Castle, LRI~~
~~Minda Murray, LRI~~
Mike Evens, LRI
Ben Gamache, LRI
Brian King, HSE
~~Zachary Hill, HSE~~
~~Scott Ryan, HSE~~

Safety Minute – HSE/LRI

- Discussed the occurrence of accidents and injuries throughout the lifetime of a project. Most accidents and injuries occur during the end of a project. There should be increased attention to safety towards the end of a project to prevent complacency and normalization. Normalization can be described as a person's lowered awareness to risks associated with a task as that task is repeatedly performed and no accidents or injuries occur.

1. Health and Safety Update – HSE/LRI

- Weekly Update
  - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
  - Health and Safety – No incidents or injuries during the past week.
- COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.

2. Community Air Monitoring Update - HSE/LRI
   - No exceedances.
3. Site Security Update – LRI
   - Full-time security is on-going, no incidents or issues.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - Pipeline installation has progressed into the ISS Area. Excavation of the pipeline trench through the ISS Area to the gas regulator station was completed as of yesterday.
   - There has been increased coordination with PL E-20 project (daily check-ins and/or daily on-site meetings) as the projects work in the same area. LRI will coordinate with PL E-20 project team for locations where hardened crossings and/or air bridges are needed to cross installed pipeline.
   - *Refer to #7 for additional comments on schedule coordination.*
5. Project Administration - BC
   - Project Contact List – No updates.
   - Permitting – No updates.
   - Previous Week's Action Items
     - Land to provide an update on the schedule of the asphalt pavement subcontractor.
       - No updates.
     - Land to contact the telecommunications service provider (Verizon) regarding restoring the utility line after construction activities have been completed in that area and relay the information to BC.
       - No updates.
     - PL E-20 project team to construct an air bridge/hardened crossing for construction vehicles to cross the installed pipeline.
       - The PL E-20 project team constructed the hardened crossing last week.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - No upcoming RFIs to discuss.
     - FO 4 will be issued for modifications to the asphalt pavement restoration.
6. Work Activities (Completed and Upcoming) – LRI/BC
   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - (ongoing) CAMP implementation will continue.
        - ESC measures continue to be installed as work areas change (Area 2 excavation and ISS areas).
        - The construction entrance to and from the temporary bridge over the Wynantskill Creek and the temporary access road in Area 2 periodically gets filled with soil and mud from truck traffic and has been refreshed several times with new No. 3 stone.

- Settlement, crack, and vibration monitoring has begun, and weekly submittals and SWPPP inspections are ongoing.

- Upcoming
  - Work activities this week will include demolition of concrete debris and equipment demobilization.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed – Excavation and backfilling are 100% complete.
   - Upcoming
     - Concrete debris will be processed and sent off-site for disposal/recycling (tentative to be completed next week).
     - Off-site disposal of soil containing tar-like material to Clean Earth (ESMI of NY) is anticipated to occur in October during or after the PL E-20 project generates additional waste while decommissioning the old gas pipe on Area 3.
     - *Refer to #6e for additional comments on Area 3 waste management.*

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - Crushed stone restoration (and associated compaction testing) to be completed this week.
   - Upcoming
     - *Refer to #6g for additional comments on Area 2 Excavation restoration activities.*

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - Post-ISS excavation and off-site disposal of the material is completed.
     - Backfilling and compaction of imported common fill is completed.
   - Upcoming
     - Crushed stone restoration is anticipated to begin next week.
     - Demobilization of the grout plant and material storage silos is anticipated to be completed the week of September 26.
     - *Refer to #6g for additional comments on ISS restoration activities.*

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - (ongoing) Loadout of concrete debris. The concrete crusher has been mobilized to the site and the resized debris will be transported off-site to Green Ridge Landfill over the next two weeks.
   - Upcoming
     - Area 3 concrete debris load out is anticipated to begin in October.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)

- Completed
  - (ongoing) Continued import of crushed stone materials for temporary road construction (access around Excavation Area A and around ISS Area) and material staging areas.
  - Import and placement of common fill to backfill the ISS Area is completed.
  - Import and placement of common fill and crushed stone to backfill Excavation Area A is completed.
- Upcoming
  - Import and placement of crushed stone in the ISS Area.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)

- Area 3 Completed/Upcoming
  - The remaining crushed stone cover on Area 3 will be completed after the PL E-20 project no longer needs access to this area.
  - Fencing restoration in Area 3 scheduled for October 30.
- Area 2 Completed/Upcoming
  - Construction of site cover in Excavation Area A was completed on 9/13.
  - Crushed stone restoration in the ISS Area is anticipated to begin next week.
  - Asphalt pavement restoration is anticipated to be begin in October.
  - Paving restoration in the ISS Area and in Excavation Area A is anticipated to begin the week of October 10.
  - Relocation of fencing and jersey barriers to King Road is anticipated to begin the week of October 10.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - PL E-20 schedule coordination - The PL E-20 project is currently installing piping within the ISS footprint. Mobilization of the hydro pressure test will begin on Monday (8/19). Tie-in activities will begin the week of September 26 and gas will be run through the pipe.
8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals.
     - Submittals 19 (vibration and crack monitoring results), 50 (analytical test results), 63 (compaction test results), 73 (ISS QC test results), and 86 (waste characterization results) were received on 9/13.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly)
     - Requests to Import Fill Packages (ongoing as needed)
9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - None.
10. **Community Interaction/Relations**
    - None.
11. **NYSDEC/NYSDOH Comments**

- Scott Deyette (NYSDEC) – Asked what waste streams were remaining. Jon Borelli responded that residual post-ISS swell in Area 2, concrete debris in Area 2 and in Area 3, and tar-like material in Area 3 were the remaining waste streams.

12. Review of Action Items
    - BC to issue Field Order 4.
    - Land and BC to generate a punch list.
    - Land to contact the telecommunications service provider (Verizon) regarding restoring the utility line after construction activities have been completed in that area and relay the information to BC.
13. Other
    - Next meeting: Wednesday, 9/21/22 at 10 am
    - Upcoming Vacations
        - B. Taylor out 9/19 through 9/23
        - G. Cummins out 10/6 through 10/11
    - Upcoming Site visits
        - None.
14. Lessons Learned
    - The PL E-20 project and Phase 1A Remediation project do not use the same radios. Land personnel working on the Phase 1A Remediation project will maintain communication with the PL E-20 project personnel through Matt Thompson (LRI).

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
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T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** September 21, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
~~Brian Stearns, National Grid~~
John Spellman, NYSDEC
Scott Deyette, NYSDEC
~~Dave Herman, NYSDEC~~
~~Justin Deming, NYSDOH~~
Mark Sergott, NYSDOH
Adam Sherman, BC
Keith Bogatch, BC
Ally Kenny, BC
Charles Atanasio, BC
Adam Gutta, BC
~~Nia Gilliam, BC~~
~~Brian Taylor, BC~~
Jesse Braun, BC
Will Lindheimer, LRI
Jon Borrelli, LRI
~~Jon Castle, LRI~~
~~Minda Murray, LRI~~
Mike Evens, LRI
Brian King, HSE
~~Zachary Hill, HSE~~
~~Scott Ryan, HSE~~

Safety Minute – HSE/LRI

- Discussed the Dunning-Kruger effect, also referred to as "overconfident incompetence" or "having a false sense of being above average" – this is a cognitive bias where people believe they are more capable than they actually are. This inability to realize one's own lack of ability is especially dangerous in environmental construction because underestimating hazards or overestimating one's skills can lead to serious health and safety incidents. This may also cause people to reject feedback relating to health and safety (e.g., "I've done this a hundred times before, trust me").

1. Health and Safety Update – HSE/LRI

- Weekly Update
  - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.

  - Health and Safety – No incidents or injuries during the past week.
- COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.

