PERIODIC REVIEW REPORT

450 UNION STREET, BROOKLYN, NEW YORK

NYSDEC BCP SITE NUMBER: C224219

Prepared For:

New York State Department of Environmental Conservation

Division of Environmental Remediation

625 Broadway

Albany, New York 12233

&

2201 Union LLC

55 Washington Street, Suite 551

Brooklyn, New York 11201

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Astoria, New York 11105

JULY 2024

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EXECUTIVE SUMMARY

450 Union Street Site located in Gowanus neighborhood of Brooklyn, New York was remediated in accordance with a New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) approved work plans pursuant to a Brownfield Cleanup Agreement (BCA) dated September 1, 2015 and amended on March 13, 2020. Upon completion of remediation, a Certificate of Completion (COC) was issued by the NYSDEC on December 29, 2020.

450 Union Developer LLC was added to the BCA as an additional Volunteer on March 13, 2020, and 2201 Union LLC was added to the BCA upon purchase of the property. A notice of transfer of Certificate of Completion (COC) and Change of Use Notification for the new entity was submitted to the NYSDEC on October 24, 2022.

According to the Site Management Plan (SMP) dated December 18, 2020, a Periodic Review Report (PRR) is required to be submitted annually to the NYSDEC. The first PRR was submitted in June 2022, and this is the third annual PRR for this Site.

Since the most recent PRR dated September 2023, NYSDEC-approved construction fence work in September 2023 and investigation activities were performed at the Site in February 2024. The September 2023 construction fence relocation work consisted of removing fencing and fencepost installed along the curblines of Bond Street and Union Street and relocating them towards the Site boundaries. The relocated fence posts were installed along the Site boundary sidewalks and not within the Site cover system. The February 2024 investigation consisted of a grossly contaminated media (GCM) investigation to conduct bench-scale treatability studies for both in-situ stabilization/solidification (ISS) and in-situ geochemical stabilization technologies to treat and immobilize GCM observed beneath the Site.

1.0 INTRODUCTION

This Periodic Review Report (PRR) was prepared by Vektor Consultants, LLC (Vektor) for the 450 Union Street project (Brownfield Cleanup Program Site No. C224219) as a requirement of the December 18, 2020 Site Management Plan. The Site is located at 450 Union Street in the Gowanus Neighborhood of Brooklyn, New York, and is identified on the New York City Brooklyn Borough Tax Map as Block 438, Lot 7. The Site consists of an irregular-shaped vacant lot that is approximately 28,500 square feet. The Site access is controlled by a New York City Department of Buildings (NYCDOB)-approved construction fence. The bulkhead/containment barrier (constructed in 2017), consisting of corrugated steel sheet piles, separates the Site from the Gowanus Canal and serves as a containment barrier. The former buildings once occupying the Site were demolished between May and June 2023. The slabs of the buildings were not removed; however, the concrete slab of the northern building was cracked as described in the 2023 PRR as required by the Department of Buildings for Site drainage purposes.

The Site was remediated pursuant to the Brownfield Cleanup Agreement (dated September 1, 2015, amended March 13, 2020) and a Certificate of Completion (COC) was issued by the New York State Department of Environmental Conservation (NYSDEC) on December 29, 2020. The Site location is shown in Figure 1 and the BCP site boundaries are shown in Figure 2.

2.0 PERIODIC REVIEW REPORT CERTIFICATION

2.1 Institutional Controls

An Environmental Easement was executed with the NYSDEC on September 10, 2020 to (1) implement, maintain and monitor the engineering controls (ECs); (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface; and (3) limit the use and development of the site to restricted-residential, commercial, and industrial uses only. There have been no changes or actions that require modification to the environmental easement since the NYSDEC issued COC. A copy of the Environmental Easement is included as Appendix A.

2.2 Engineering Controls

The Site ECs include:
(1) a site cover system;
(2) a bulkhead wall/containment barrier; and
(3) a dense non-aqueous phase liquid (DNAPL) recovery program using two on-site recovery wells.

The EC locations and details are shown in Figure 3.

Site Cover System
The current site cover system consists of:

- Partially demolished building slabs; and
- Asphalt-paved areas

Partially demolished building slab areas in the central and western portions of the Site are in preparation for redevelopment activities. Portions of the asphalt-paved areas are proposed to be redeveloped for the new building and the remainder of the asphalt-paved areas (adjacent to the bulkhead) are to be redeveloped into landscaped areas during redevelopment activities. Areas eventually not capped by a surface structure will contain a minimum of two-foot clean fill cover (i.e., virgin stone or a soil cover) installed above remaining Site soils. Soil used as cover will need to meet the lower of the Title 6 New York Codes, Rules, and Regulations (6 NYCRR) Part 375-6.4(b) Restricted-Residential (RR) and Protection of Groundwater (PGW) Soil Cleanup Objectives (SCOs). For landscaped areas, a highly visible demarcation barrier (i.e., orange snow fence) is to be placed between the remaining site soil and the clean fill cap.

Bulkhead Wall/Containment Barrier
Migration of coal tar DNAPL between the Site and the east-adjacent Gowanus Canal is prevented by a bulkhead/containment barrier installed along the eastern 100-foot site boundary. Steel sheet piles for the bulkhead/containment barrier were driven to a minimum of 52 feet below grade surface (bgs) (el. -40 NAVD88) within the secondary low-permeability silt and clay layers that

extend from about 38 feet to 56 feet bgs. A hydrophilic water-stop is installed within un-welded interlocking seams from sheet toe (el. -40) up to the mean higher high water (MHHW), about 10 feet bgs (el. 2.5), and is designed to swell and seal voids on contact with water. A high-level relieving platform, consisting of a pile-supported, reinforced concrete slab, is installed about 4 feet bgs and extends 25 feet west (inland) from the bulkhead/contaminant barrier. As part of the design, soil/fill beneath the concrete platform was excavated to about 12.5 feet bgs (el. 0) to reduce earth-pressures exerted on the steel sheets. Construction of the bulkhead/containment barrier was completed in 2017. Procedures for monitoring the bulkhead wall/contaminant barrier are described in the NYSDEC-approved SMP.

DNAPL Recovery Program

DNAPL recovery is performed from two on-site recovery wells (RW01 and RW02) at monthly intervals by GZA GeoEnvironmental, Inc. (GZA). Recovery well locations are shown on Figure 3. During each event, recovery wells are gauged for product thickness, which is recorded and compared with the results of past events. After gauging product thickness, recoverable DNAPL is extracted, and the approximate volume is measured. Recovered DNAPL is containerized into drums and transported off-site for disposal. DNAPL recovery will be performed until asymptotic conditions are reached and discontinuance is approved by NYSDEC.

2.3 Institutional and Engineering Controls Certification

The certification period covered by this PRR is from September 1, 2023, to June 30, 2024. Inspections, as described in Section 4.0 were completed in accordance with the requirements of the NYSDEC-approved SMP as certified by the owner and Professional Engineer in the EC/IC Certificate Form. The completed and signed EC/IC Certificate Form is provided as Appendix B.

3.0 POST-COC COMPLIANCE OPERATIONS

NYSDEC-approved field activities that breached the site cover system were conducted in September 2023 and February 2024. As a result, parts of the site cover system were modified and removed during this reporting period. Actions that affected the site cover system are summarized in the following sections. The locations of the post-COC investigation and construction activities are shown in Figure 4.

3.1 Investigation and Construction Activities

3.1.1 September 2023 – Construction Fence Relocation

Vektor Consultants oversaw the relocation of the Site's construction fence along the sidewalks of Bond Street and Union Street. Candid Construction was retained to perform the work. Candid Construction used concrete to repair the site cover system in the locations where the fence posts were removed along the curblines of Bond Street and Union Street and relocating them towards the Site boundaries. The relocated fence posts were installed along the Site boundary sidewalks and not within the Site cover system. Vektor Consultants performed CAMP during all aspects of the work.

3.1.4 February 2024 – GCM Bench-Scale Treatability Study

Vektor Consultants conducted a bench-scale treatability study for both in situ stabilization/solidification and in situ geochemical stabilization. The treatability study included soil sampling to obtain representative impacted soil samples for submission to Geo-Solutions, Inc for the In-Situ Stabilization (ISS) study and to ReSolutions Partners for the In-Situ Geochemical Stabilization (ISGS). The soil samples were collected within the NYSDEC determined treatment area at elevations between -10 and -28 NAVD88 where the presence of grossly contaminated material (GCM) and non-aqueous phase liquids (NAPL) is the highest. Coastal Environmental Solutions, under the direction of Vektor Consultants, advanced four soil borings at two locations within the proposed treatment area as described in the NYSDEC approved Remedial Site Optimization Treatability Study Work Plan, dated January 2024. As requested by Geo-Solutions, Inc and ReSolution Partners, a total of approximately 360 pounds of soil were collected for bench-scale testing for both technologies. Additionally, Vektor Consultants collected groundwater samples from existing groundwater wells for the ISGS study. A total of nine (9) 9.5-L cannisters and one 1-L cannisters were collected. All soil cuttings and purged groundwater was containerized in 55-gallon drums, characterized, and property staged for transportation off-site All penetrations to the site cover system were repaired in kind by the drilling contractor with asphalt patch.

Investigation derived waste (soil and groundwater) from the bench-scale testing was removed from the Site on April 23, 2024 for disposal.

3.2 Compliance with SMP during Investigation and Construction Activities

3.2.1 Soils/Materials Management Plan

The SMP includes an Excavation Work Plan (EWP), which provides requirements for managing soil/fill at the Site, including screening excavated soil/fill, stockpile management, transport and off-site disposal of excess soil/fill, and community air monitoring. Post-COC activities were performed in accordance with the NYSDEC-approved SMP and EWP.

3.2.2 Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) was implemented during NYSDEC-approved ground-intrusive activities. The CAMP consisted of two monitoring stations placed at upwind and downwind locations relative to the intrusive work, to monitor for particulates and volatile organic compounds (VOCs) related to the work. Fifteen-minute-average concentrations of VOCs and particulates were not recorded above the action levels established in the CAMP (SMP Appendix F) and no fugitive dust or odors associated with intrusive activities were observed migrating off-site. CAMP data is provided in Appendix C.