2. Community Air Monitoring Update – HSE/LRI
   - No exceedances.
3. Site Security Update – LRI
   - Full-time security is on-going, no incidents or issues.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - National Grid Gas has completed leak and pressure testing on the new gas line. They will be tying into the gas regulator station in the coming weeks and retiring (decommissioning) the old line.
   - *Refer to #7 for additional comments on schedule coordination.*
5. Project Administration - BC
   - Project Contact List – No updates.
   - Permitting – No updates.
   - Previous Week's Action Items
     - Land to provide an update on the schedule of the asphalt pavement subcontractor.
       - No updates.
     - Land to contact the telecommunications service provider (Verizon) regarding restoring the utility line after construction activities have been completed in that area and relay the information to BC.
       - No updates.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - No upcoming RFIs to discuss.
6. Work Activities (Completed and Upcoming) – LRI/BC
   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - (ongoing) CAMP implementation will continue.
        - ESC measures continue to be installed as work areas change (Area 2 excavation and ISS areas).
        - Decontaminated equipment such as the Linkbelt-800 and concrete crusher. The Linkbelt-800 was demobilized last week.
        - Concrete crusher was mobilized to the Site last week. Concrete debris from Area 2, Area 3, and the PLE-20 project has been crushed. All piles are segregated, and loadout was started last week (loadout to be completed next week).
        - Settlement, crack, and vibration monitoring has begun, and weekly submittals and SWPPP inspections are ongoing.

- Upcoming
  - Work activities this week will include demolition of concrete debris and equipment demobilization.
  - Mobilizing a crane next week to demobilize grout plant components (e.g., silos).

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed – Excavation and backfilling are 100% complete.
   - Upcoming
     - Off-site disposal of soil containing tar-like material to Clean Earth (ESMI of NY) is anticipated to occur in October during or after the PL E-20 project generates additional waste while decommissioning the old gas pipe on Area 3.
     - *Refer to #6e for additional comments on Area 3 waste management.*

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed – Excavation is 100% complete.
   - Upcoming
     - Backfilling and grading of the new gas line corridor within Area 2 planned for next week.
     - *Refer to #6g for additional comments on Area 2 Excavation restoration activities.*

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - Post-ISS excavation and off-site disposal of the material is completed.
     - Backfilling and compaction of imported common fill is completed.
   - Upcoming
     - Demobilization of the grout plant and material storage silos is anticipated to be completed the week of 9/26.
     - *Refer to #6g for additional comments on ISS restoration activities.*

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - (ongoing) Loadout of resized concrete debris for off-site disposal at Green Ridge Landfill tentative to be completed next week.
   - Upcoming
     - Waste characterization sampling of the water storage frac tank planned for this week.
     - Crushed concrete debris and ISS swell materials loadout to be completed next week.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - (ongoing) Continued import of crushed stone materials for temporary road construction (access around Excavation Area A and around ISS Area) and material staging areas.
     - Import and placement of common fill to backfill the ISS Area is completed.

- Import and placement of common fill and crushed stone to backfill Excavation Area A is completed.

- Upcoming
  - Import and placement of crushed stone in the ISS Area.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)

- Area 3 Completed/Upcoming
  - The remaining crushed stone cover on Area 3 will be completed after the PL E-20 project no longer needs access to this area.
  - Fencing restoration in Area 3 scheduled for 10/30.
- Area 2 Completed/Upcoming
  - Construction of site cover in Excavation Area A was completed on 9/13.
  - Crushed stone restoration in the ISS Area is anticipated to begin next week.
  - Asphalt pavement restoration is anticipated to be begin in October.
  - Paving restoration in the ISS Area and in Excavation Area A is anticipated to begin the week of 10/10.
  - Relocation of fencing and jersey barriers to King Road is anticipated to begin the week of 10/10.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - None.
8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals.
     - Submittals 19 (vibration and crack monitoring results), 87 (approval from Green Ridge Landfill for updated waste profile quantity), and 91 (countersigned manifests from Green Ridge Landfill) were received on 9/21.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly)
     - Requests to Import Fill Packages (ongoing as needed)
9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - None.
10. **Community Interaction/Relations**
    - None.
11. **NYSDEC/NYSDOH Comments**
    - None.
12. **Review of Action Items**
    - BC to issue Field Order 5 for miscellaneous additional site restoration activities.
    - Land and BC to generate a punch list.
    - Land to contact the telecommunications service provider (Verizon) regarding restoring the utility line after construction activities have been completed in that area and relay the information to BC.

13. Other
    - Next meeting: Wednesday, 9/28/22 at 10 am
    - Upcoming Vacations
        - B. Taylor out 9/19 through 9/23
        - G. Cummins out 10/6 through 10/12
    - Upcoming Site visits
        - None.
14. Lessons Learned
    - Implementation of “goal-posts” to alert truck drivers of power lines when traversing the Site has worked out really well and should be incorporated as a standard practice. “If you want something to be done correctly, make it easy to follow”.

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
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T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** September 28, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
~~Brian Stearns, National Grid~~
John Spellman, NYSDEC
Scott Deyette, NYSDEC
Dave Herman, NYSDEC
~~Justin Deming, NYSDOH~~
Mark Sergott, NYSDOH
Adam Sherman, BC
Keith Bogatch, BC
Ally Kenny, BC
Charles Atanasio, BC
~~Adam Gutta, BC~~
Nia Gilliam, BC
Brian Taylor, BC
~~Jesse Braun, BC~~
Michael Davis, BC
~~Will Lindheimer, LRI~~
Jon Borrelli, LRI
~~Jon Castle, LRI~~
~~Minda Murray, LRI~~
Mike Evens, LRI
Brian King, HSE
~~Zachary Hill, HSE~~
~~Scott Ryan, HSE~~

Safety Minute – HSE/LRI

- Discussed preparation for critical lifts which includes good communication, teamwork and professionalism. Everyone had their defined roles and a meeting was held prior to performing the critical lift today.

1. Health and Safety Update – HSE/LRI

- Weekly Update
  - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
  - Health and Safety – No incidents or injuries during the past week.
- COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.

2. Community Air Monitoring Update – HSE/LRI
   - No exceedances.
3. Site Security Update – LRI
   - Full-time security is on-going, no incidents or issues.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - National Grid Gas has tied the new gas line into the gas regulator station and the gas line is now in service. The old gas line is anticipated to be decommissioned this week. J Mullen & Sons and Land are coordinating with each other on the installation of the hardened crossing and the backfilling of the remaining trench in the ISS Area this week. If necessary, inquire with Dig Safe (811) prior to excavating.
   - *Refer to #7 for additional comments on schedule coordination.*
5. Project Administration - BC
   - Project Contact List
     - Michael Davis (BC) will be added to the Project Contact List.
   - Permitting – No updates.
   - Previous Week's Action Items
     - BC to issue Field Order 5 for miscellaneous additional site restoration activities.
       - BC had issued Field Order 5 to LRI.
     - Land to contact the telecommunications service provider (Verizon) regarding restoring the utility line after construction activities have been completed in that area and relay the information to BC.
       - No updates.
     - Land and BC to generate a punch list.
       - BC has generated and sent LRI a punch list.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - No upcoming RFIs to discuss.
6. Work Activities (Completed and Upcoming) – LRI/BC

   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well de-commissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
   - Completed
     - (ongoing) CAMP implementation will continue.
     - (ongoing) Demobilization of grout plant components.
     - ESC measures continue to be installed as work areas change.
     - Decontaminated equipment such as the Linkbelt-800 and concrete crusher. The Linkbelt-800 was demobilized last week.
     - Concrete crusher was mobilized to the Site last week. Concrete debris from Area 2, Area 3, and the PLE-20 project has been crushed.

  - Settlement, crack, and vibration monitoring has begun, and weekly submittals and SWPPP inspections are ongoing.
- Upcoming
  - Continue with temporary controls, monitoring, decontamination/demobilization activities.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
- Completed – Excavation and backfilling are 100% complete.
- Upcoming
  - Off-site disposal of soil containing tar-like material to Clean Earth (ESMI of NY) is anticipated to occur in October during or after the PL E-20 project generates additional waste while decommissioning the old gas line on Area 3.
  - *Refer to #6e for additional comments on Area 3 waste management.*

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
- Completed – Excavation and backfilling is 100% complete.
- Upcoming
  - Grading of the new gas line corridor within Area 2 planned for this week.
  - *Refer to #6g for additional comments on Area 2 Excavation restoration activities.*

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
- Completed
  - (ongoing) Demobilization of grout plant components anticipated to be completed next week.
  - Post-ISS excavation and off-site disposal of the material is completed.
  - Backfilling and compaction of imported common fill is completed.
- Upcoming
  - Backfilling and compaction of imported crusher run and restoration activities within the ISS Area are tentatively planned for this week.
  - *Refer to #6g for additional comments on ISS restoration activities.*

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
- Completed
  - (ongoing) Loadout of resized concrete debris from Area 3 for off-site disposal at Green Ridge Landfill tentative to be completed this week.
  - Waste characterization sampling of the water storage frac tank.
- Upcoming
  - Loadout of tar-like material in Area 3 for off-site disposal at Clean Earth is tentative to be completed next week.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
- Completed

- (ongoing) Continued import of crushed stone materials for temporary road construction (access around Excavation Area A and around ISS Area) and material staging areas.
- Import of common fill to backfill the ISS Area is completed.
- Import of common fill and crushed stone to backfill Excavation Area A and Area 3 excavation is completed.
- Request to Import form for common fill import has been approved for an additional 2,000 cubic yards (12,000 cubic yards total) by the NYSDEC in an email dated 9/26.
- Request to Import form for Type II subbase import has been approved for an additional 1,000 cubic yards (3,500 cubic yards total) by the NYSDEC in an email dated 9/26.

- Upcoming
  - Import and placement of crushed stone in the ISS Area.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)

- Area 3 Completed/Upcoming
  - The remaining crushed stone cover on Area 3 will be completed after the PL E-20 project no longer needs access to this area.
  - Fencing restoration in Area 3 scheduled for next week after the PL E-20 project no longer needs access to this area.
- Area 2 Completed/Upcoming
  - Construction of site cover in Excavation Area A was completed on 9/13.
  - Crushed stone restoration in the ISS Area is anticipated to begin next week.
  - Asphalt pavement restoration is anticipated to be begin the week of 10/17.
  - Relocation of fencing and jersey barriers to King Road is anticipated to begin the week of 10/17.
  - Office trailers and the temporary bridge are anticipated to be demobilized at the end of October. Need to coordinate with fill import from the Cohoes (Linden Street) Site.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - None.
8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals.
     - Submittals 19 (vibration and crack monitoring results), 73 (ISS QC test results), and 86 (waste characterization analytical results) were received on 9/28.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly)
     - Requests to Import Fill Packages (ongoing as needed)
9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - Minda Murray will reach out to City of Troy when King Road is restored.
10. **Community Interaction/Relations**
    - None.

11. NYSDEC/NYSDOH Comments
    - John Spellman – Commented if there are any other excavations that are planned that are outside the scope of work. BC responds there is a section of pipe on the boundary of Area 2 and Area 3 that will be cut and capped.
    - Mark Sergott – No comments.
    - Scott Deyette – No comments.
    - Dave Herman – No comments.
12. Review of Action Items
    - Land to issue a Change Order Request for Field Order 4.
13. Other
    - Next meeting: Wednesday, 10/5/22 at 10 am
    - Upcoming Vacations
        - G. Cummins out 10/6 through 10/12
        - A. Sherman out 10/7 and 10/28
    - Upcoming Site visits
        - None.
14. Lessons Learned
    - The silo demobilization coordination meeting this morning was very detailed.

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
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T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** October 5, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
~~Brian Stearns, National Grid~~
John Spellman, NYSDEC
~~Scott Deyette, NYSDEC~~
~~Dave Herman, NYSDEC~~
~~Justin Deming, NYSDOH~~
Mark Sergott, NYSDOH
Adam Sherman, BC
Keith Bogatch, BC
~~Ally Kenny, BC~~
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
Brian Taylor, BC
~~Jesse Braun, BC~~
Michael Davis, BC
Will Lindheimer, LRI
Jon Borrelli, LRI
~~Jon Castle, LRI~~
Minda Murray, LRI
Mike Evens, LRI
Brian King, HSE
~~Zachary Hill, HSE~~
~~Scott Ryan, HSE~~

Safety Minute – HSE/LRI

- Discussed tragic recent events/incidents and lessons we can learn from them. Construction can be a dangerous industry so always stay on your feet regarding safety.

1. Health and Safety Update – HSE/LRI

- Weekly Update
  - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
  - Health and Safety – No incidents or injuries during the past week.
- COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.

2. Community Air Monitoring Update – HSE/LRI
   - No exceedances.
3. Site Security Update – LRI
   - Full-time security is on-going, no incidents or issues.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - Demobilization activities are ongoing and the PL E-20 project will be complete this week.
   - *Refer to #7 for additional comments on schedule coordination.*
5. Project Administration - BC
   - Project Contact List – No updates.
   - Permitting – No updates.
   - Previous Week's Action Items
     - Land to contact the telecommunications service provider (Verizon) regarding restoring the utility line after construction activities have been completed in that area and relay the information to BC.
       - Mike Evens (LRI) met with two Verizon representatives last week. Verizon will restore this line, although no date was set.
     - Land to issue a Change Order Request for Field Order 4 (Modifications to Asphalt Restoration).
       - No updates.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - No upcoming RFIs to discuss.
     - Field Order 6 (Re-use of Fill Materials from the Cohoes (Linden Street) Site) has been issued to LRI.
6. Work Activities (Completed and Upcoming) – LRI/BC

   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - (ongoing) CAMP implementation will continue.
        - Demobilization of grout plant components.
        - ESC measures continue to be installed as work areas change.
        - Decontaminate equipment such as the Linkbelt-800 and concrete crusher. The Linkbelt-800 was demobilized last week.
        - Settlement, crack, and vibration monitoring has begun, and weekly submittals and SWPPP inspections are ongoing.
      - Upcoming
        - Continue with temporary controls, monitoring, decontamination/demobilization activities.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed – Excavation and backfilling are 100% complete.
   - Completed – Off-site disposal of soil containing tar-like material to Clean Earth (ESMI of NY) has been completed.
   - Upcoming
     - None.
     - *Refer to #6e for additional comments on Area 3 waste management.*

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed – Excavation and backfilling is 100% complete.
   - Upcoming
     - None.
     - *Refer to #6g for additional comments on Area 2 Excavation restoration activities.*

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - Demobilization of grout plant components has been completed.
     - (ongoing) Compaction of common fill and restoration activities within the ISS Area.
   - Upcoming
     - None.
     - *Refer to #6g for additional comments on ISS restoration activities.*

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - (ongoing) Loadout of resized concrete debris from Area 3 for off-site disposal at Green Ridge Landfill tentative to be completed this week.
     - Analytical results of water contents in the storage frac tank have been received and a waste facility has accepted the waste.
   - Upcoming
     - Loadout of wastewater from the storage frac tank is anticipated to be completed next week.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - (ongoing) Continued import and placement of Type II subbase material for restoration activities in Area 2.
   - Upcoming
     - Import and staging of clean fill materials from the Cohoes (Linden Street) Site for future re-use as backfill.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
   - Area 3 Completed/Upcoming

  - Completed – The remaining crushed stone cover on Area 3 is complete.
  - Fencing restoration in Area 3 scheduled for this week.
- Area 2 Completed/Upcoming
  - Crushed stone restoration in the ISS Area is anticipated to begin this week.
  - Asphalt pavement restoration is anticipated to begin next week.
  - Relocation of fencing and jersey barriers to King Road and the return of traffic to King Road is anticipated to begin the week of 10/17.
  - Office trailers and the temporary bridge are anticipated to be demobilized at the end of October. Need to coordinate with fill import from the Cohoes (Linden Street) Site.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - None.
8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals.
     - Submittals 19 (settlement and crack monitoring results), 50 (analytical test results for water contents in frac tank), 73 (ISS QC test results), and 87 (written communication from Green Ridge Landfill confirming waste is acceptable), and 91 (counter-signed manifests and weight tickets from ESMI) were received on 10/4.
     - Minda Murray (LRI) has submitted the final CAMP data through September for the construction completion report.
     - Post-construction assessment of the former E-Lot building is tentatively planned for October 25.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly)
     - Requests to Import Fill Packages (ongoing as needed)
9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - Minda Murray (LRI) will reach out to the City of Troy when King Road is restored.
10. **Community Interaction/Relations**
    - None.
11. **NYSDEC/NYSDOH Comments**
    - John Spellman – No comments.
    - Mark Sergott – No comments.
12. **Review of Action Items**
    - None.