3.2.3 Materials Disposal Off-Site

Excess soil/fill excavated and removed from the site during this reporting period were managed, transported, and disposed of off-site in accordance with local, state and federal regulations. Soil/fill transported for off-site disposal during this reporting period included:

- Sixteen drums (approximately 720 gallons) of investigation derived waste (IDW) consisting of groundwater from the June-July 2023 RSO/GCM delineation investigation were transported off-site for disposal at Clean Water of New York, Staten Island, NY on September 6, 2023. Please refer to the 2023 PRR for further details of the June-July 2023 RSO/GCM delineation investigation.
- Two drums (approximately 100 gallons) of IDW consisting of groundwater from the February 2024 Remedial Site Optimization Treatability Study were transported off-site for disposal at Clear Water of New York, Staten Island, NY on April 23, 2024.
- Four drums (approximately 1,600 pounds) of IDW consisting of soil cuttings from the February 2024 Remedial Site Optimization Treatability Study were transported off-site for disposal at Clean Water of New York, Staten Island, NY on April 23, 2024.

Waste disposal documentation, including waste characterization data, the facility approval letter, and disposal manifests, are included in Appendix D.

3.2.4 Reporting

Vektor documented investigation and construction activities that breached the site cover system. Activities observed during periodic visits were summarized in field reports submitted to the

NYSDEC and New York State Department of Health (NYSDOH). Field reporting / documentation of post-COC intrusive work performed during this reporting period is provided in Appendix E.

4.0 SITE INSPECTIONS

In accordance with the NYSDEC-approved SMP, routine site inspections are performed annually. Vektor inspected the site's ECs on June 28, 2024, for the PRR reporting period. ECs were documented to be functioning as designed, maintained, and monitored in accordance with the SMP. Site inspections and monitoring observations are described in the following sections. Photographic documentation from the routine inspection is included in Appendix F. The Site inspection form is included as Appendix G.

4.1 Site Cover System Inspection

Alterations to the site cover system were observed at the time of inspection. The slab of the former building along Union Street was cracked as part of development demolition as per NYCDOB requirements (as further described in the 2023 PRR). No other breaches to the site cover system were observed. The remaining concrete former building slabs and exterior asphalt pavement appeared competent with minor surficial cracks. Landscaped areas remain intact with the required cover thickness. No indication of unapproved construction activity was observed to have breached the site cover system within the certification year.

4.2 Bulkhead Wall/Containment Barrier

The bulkhead wall/containment barrier was observed for indications of major damage and coal tar seepage. Major damage was not observed on bulkhead wall/contaminant barrier at the time of the inspection. Evidence of coal tar seepage from the bulkhead wall/contaminant barrier to the Gowanus Canal was not observed.

4.3 DNAPL Recovery Wells

The two on-site recovery wells were observed to be intact, secure and in good condition during the time of the inspection.

4.4 Site-Wide Inspection

Indications of subsurface work or breaching of the site cover system were not observed other than the NYSDEC-approved activities described in Section 3.0. The Environmental Easement and ICs remain in place and the site use has not changed. The slab of the former building along Union Street was cracked as part of development demolition as per NYCDOB. Significant cracks in remaining former building slabs were not observed and the overall interior and exterior parts of the BCP site were in good condition.

5.0 O&M PLAN COMPLIANCE REPORT

5.1 DNAPL Recovery Program

Post-COC DNAPL recovery from two on-site recovery wells (RW01 and RW02) started in April 2022 and will continue on a monthly schedule unless otherwise approved by the NYSDEC. Currently, recovery events are performed by GZA GeoEnvironmental, Inc. (GZA). As part of each event, GZA collects measurements of the DNAPL well thickness before and after DNAPL removal. DNAPL is then removed using a submersible pump, the volume is measured, and the waste is placed in a 55-gallon steel drum. At the end of the event, the area around the wells are cleaned and drummed DNAPL waste is removed from the site. In accordance with the NYSDEC-approved SMP, DNAPL recovery results are documented in quarterly progress reports submitted to the NYSDEC. Locations of the DNAPL recovery wells are shown on Figure 3.

The following table summarizes the DNAPL recovery results from the monthly recovery events between September 2023 through June 2024, as documented in GZA's Monthly Reports No. 16 through No. 19 in 2023, and Monthly Reports No.20 through No.25 in 2024.