13. **Other**
    - Next meeting: Wednesday, 10/12/22 at 10 am
    - Upcoming Vacations
        - G. Cummins out 10/6 through 10/12
        - A. Sherman out 10/10 and 10/28
    - Upcoming Site visits
        - None.
14. **Lessons Learned**
    - None this week.

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
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T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** October 12, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
~~Brian Stearns, National Grid~~
John Spellman, NYSDEC
~~Scott Deyette, NYSDEC~~
~~Dave Herman, NYSDEC~~
~~Justin Deming, NYSDOH~~
~~Mark Sergott, NYSDOH~~
Adam Sherman, BC
Keith Bogatch, BC
Ally Kenny, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
Brian Taylor, BC
~~Jesse Braun, BC~~
~~Michael Davis, BC~~
Will Lindheimer, LRI
~~Jon Borrelli, LRI~~
~~Jon Castle, LRI~~
~~Minda Murray, LRI~~
Mike Evens, LRI
~~Brian King, HSE~~
~~Zachary Hill, HSE~~
Scott Ryan, HSE

Safety Minute – HSE/LRI

- Discussed importance of stretching prior to beginning activities at work. Stretching can avoid damage to soft tissue, improve posture and technique, and can prevent injuries on the job. Stretch to the point that is comfortable, do not bounce when stretching, breathe with a slow, normal rhythm, and drink plenty of water.

1. Health and Safety Update – HSE/LRI

- Weekly Update
  - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
  - Health and Safety – No incidents or injuries during the past week.

- COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.

2. Community Air Monitoring Update – HSE/LRI
   - No exceedances.
3. Site Security Update – LRI
   - Full-time security is on-going, no incidents or issues.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - The PL E-20 project is completed.
5. Project Administration - BC
   - Project Contact List – No updates.
   - Permitting – No updates.
   - Previous Week's Action Items
     - Land to issue a Change Order Request (COR) for Field Order 4 (Modifications to Asphalt Restoration), Field Order 5 (Additional Site Tasks), and Field Order 6 (Re-use of Fill Materials from the Cohoes (Linden Street) Site).
       - Land will issue CORs this week.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - No upcoming RFIs/FOs to discuss.
6. Work Activities (Completed and Upcoming) – LRI/BC

   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - (ongoing) CAMP implementation will continue.
        - Demobilization of grout plant components.
        - ESC measures continue to be installed as work areas change.
        - Settlement, crack, and vibration monitoring continues, and weekly submittals and SWPPP inspections are ongoing.
      - Upcoming
        - Continue with temporary controls, monitoring, decontamination/demobilization activities.

   b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
      - Completed – Excavation and backfilling are 100% complete.
      - Completed – Off-site disposal of excavation spoils has been completed.
      - Upcoming
        - None.

   c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)

- Completed – Excavation and backfilling is 100% complete.
- Completed – Off-site disposal of excavation spoils has been completed.
- Upcoming
  - None.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
- Completed
  - All ISS activities have been completed.
- Upcoming
  - None.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
- Completed
  - Loadout of resized concrete debris from Area 3 for off-site disposal at Green Ridge Landfill.
  - Loadout of wastewater from the storage frac tank has been completed.
- Upcoming
  - Loadout of asphalt material.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
- Completed
  - (ongoing) Continued import and placement of Type II Subbase material for restoration activities in Area 2.
- Upcoming
  - Import and staging of clean fill materials from the Cohoes (Linden Street) Site for future re-use as backfill in Phase 1B Remedial Action.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
- Area 3 Completed/Upcoming
  - Completed – The crushed surface cover restoration is complete on Area 3.
  - Fencing restoration in Area 3 is anticipated for the week of 10/17.
- Area 2 Completed/Upcoming
  - (ongoing) Crushed stone surface cover restoration in the ISS Area.
  - Asphalt pavement restoration is anticipated to begin this week.
  - Relocation of fencing and jersey barriers to King Road and the return of traffic to King Road is anticipated to begin the week of 10/17.
  - Office trailers and the temporary bridge are anticipated to be demobilized at the end of October to early November. Need to coordinate with fill import from the Cohoes (Linden Street) Site.

7. Project Schedule - LRI

- Baseline Schedule Updates/Schedule Impacts
  - None.

8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals.
     - Submittals 19 (settlement, vibration, and crack monitoring results), 88 (manifest for Blue Diamond Trucking), and 90 (weight tickets for the month of September), and 91 (counter-signed manifests for the month of September) were received on 10/12.
     - Post-construction assessment of the former E-Lot building is tentatively planned for October 25.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly).
     - Requests to Import Fill Packages (ongoing as needed).
9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - Minda Murray (LRI) will reach out to the City of Troy and County Waste when King Road is restored.
10. **Community Interaction/Relations**
    - None.
11. **NYSDEC/NYSDOH Comments**
    - John Spellman (NYSDEC) – No comments.
12. **Review of Action Items**
    - None.
13. **Other**
    - Next meeting: Wednesday, 10/19/22 at 10 am
    - Upcoming Vacations
      - A. Sherman out 10/28
    - Upcoming Site visits
      - None.
14. **Lessons Learned**
    - None this week.

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** October 19, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
~~Brian Stearns, National Grid~~
~~John Spellman, NYSDEC~~
~~Scott Deyette, NYSDEC~~
~~Dave Herman, NYSDEC~~
~~Justin Deming, NYSDOH~~
~~Mark Sergott, NYSDOH~~
Adam Sherman, BC
Keith Bogatch, BC
~~Ally Kenny, BC~~
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
~~Brian Taylor, BC~~
~~Jesse Braun, BC~~
~~Michael Davis, BC~~
~~Will Lindheimer, LRI~~
Jon Borrelli, LRI
~~Jon Castle, LRI~~
~~Minda Murray, LRI~~
Mike Evens, LRI
Brian King, HSE
~~Zachary Hill, HSE~~
~~Scott Ryan, HSE~~

Safety Minute – HSE/LRI

- Discussed COVID symptoms (congestion, cough, diarrhea, fatigue, fever/chills, headache, vomiting, loss of taste and smell, breathing difficulty, sore throat). Do not come to the site if you have symptoms. The holiday season is coming up which is another reason to prevent unnecessary safety risks. Preventing unnecessary safety risks on the job site will enable you to continue to provide for your family, prevent potential injuries to your coworkers, and build a safety reputation for you and your company.

1. Health and Safety Update – HSE/LRI

- Weekly Update
  - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
  - Health and Safety – No incidents or injuries during the past week.

- COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.

2. Community Air Monitoring Update – HSE/LRI
   - No exceedances.
3. Site Security Update – LRI
   - Full-time security is on-going, no incidents or issues.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - The PL E-20 project is completed.
5. Project Administration - BC
   - Project Contact List – No updates.
   - Permitting – No updates.
   - Previous Week's Action Items
     - Land has issued a Change Order Request (COR) for Field Order 4 (Modifications to Asphalt Restoration).
     - Land to issue a Change Order Request (COR) for Field Order 5 (Additional Site Tasks) and Field Order 6 (Re-use of Fill Materials from the Cohoes (Linden Street) Site).
       - Land will issue CORs this week.
     - No updates on the telecommunications service provider (Verizon) restoring the utility line. Verizon will restore this line, although no date was set.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - No upcoming RFIs/FOs to discuss.
6. Work Activities (Completed and Upcoming) – LRI/BC

   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - (ongoing) CAMP implementation will continue.
        - Demobilization of grout plant components.
        - ESC measures continue to be installed as work areas change.
        - Settlement, crack, and vibration monitoring continues, and weekly submittals and SWPPP inspections are ongoing.
      - Upcoming
        - Continue with temporary controls, monitoring, decontamination/demobilization activities.

   b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
      - Completed – Excavation and backfilling are 100% complete.
      - Completed – Off-site disposal of excavation spoils has been completed.

- Upcoming
  - None.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed – Excavation and backfilling is 100% complete.
   - Completed – Off-site disposal of excavation spoils has been completed.
   - Upcoming
     - None.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - ISS activities have been completed.
   - Upcoming
     - None.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - Loadout of wastewater from the storage frac tank has been completed.
   - Upcoming
     - Loadout of asphalt material.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - (ongoing) Continued import and placement of Type II Subbase material for restoration activities in Area 2.
   - Upcoming
     - Import and staging of clean fill materials from the Cohoes (Linden Street) Site for future re-use as backfill in Phase 1B Remedial Action is anticipated to begin on 10/20.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
   - Area 3 Completed/Upcoming
     - Completed – The crushed surface cover restoration is complete on Area 3.
     - Fencing restoration in Area 3 is anticipated for the week of 10/24.
   - Area 2 Completed/Upcoming
     - (ongoing) Crushed stone surface cover restoration in the ISS Area.
     - Asphalt pavement restoration was completed on 10/14. There is a section of wet subbase underneath the asphalt that resulted in defective asphalt pavement in the vicinity of the Area A excavation. This section of asphalt is planned to be repaired later this week or early next week.
     - Relocation of fencing and jersey barriers to King Road and the return of traffic to King Road is anticipated to begin the week of 10/24.

- Office trailers and the temporary bridge are anticipated to be demobilized at the end of October to early November. Need to coordinate with fill import from the Cohoes (Linden Street) Site.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - None.
8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals.
     - Submittals 19 (settlement, vibration, and crack monitoring results) and 63 (compaction test results for Type II Subbase) were received on 10/19.
     - Post-construction assessment of the former E-Lot building is tentatively planned for October 25.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly).
     - Requests to Import Fill Packages (ongoing as needed).
9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - Minda Murray (LRI) will reach out to the City of Troy and County Waste when King Road is restored.
10. **Community Interaction/Relations**
    - None.
11. **NYSDEC/NYSDOH Comments**
    - No comments.
12. **Review of Action Items**
    - None.
13. **Other**
    - Next meeting: Wednesday, 10/26/22 at 10 am
    - Upcoming Vacations
      - A. Sherman out 10/28
    - Upcoming Site visits
      - None.
14. **Lessons Learned**
    - Allowing the schedule to drive the paving of King Road resulted in paving on questionable subbase that affected the quality of the work.

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** October 26, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
~~Brian Stearns, National Grid~~
John Spellman, NYSDEC
~~Scott Deyette, NYSDEC~~
~~Dave Herman, NYSDEC~~
~~Justin Deming, NYSDOH~~
Mark Sergott, NYSDOH
~~Adam Sherman, BC~~
Keith Bogatch, BC
Ally Kenny, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
Brian Taylor, BC
~~Jesse Braun, BC~~
~~Michael Davis, BC~~
Will Lindheimer, LRI
Jon Borrelli, LRI
~~Jon Castle, LRI~~
~~Minda Murray, LRI~~
~~Mike Evens, LRI~~
~~Brian King, HSE~~
~~Zachary Hill, HSE~~
Scott Ryan, HSE

Safety Minute – HSE/LRI

- Discussed spotting. There is use of heavy equipment and high truck traffic on the site. Operating heavy equipment (backing in) can have hazards. Hazards include increased blind spots and damage/injury. Mitigation of these hazards include eliminating backing in as much as possible, altering the set-up of tasks, completing a walk around your vehicle prior to backing up, installing back up cameras on vehicles and equipment, using a spotter (understand additional hazards of having a spotter), and placing protective barriers around objects to prevent struck-by accidents. Elimination of the hazard should always be the first choice.

1. Health and Safety Update – HSE/LRI
   - Weekly Update
     - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
     - Health and Safety – No incidents or injuries during the past week.
   - COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.
2. Community Air Monitoring Update – HSE/LRI
   - No exceedances.
3. Site Security Update – LRI
   - Full-time security is on-going, no incidents or issues.
   - No indications of illicit activity or illegal dumping.
4. PL E-20 Project Coordination – NG/BC
   - The PL E-20 project is completed.
5. Project Administration - BC
   - Project Contact List – No updates.
   - Permitting – No updates.
   - Previous Week's Action Items
     - Land has issued a Change Order Request (COR) for Field Order 4 (Modifications to Asphalt Restoration).
     - Land to issue a Change Order Request (COR) for Field Order 5 (Additional Site Tasks) and Field Order 6 (Re-use of Fill Materials from the Cohoes (Linden Street) Site).
     - No updates on the telecommunications service provider (Verizon) restoring the utility line. Verizon will restore this line, although no date was set.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - No upcoming RFIs/FOs to discuss.
6. Work Activities (Completed and Upcoming) – LRI/BC
   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - (ongoing) CAMP implementation will continue.
        - Demobilization of grout plant completed this week.
        - ESC measures continue to be monitored and repaired as needed.
        - Settlement, crack, and vibration monitoring continues, and weekly submittals and SWPPP inspections are ongoing.
        - Post-construction assessment of the former E-Lot building was completed on 10/25.
      - Upcoming
        - Continue with temporary controls, monitoring, decontamination/demobilization activities.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - Excavation and backfilling are 100% complete.
     - Off-site disposal of excavation spoils has been completed.
   - Upcoming
     - None.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - Excavation and backfilling are 100% complete.
     - Off-site disposal of excavation spoils has been completed.
   - Upcoming
     - None.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - All ISS activities have been completed.
   - Upcoming
     - None.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - None.
   - Upcoming
     - Loadout of asphalt material. Loadout of asphalt material from King Road restoration activities to Green Ridge landfill is anticipated.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - (ongoing) Continued import and placement of stone materials for restoration activities in Area 2.
     - (ongoing) Import and staging of clean fill materials from the Cohoes (Linden Street) Site for future re-use as backfill in Phase 1B Remedial Action.
   - Upcoming
     - None.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
   - Area 3 Completed/Upcoming
     - Completed – The crushed surface cover restoration is complete on Area 3.
     - Fencing restoration in Area 3 is anticipated for the week of 10/31.

- Area 2 Completed/Upcoming
  - (ongoing) Crushed stone surface cover restoration in the ISS Area.
  - Asphalt pavement restoration was completed on 10/14. A section of defective asphalt, due to wet subbase, was removed and replaced on 10/21 and a top leveling course was added over the northern portion of the road.
  - Relocation of fencing and jersey barriers to King Road and the return of traffic to King Road was completed on 10/25.
  - Office trailers and the temporary bridge are anticipated to be demobilized at the end of October to early November. Need to coordinate with fill import from the Cohoes (Linden Street) Site.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - None.
8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals.
     - Submittals 19 (settlement, vibration, and crack monitoring results) and 63 (compaction test results for asphalt on King Road) were received on 10/26.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly).
     - Requests to Import Fill Packages (ongoing as needed).
9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - Minda Murray (LRI) reached out to the City of Troy and County Waste when King Road was restored yesterday, 10/25.
10. **Community Interaction/Relations**
    - None.
11. **NYSDEC/NYSDOH Comments**
    - John Spellman (NYSDEC) – Asked about the debris pile being generated in the past few weeks. Charles Atanasio responded the debris pile being generated is pre-existing City of Troy debris that will be left on the site. The debris pile will not be covered and does not contain impacted material. Garry Cummins added that the debris pile is generated by consolidating miscellaneous debris from all over the site. In the future, the debris pile will be addressed with Andrew Kreshik, the City of Troy Planner. The fill materials from Cohoes will be staged in a pile that is covered and lined with geotextile fabric.
    - Mark Sergott (NYSDOH) – No comments.
12. **Review of Action Items**
    - None.