Recovery Well	DNAPL Recovered (Gallons) 2023			
	9/19/2023	10/17/2023	11/21/2023	12/27/2023
RW01	25	30	40	15
RW02	110	40	50	10

Recovery Well	DNAPL Recovered (Gallons) 2024					
	1/30/2024	2/27/2024	3/7/2024	4/25/2024	5/29/2024	6/25/2024
RW01	35	15	0	20	40	30
RW02	50	0	25	35	30	40

The total volume of recovered DNAPL between May 2022 and December 2022 was approximately 711 gallons. The total volume of recovered DNAPL between January 2023 and August 2023 was approximately 784 gallons. The total volume of recovered DNAPL between September 2023 and June 2024 was approximately 640 gallons. According to GZA's monthly reports, recovered DNALP and spent personal protective equipment (PPE) were placed in drums. PPE drums were exported for off-site disposal by Miller Environmental Group (MEG) at the Waterworks facility in Newburgh, New York and DNAPL drums were exported off-site by MEG to Norlite LLC in Cohoes, New York between September 2023 and November 2023, by MEG to the Waterworks Facility in Newburgh, New York in December 2023, by MEG to the Tradabe Facility in East Chicago, Illinois between January 2024 and May 2024 and by MEG to the Tradabe Facility in Meriden, Connecticut in June 2024.

DNAPL well thicknesses, recovery volumes, and disposal information associated with the on-site recovery event is documented in the GZA DNAPL recovery reports, included as Appendix H. Certification of this PRR is reliant on the recovery reports prepared and certified by GZA.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Amendments to the SMP

No amendments to the SMP, ECs, or ICs are recommended at this time.

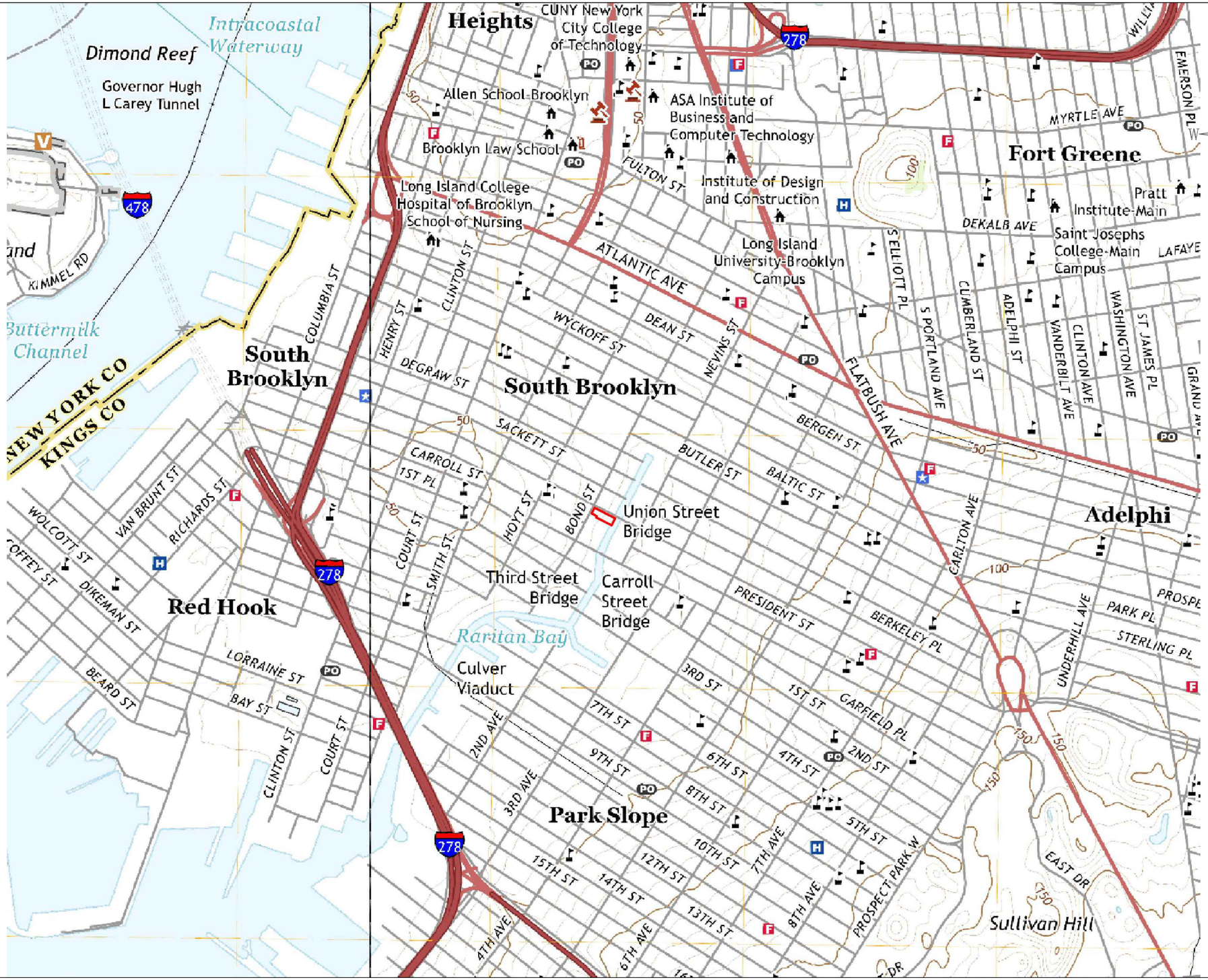
6.2 Amendments to the Frequency of PRR Submissions

No changes in the frequency of PRR submissions are recommended at this time.