13. Other
    - Next meeting: Wednesday, 11/2/22 at 10 am
    - Upcoming Vacations
      - A. Sherman out 10/28
      - Adam Gutta out 11/10 to 11/26
    - Upcoming Site visits
      - None.
14. Lessons Learned
    - Everyone communicated well and used all the necessary resources during the re-establishment of King Road yesterday.
    - As we near the end of the project, avoid complacency and do not rush. Stay aware of your surroundings and do your best to avoid any incidences.

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** November 2, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

Gerald Cummins, National Grid
~~Brian Stearns, National Grid~~
John Spellman, NYSDEC
~~Scott Deyette, NYSDEC~~
~~Dave Herman, NYSDEC~~
~~Justin Deming, NYSDOH~~
Mark Sergott, NYSDOH
~~Adam Sherman, BC~~
Keith Bogatch, BC
Ally Kenny, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
~~Brian Taylor, BC~~
~~Jesse Braun, BC~~
~~Michael Davis, BC~~
~~Will Lindheimer, LRI~~
Jon Borrelli, LRI
~~Jon Castle, LRI~~
~~Minda Murray, LRI~~
~~Mike Evens, LRI~~
~~Brian King, HSE~~
~~Zachary Hill, HSE~~
Scott Ryan, HSE

Safety Minute – HSE/LRI

- Discussed complacency as it can occur in different stages of construction, especially towards the end of a project. Complacency was defined as a feeling of quiet pleasure or security, often while unaware of some potential danger. This can happen when an inexperienced employee is ignorant of the hazards present in a given situation. It can also occur when a more experienced employee goes through repetitive motions and acts on autopilot. Both scenarios can lead to major consequences when on site. To avoid complacency, one should treat every day like it's a fresh start and audit yourself and others when completing tasks.

1. Health and Safety Update – HSE/LRI
   - Weekly Update
     - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
     - Health and Safety – No incidents or injuries during the past week.
   - COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.
2. Community Air Monitoring Update – HSE/LRI
   - No exceedances.
3. Site Security Update – LRI
   - Full-time security is on-going.
   - Illegally dumped brick and debris pile was found on 11/1/2022 between 6:00-7:00 am in front of the Security booth. The dumping occurred between the security shift change, but the security guard suspected a white flatbed truck with a dump trailer behind it. This truck was observed in the area during the time of the illegal dumping. It was decided that the best course of action would be for LRI/BC to file a police report and for NG to contact the Troy LDC (property owner).
   - Discussion about reducing access to prevent illicit dumping. A course of action will be further developed with NG.
4. PL E-20 Project Coordination – NG/BC
   - The PL E-20 project is completed.
5. Project Administration - BC
   - Project Contact List – No updates.
   - Permitting – No updates.
   - Previous Week's Action Items
     - LRI is waiting on the telecommunications service provider (Verizon) to follow up with them regarding restoring the utility line. Verizon will restore this line, although no date was set.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - None.
6. Work Activities (Completed and Upcoming) – LRI/BC
   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - Demobilization of 350x4 link belt excavator.
        - E-lot structural inspection was completed last week on 10/25.
        - (ongoing) ESC measures continue to be monitored and repaired as needed.
        - (ongoing) Settlement, crack, and vibration monitoring continues, and weekly submittals and SWPPP inspections are ongoing.
        - (ongoing) CAMP implementation will continue.
      - Upcoming

- Continue with temporary controls, monitoring, decontamination/demobilization activities.
- Debris relocation throughout the site to compact and remove.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - Excavation and backfilling are 100% complete.
     - Off-site disposal of excavation spoils has been completed.
   - Upcoming
     - None.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - Excavation and backfilling are 100% complete.
     - Off-site disposal of excavation spoils has been completed.
   - Upcoming
     - None.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - All ISS activities have been completed.
   - Upcoming
     - None.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - Asphalt C&D removed on 10/31.
     - The bentonite stored in the E-lot building will remain in storage until a better location is found.
   - Upcoming
     - None.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - Import and placement of stone materials for restoration activities in Area 2.
   - Upcoming
     - (ongoing) Import and staging of clean fill materials from the Cohoes (Linden Street) Site for future re-use as backfill in Phase 1B Remedial Action.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
   - Area 3 Completed/Upcoming
     - Fencing restoration in Area 3 is anticipated either Friday 11/4/2022 or Monday 11/7/2022.

- Area 2 Completed/Upcoming
  - Completed - Crushed stone surface cover restoration in the ISS Area.
  - Completed - Relocation of fencing and jersey barriers to King Road and the return of traffic to King Road was completed on 10/25.
  - Office trailers will be removed during the week of 11/7/2022.
  - The temporary bridge is anticipated to be demobilized by early November.
  - An estimated 600 CY of import from the Cohoes (Linden Street) Site has been delivered and staged. The Troy Site will be receiving an additional approximate volume of 400 CY by the end of the week of 11/7/2022, for a total approximate volume of 1,000 CY.
  - A photolog of the final conditions of the Site will be created for the purposes of documenting the final conditions after Phase 1A. Site visits will be conducted over the fall/winter/spring to identify and document Site conditions, including new debris/materials that may be illicitly dumped.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - None.
8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals.
     - Submittals 19 (settlement, vibration, and crack monitoring results) and manifests from the month of October are expected to be received by the end of this week.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly).
     - Requests to Import Fill Packages (ongoing as needed).
9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - LRI/BC needs to notify the police and NG needs to notify the Troy LDC about the illegally dumped brick debris.
10. **NYSDEC/NYSDOH Comments**
    - John Spellman (NYSDEC) – Asked about the size of the pile of bricks illegally dumped. Charles estimated the volume to be 2-5 CY.
    - Mark Sergott (NYSDOH) – No comments.
11. **Review of Action Items**
    - None.
12. **Other**
    - Next meeting: Wednesday, 11/9/22 at 10 am
    - Upcoming Vacations
      - Adam Gutta out 11/10 to 11/26
    - Upcoming Site visits
      - None.
13. **Lessons Learned**

- Since King Road has been reestablished, everyone on Site has remained alert about the new active roadway. This has led to a safe working environment with no injuries to report.

Progress Meeting Summary Notes

3 Marcus Boulevard, Suite 106
Albany, NY 12205
T: 518.560.5910

Prepared for: National Grid
Project Title: Troy (Water Street) Site, Troy, NY
Phase 1A/Gas Corridor Remediation Project
Project No.: 152167

Purpose of Meeting: Construction Meeting **Date:** November 9, 2022
Meeting Location: Construction Trailer and Conference Call (MS Teams) **Time:** 10:00
Agenda Prepared by: Brown and Caldwell Associates

AGENDA

Attendees:

~~Gerald Cummins, National Grid~~
~~Brian Stearns, National Grid~~
~~John Spellman, NYSDEC~~
~~Scott Deyette, NYSDEC~~
~~Dave Herman, NYSDEC~~
~~Justin Deming, NYSDOH~~
Mark Sergott, NYSDOH
Adam Sherman, BC
Keith Bogatch, BC
Ally Kenny, BC
Charles Atanasio, BC
Adam Gutta, BC
Nia Gilliam, BC
~~Brian Taylor, BC~~
~~Jesse Braun, BC~~
~~Michael Davis, BC~~
Will Lindheimer, LRI
Jon Borrelli, LRI
~~Jon Castle, LRI~~
~~Minda Murray, LRI~~
~~Mike Evens, LRI~~
~~Brian King, HSE~~
~~Zachary Hill, HSE~~
Scott Ryan, HSE

Safety Minute – HSE/LRI

- Discussed general site housekeeping and how it has a direct impact on workers safety. Poor housekeeping can lead to trips, slips, and falls and pose a general hazard to those on site. During all stages of construction, there should be designated working areas, walking paths, and parking areas. Well maintained and delineated laydown yards can allow for safe working conditions and prevent accidents. It is important to keep tools clean and in their designated areas for reliable usability.