6.3 Proposed Discontinuation of SMP

Discontinuation of the SMP is not recommended at this time.

FIGURES



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Legend:

- Approximate BCP Site Boundary

Notes:

1. All feature locations are approximate
2. Base Map - 2019 Topography

Scale:

0 625 1250 1875 2500

Figure No.	1
Figure Name:	Site Location Plan
Report:	PRR
Date:	7/10/2024
Drawn By:	KB
Site Address:	450 Union Street Brooklyn, New York BCP# C224219

MIXED USE
305 BOND STREET

COMMERCIAL
449-501 BOND STREET

UNDER DEVELOPMENT
501 SACKETT STREET

GOWANUS CANAL

N
W
E
S

UNION STREET

BOND STREET

RESIDENTIAL
316-322 BOND STREET

16' 8' 0 16' 32'

UNDER DEVELOPMENT
313-319 BOND STREET
419-441 PRESIDENT STREET

GOWANUS CANAL

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Legend:

- Approximate BCP Site Boundary
- High-Level Relieving Platform

Notes:

1. All feature locations are approximate

Scale: AS SHOWN

Figure No.	2
Figure Name:	Site Plan
Report:	PRR
Date:	7/10/2024
Drawn By:	KB
Site Address:	450 Union Street Brooklyn, New York BCP# C224219

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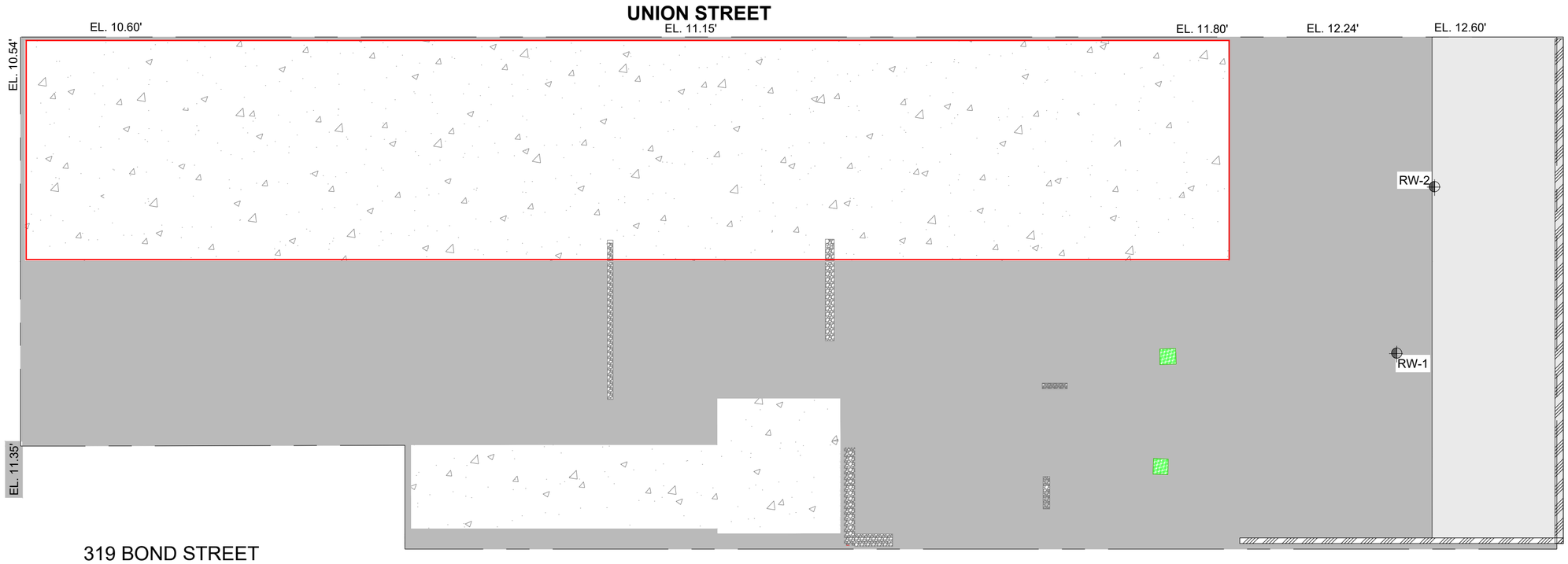
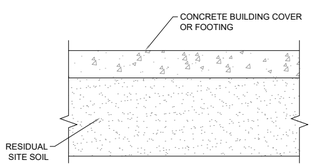
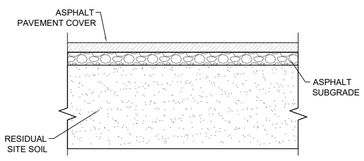
16' 8' 0 16' 32'



319 BOND STREET
BLOCK 438, L 3



DETAIL 1: COVER TYPE 1 - TYPICAL CONCRETE COVER FOR BUILDING AND FOOTINGS
(NOT TO SCALE)



DETAIL 2: COVER TYPE 2 - TYPICAL ASPHALT COVER
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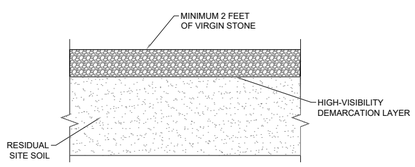

DETAIL 3: COVER TYPE 3 - TYPICAL CLEAN STONE COVER
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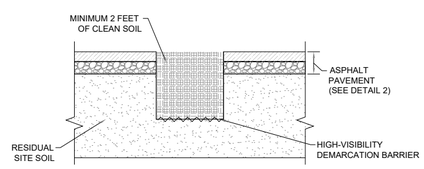
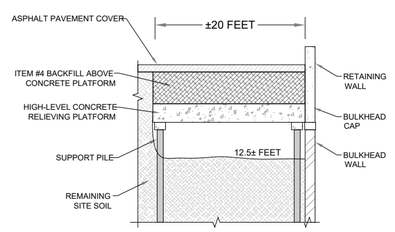


DETAIL 4: COVER TYPE 4 - TYPICAL CLEAN SOIL COVER
(NOT TO SCALE)



DETAIL 5: HIGH-LEVEL RELIEVING PLATFORM
(NOT TO SCALE)

Legend:
- 6- to 8-inch Thick Concrete Cover - Type 1 (Detail 1)
- 3- to 4-inch-Thick Asphalt Cover - Type 2 (Detail 2)
- High-Level Relieving Platform (Detail 5)
- 2-foot-Thick Stone Cover - Type 3 (Detail 3)
- 2-foot-Thick Clean Soil Cover - Type 4 (Detail 4)
- Recovery Well (RW-X)
- Approximate area of cracked former building slab as per NYCDOB (July 2023)

Notes:

1. All feature locations are approximate
2. Base Plan is provided by Mueser Rutledge Engineers PLLC

Scale: AS SHOWN

Figure No. 3

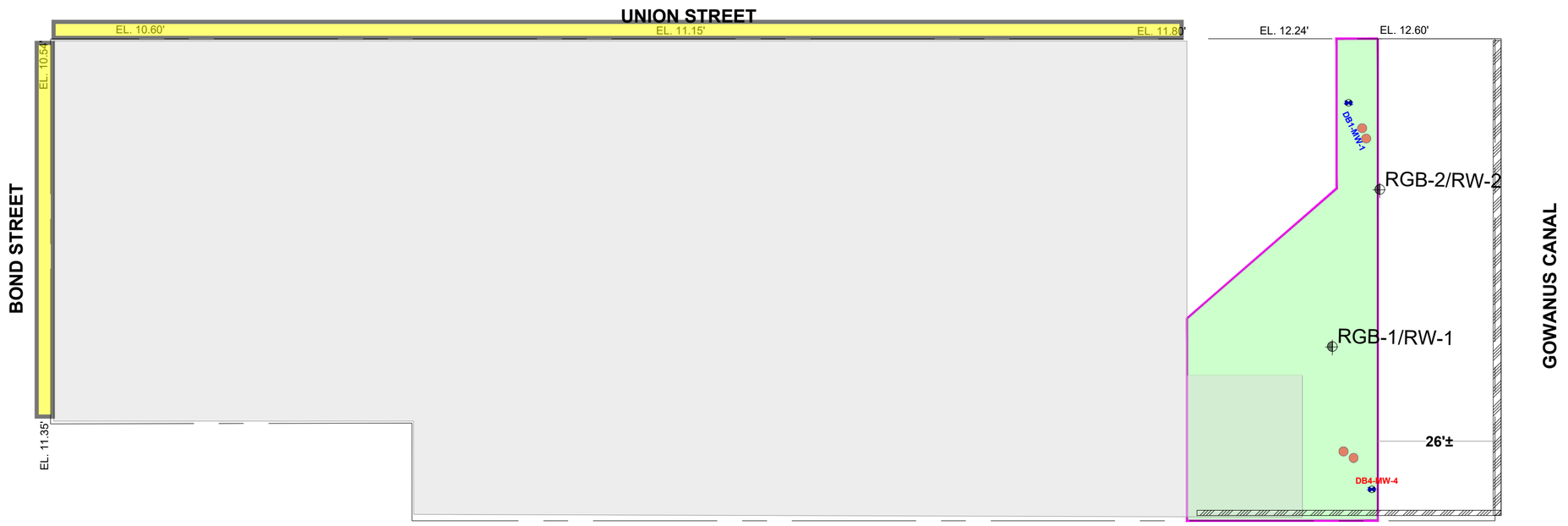
Figure Name: Engineering Control Location Map and Typical Details

Report: PRR

Date: 7/10/2024

Drawn By: KB

Site Address: 450 Union Street
Brooklyn, New York



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Legend:

- Locations of September 2023 Construction Fence Relocation (Immediately Outside of Site Boundaries)
- DBX-MW-XD — Groundwater well locations for collection of groundwater between el. -10 and -28 for ISGS study
- DBX-MW-XD — Groundwater well location for collection of groundwater and NAPL sample between el. -10 and -28 for ISGS study
- Proposed Treatability Work Area per NYSDEC
- Approximate location of borings for collection of soil between el. -10 and -28 for ISS and ISGS studies
- RGB/RW-X — Recovery Well Location and ID