1. **Health and Safety Update – HSE/LRI**
   - Weekly Update
     - Work zone air monitoring – No elevated levels of VOCs or particulates during past week.
     - Health and Safety – No incidents or injuries during the past week.
   - COVID protocols and updates – No changes in procedures. Do not come to the site if symptomatic or use available testing to be safe and keep co-workers safe.
2. **Community Air Monitoring Update – HSE/LRI**
   - No exceedances.
3. **Site Security Update – LRI**
   - Full-time security is on-going.
   - The police and the Troy LDC were notified on 11/02/2022 of the illegal dumping of bricks that occurred on 11/01/2022. Concrete Jersey barriers and fencing have since been added north of the Wynantskill Creek to secure the property and deter more illicit dumping, per new BC drawings that were submitted on 11/07/2022 to Land.
4. **PL E-20 Project Coordination – NG/BC**
   - The PL E-20 project is completed.
5. **Project Administration - BC**
   - Project Contact List – No updates.
   - Permitting – No updates.
   - Previous Week's Action Items
     - The Verizon 2" conduit line was repaired and backfilled on 11/07/2022. Communication line is currently not active.
   - Request for Information (RFI)/Field Order (FO) updates, field clarifications.
     - BC has generated and distributed F/O # 6 for reuse of fill materials from Cohoes. Geo-Fabric was discussed and approved. (Transportation date from Cohoes to Troy Scheduled to resume the week of 11/14/2022)
6. **Work Activities (Completed and Upcoming) – LRI/BC**

   a. Mobilization, Site Preparation, Temp Controls, and Monitoring (inspections, bridge, roadway, fencing, signage, facilities, debris cleanup, vegetation removal, utility management, well decommissioning, traffic controls, dust, odor/vapor controls, ESC, surveying, vibration, settlement, and crack monitoring)
      - Completed
        - E-Lot building structural inspection was completed last week on 10/25/2022.
        - Demobilization of 350x4 Link Belt excavator last week on 11/02/2022.
        - Final SWPPP inspection was conducted on 11/02/2022.
        - (ongoing) CAMP implementation will continue until completely demobilized.
      - Upcoming
        - Continue with temporary controls, monitoring, decontamination/demobilization activities. Equipment is expected to be fully demobilized during the week of 11/14/2022.
        - Debris relocation throughout the site to compact and remove. Light clearing and mowing throughout the site.

- Finalizing barricades and fencing throughout the site.

b. Area 3 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - Excavation and backfilling are 100% complete.
     - Off-site disposal of excavation spoils has been completed.
   - Upcoming
     - None.

c. Area 2 Excavation (Excavation, Support, Dewatering, Demo, Inspections, Arch Monitoring, Backfill)
   - Completed
     - Excavation and backfilling are 100% complete.
     - Off-site disposal of excavation spoils has been completed.
   - Upcoming
     - None.

d. ISS (Set-up, Start-up, Pre-cut, Demo, ISS, QA/QC, Post-cut, Backfill)
   - Completed
     - All ISS activities have been completed.
   - Upcoming
     - None.

e. Waste Management (Characterization, Profiling, Acceptance, Conditioning, On-site Management/Loading, Manifesting, T&D)
   - Completed
     - Asphalt C&D removed on 10/31.
     - The bentonite stored in the E-lot building will remain in storage until a better location is found.
   - Upcoming
     - None.

f. Fill Importing and Re-Use (Sampling, Requests/Approvals, Importing, Re-Use)
   - Completed
     - Import and placement of stone materials for restoration activities in Area 2.
   - Upcoming
     - (ongoing) Import and staging of clean fill materials from the Cohoes (Linden Street) Site for future re-use as backfill in Phase 1B Remedial Action. Material will be continued to be delivered starting on the week of 11/14/2022.

g. Restoration (Crushed Stone Cover, Paving, Fencing, Temp Facility/Control Removal)
   - Area 3 Completed/Upcoming
     - Fencing restoration in Area 3 is anticipated to be completed by 11/11/2022.
   - Area 2 Completed/Upcoming

- Completed - Crushed stone surface cover restoration in the ISS Area.
- Completed - Relocation of fencing and jersey barriers to King Road and the return of traffic to King Road was completed on 10/25.
- Completed - A photolog of the final conditions of the Site was created for the purposes of documenting the final site conditions on 11/07/2022. Site visits will be conducted over the fall/winter/spring to identify and document Site conditions and to monitor new debris/materials that may be illicitly dumped.
- Office trailers will be removed during the week of 11/7/2022.
- The temporary bridge will be delayed and kept throughout the winter. Instead, it will be barricaded and fenced so that through traffic is not allowed.
- An estimated 600 CY of import from the Cohoes (Linden Street) Site has been delivered and staged. The Troy Site will be receiving an additional approximate volume of 400 CY the week of 11/14/2022, for a total approximate volume of 1,000 CY.

7. **Project Schedule - LRI**
   - Baseline Schedule Updates/Schedule Impacts
     - None.
8. **Submittals – BC/LRI**
   - Submittals update – Weekly monitoring submittals.
     - Settlement, vibration, and crack monitoring post construction results were received on 11/09/2022.
     - ISS final lab results were received on 11/09/2022.
     - Counter signed manifests for the month of October were received on 11/09/2022.
   - NYSDEC Submittals:
     - Weekly H&S/CAMP Reports (ongoing weekly).
     - Requests to Import Fill Packages (ongoing as needed).
9. **Local Coordination (City of Troy, County of Rensselaer, Fire Dept)**
   - LRI/BC notified the police and NG notified the Troy LDC about the illegally dumped brick debris on 11/02/2022.
   - BC contacted Troy LDC about the additional barricades and fencing that will be added north of Wynantskill Creek to restrict access and deter illegal dumping activities.
10. **NYSDEC/NYSDOH Comments**
    - Mark Sergott (NYSDOH) – No comments.
11. **Review of Action Items**
    - None.
12. **Other**
    - Next meeting: None.
    - Upcoming Vacations
      - Adam Gutta out 11/10 to 11/26
    - Upcoming Site visits
      - None.

13. Lessons Learned

- Staying alert this time of the year due to daylights saving and the increased number of deer in the area. Driving responsibly includes defensive driving and driving at the appropriate speed.

Appendix Q: Pipe Video Inspection Report



GPRS

www.gp-radar.com

Site Name and Location:

Water St, Troy NY

Assumptions & Clarifications

1. UNLESS OTHERWISE NOTED UNDERGROUND UTILITY DATA IS CONSIDERED QUALITY LEVEL B (QLB) AS DEFINED IN ASCE 38-02: STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA AND IS INTENDED TO SHOW THE APPROXIMATE HORIZONTAL LOCATIONS OF EXISTING UNDERGROUND UTILITIES AS MARKED BY MASTER LOCATORS DURING A GEOPHYSICAL INVESTIGATION PERFORMED WITHIN THE OUTLINED SCOPE OF WORK.

2. ALL UTILITY LOCATIONS SHOWN ON THIS PLAN ARE FOR REFERENCE ONLY. THIS PLAN SHOULD NOT BE USED FOR CONSTRUCTION OR DESIGN PURPOSES AND MASTER LOCATORS IS NOT RESPONSIBLE FOR DAMAGE TO UTILITIES RESULTING FROM ANY CONSTRUCTION WORK BASED ON THESE PLAN.