Notes:

1. All feature locations are approximate
2. Base Plan is provided by Mueser Rutledge Engineers PLLC
3. DBX-MW-X: NAPL Mobility Well screened over GCM interval

Scale: AS SHOWN

Figure No. 4

Figure Name: Post-COC Investigation and Construction Locations Map

Report: PRR

Date: 7/10/2024

Drawn By: KB

Site Address: 450 Union Street Brooklyn, New York

APPENDICES

APPENDIX A
ENVIRONMENTAL EASEMENT

NYC DEPARTMENT OF FINANCE
OFFICE OF THE CITY REGISTER

This page is part of the instrument. The City Register will rely on the information provided by you on this page for purposes of indexing this instrument.The information on this page will control for indexing purposes in the event of any conflict with the rest of the document.

2020092301057001002E2652

RECORDING AND ENDORSEMENT COVER PAGE **PAGE 1 OF 10**

Document ID: 2020092301057001 Document Date: 09-10-2020 Preparation Date: 09-24-2020
Document Type: EASEMENT
Document Page Count: 9

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125 PARK AVENUE, SUITE 1610
NEW YORK, NY 10017
212-376-0900
MBASALATAN@ROYALABSTRACT.COM

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(183227)MB
125 PARK AVENUE, SUITE 1610
NEW YORK, NY 10017
212-376-0900
MBASALATAN@ROYALABSTRACT.COM

PROPERTY DATA

Borough	Block	Lot	Unit	Address
BROOKLYN	438	7	Entire Lot	452 UNION STREET

Property Type: COMMERCIAL REAL ESTATE

CROSS REFERENCE DATA

CRFN_____ *or* DocumentID_____ *or* _____ Year_____ Reel____ Page_____ *or* File Number_____

PARTIES

GRANTOR/SELLER:
450 UNION LLC
10 GLENVILLE STREET, SUITE 1
GREENWICH, CT 06831

GRANTEE/BUYER:
THE PEOPLE OF THE STATE OF NEW YORK
NYSDEC, 625 BROADWAY
ALBANY, NY 12233

FEES AND TAXES

Mortgage :		
Mortgage Amount:	$	0.00
Taxable Mortgage Amount:	$	0.00
Exemption:		
TAXES: County (Basic):	$	0.00
City (Additional):	$	0.00
Spec (Additional):	$	0.00
TASF:	$	0.00
MTA:	$	0.00
NYCTA:	$	0.00
Additional MRT:	$	0.00
TOTAL:	$	0.00
Recording Fee:	$	82.00
Affidavit Fee:	$	0.00

Filing Fee: $ 0.00
NYC Real Property Transfer Tax: $ 0.00
NYS Real Estate Transfer Tax: $ 0.00

RECORDED OR FILED IN THE OFFICE OF THE CITY REGISTER OF THE CITY OF NEW YORK
Recorded/Filed 10-05-2020 17:17
City Register File No.(CRFN): **2020000271467**

City Register Official Signature

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 10th day of September, 2020 between Owner, 450 Union LLC, having a mailing address of 10 Glenville Street, Suite 1, Greenwich, Connecticut 06831, County of Fairfield, State of Connecticut (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 450 Union Street in the City of New York, County of Kings and State of New York, known and designated on the tax map of the New York City Department of Finance as tax map parcel number: Block 438 Lot 7, being the same as that property conveyed to Grantor by deed dated September 9, 2014 and recorded in the City Register of the City of New York as CRFN #2014000329318. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.654 +/- acres, and is hereinafter more fully described in the Land Title Survey dated June 25, 2020 prepared by Paul D. Fisher, L.L.S. of Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C., which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is

extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: C224219-06-15, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the New York City Department of Health and Mental Hygiene to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation

pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: C224219
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and

communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

11. Consistency with the SMP. To the extent there is any conflict or inconsistency between the terms of this Environmental Easement and the SMP, regarding matters specifically addressed by the SMP, the terms of the SMP will control.

Remainder of Page Intentionally Left Blank

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

450 Union LLC:

By: _____

Print Name: Eric Schwartz

Title: Manager Date: 8/25/20

Grantor's Acknowledgment

L.A. STATE OF ~~NEW YORK~~ CONNECTICUT)
) ss:
COUNTY OF Fairfield)

On the 25th day of August, in the year 2020, before me, the undersigned, personally appeared Eric Schwartz, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Notary Public - State of New York

LYNN AMLER
Notary Public, State of Connecticut
My Commission Expires Aug. 31, 2022

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting by and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
George W. Heitzman, Assistant Director
Division of Environmental Remediation

Grantee's Acknowledgment

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

On the 10th day of September, in the year 2020 before me, the undersigned, personally appeared George W. Heitzman, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

JENNIFER ANDALORO
Notary Public, State of New York
No. 02AN6098246
Qualified in Albany County
Commission Expires January 14, 2024