3. NO BOUNDARY OR PROPERTY SURVEY WORK WAS CONDUCTED IN THE DEVELOPMENT OF THIS PLAN. THE PLAN IS NOT DRAWN TO SCALE.

4.ANY DEPTH INFORMATION PROVIDED IS CONSIDERED APPROXIMATE AND IS NOT GUARANTEED UNLESS LABELED AS QUALITY LEVEL A (QLA) DATA.

Legend & Color Codes

Electric — E
Unknown — UNK
Water — W
Comms. — C
Storm — ST
Sanitary — SS
Gas — G

Man Hole, Valve, Continuation Mark, End of Information (EOI), Scope of Work
Bollard (B), Utility Pole (U/P), Clean Out (C/O), Storm Drain, Roof Drain (R/D)
Floor Drain (F/D), Test Hole, Fire Hydrant (FH), Irrigation Box (W)
Site Light (S/L), Transformer (X), Electric Box (E), Phone Pedestal (P)
Large (>12") Storm Line, Flow Direction, Buried Vault (BV), Witness Post (WP)

Revisions:

Date:	Description:	By:

ML Job #:

Date: 06/17/2022

Technician(s): Matthew Zacharias

Client Name: Land-Remediation

GPRS inc
Tel. 1(610)883-0419

GPRS VIDEO PIPE INSPECTION
USING CUTTING EDGE CAMERAS TO REVEAL THE UNKNOWN CONDITIONS OF SUBSURFACE INFRASTRUCTURE

Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
6/17/2022			**Matthew Zacharias**	**1**	**P1-Unknown**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	Not Known	**Upstream**		**20.9 '**	**20.9 '**

City:	**Troy**	Drainage Area:		Upstream MH:	**P1**
Street:	**Water St**	Media Label:		Up Rim to Invert:	**0.0**
Location Code:		Flow Control:		Downstream MH:	**Unknown**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Square**	Sewer Use:	**Stormwater Pipe**	Total gallons used:	**0.0**
Pipe size:	**60 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Brick**	Purpose:		Joints failed:	**0**
Lining Method:		Owner:			

Additional Info:



1:158 Distance		Code	Observation	Counter	Photo	Grade
0.0		AZ	Access Point Other / P1	00:00:03	1	
0.0		MWL	Water Level, 0% of the vertical dimension	00:00:04	2	
0.0	S01	DSF	Deposits Settled Fine, 30% of cross sectional area from 4 o'clock to 8 o'clock, Start	00:00:04	3	
13.9	F01	DSF	Deposits Settled Fine, 30% of cross sectional area from 4 o'clock to 8 o'clock, Finish	00:01:00	4	M4
20.9		TBA	Tap Break-in Activity, at 4 o'clock , dia/height: 12 inch	00:02:53	5	
20.9		OBP	Obstruction External Pipe or Cable, 5% of cross sectional area at 2 o'clock	00:02:41	6	M2
20.9		MSA	Miscellaneous Survey Abandoned / Cannot pass over bricks in pipe	00:03:06	7	

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI
0000	4321	4321	0.0	14.0	14.0	0.0	3.5	3.5

GPRS inc

Tel. 1(610)883-0419

Section Pictures - 6/17/2022 - P1-Unknown

City	Street	Date	Pipe Segment Reference	Section No.
Troy	**Water St**	**6/17/2022**	**P1-Unknown**	**1**



1, 00:00:03, 0.00ft
Access Point Other / P1



2, 00:00:04, 0.00ft
Water Level, 0% of the vertical dimension



3, 00:00:04, 0.00ft
Deposits Settled Fine, 30% of cross sectional area from 4 o'clock to 8 o'clock, Start



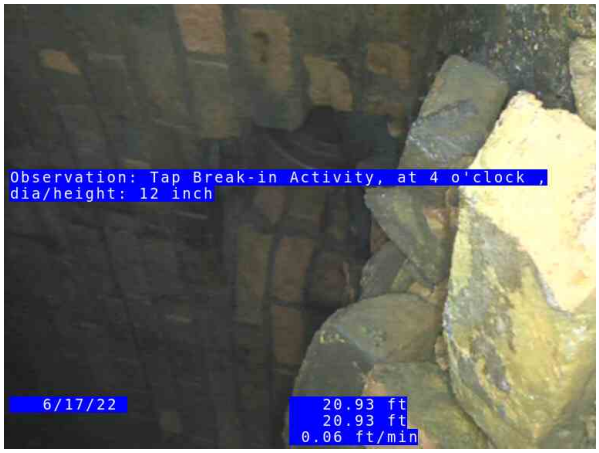
4, 00:01:00, 13.89ft
Deposits Settled Fine, 30% of cross sectional area from 4 o'clock to 8 o'clock, Finish

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Section Pictures - 6/17/2022 - P1-Unknown

City	Street	Date	Pipe Segment Reference	Section No.
Troy	**Water St**	**6/17/2022**	**P1-Unknown**	**1**



5, 00:02:53, 20.93ft
Tap Break-in Activity, at 4 o'clock , dia/height: 12 inch



6, 00:02:41, 20.93ft
Obstruction External Pipe or Cable, 5% of cross sectional area at 2 o'clock



7, 00:03:06, 20.93ft
Miscellaneous Survey Abandoned / Cannot pass over bricks in pipe

GPRS inc
Tel. 1(610)883-0419

Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
6/17/2022			**Matthew Zacharias**	**1**	**Unknown-P1**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	Not Known	**Downstream**		**15.8 '**	**15.8 '**

City:	**Troy**	Drainage Area:		Upstream MH:	**Unknown**
Street:	**Water St**	Media Label:		Up Rim to Invert:	**0.0**
Location Code:		Flow Control:		Downstream MH:	**P1**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Square**	Sewer Use:	**Stormwater Pipe**	Total gallons used:	**0.0**
Pipe size:	**60 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Brick**	Purpose:		Joints failed:	**0**
Lining Method:		Owner:			
Additional Info:					



1:120	Distance	Code	Observation	Counter	Photo	Grade
	0.0	AZ	Access Point Other / P1	00:00:01	1	
	0.0	MWL	Water Level, 0% of the vertical dimension	00:00:03	2	
	15.8	DSF	Deposits Settled Fine, 100% of cross sectional area, from 12 o'clock to 12 o'clock	00:00:59	3	
	15.8	MSA	Miscellaneous Survey Abandoned / Cannot drive past deposits in pipe	00:01:02	4	

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

GPRS inc

Tel. 1(610)883-0419

Section Pictures - 6/17/2022 - Unknown-P1

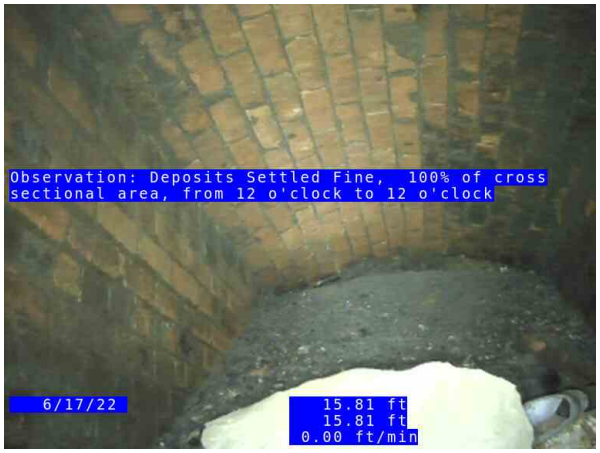
City	Street	Date	Pipe Segment Reference	Section No.
Troy	**Water St**	**6/17/2022**	**Unknown-P1**	**2**



1, 00:00:01, 0.00ft
Access Point Other / P1



2, 00:00:03, 0.00ft
Water Level, 0% of the vertical dimension



3, 00:00:59, 15.81ft
Deposits Settled Fine, 100% of cross sectional area, from 12 o'clock to 12 o'clock



4, 00:01:02, 15.81ft
Miscellaneous Survey Abandoned / Cannot drive past deposits in pipe