Block 438
Lot 7
County of Kings

183226

SCHEDULE "A" PROPERTY DESCRIPTION

ENVIRONMENTAL EASEMENT LEGAL DESCRIPTION
450 UNION STREET

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE BOROUGH OF BROOKLYN, CITY AND STATE OF NEW YORK, COUNTY OF KINGS, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEASTERLY CORNER OF BOND AND UNION STREETS;

RUNNING THENCE EASTERLY AND ALONG THE SOUTHERLY SIDE OF UNION STREET, THREE HUNDRED (300) FEET TO THE WESTERLY SIDE OF GOWANUS CANAL;

THENCE SOUTHERLY AND ALONG SAID WESTERLY SIDE OF GOWANUS CANAL, ONE HUNDRED (100) FEET;

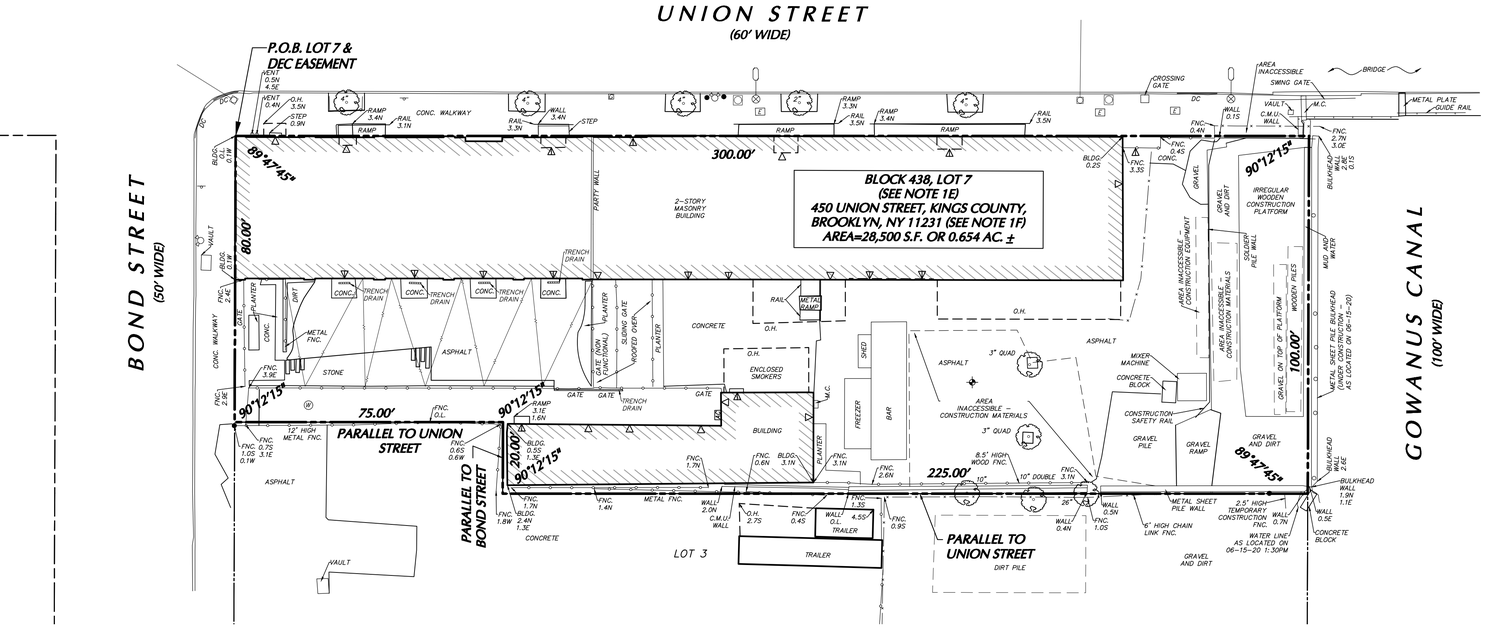
THENCE WESTERLY PARALLEL WITH THE SAID SOUTHERLY SIDE OF UNION STREET, TWO HUNDRED TWENTY-FIVE (255) FEET;

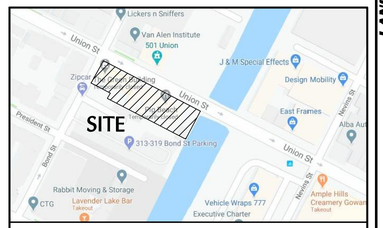
THENCE NORTHERLY AND PARALLEL WITH THE SAID SOUTHERLY SIDE OF BOND STREET, TWENTY (20) FEET;

THENCE WESTERLY AND PARALLEL WITH THE SAID SOUTHERLY SIDE OF UNION STREET, SEVENTY-FIVE (75) FEET TO THE EASTERLY SIDE OF BOND STREET; AND

THENCE NORTHERLY AND ALONG THE SAID EASTERLY SIDE OF BOND STREET, EIGHTY FEET (80) TO THE POINT OR PLACE OF BEGINNING.

ENCOMPASSING AN AREA OF 28,500 SQUARE FEET OR 0.654 ACRES, MORE OR LESS.





PROJECT LOCATION MAP

SCALE: NOT TO SCALE

SOURCE: GOOGLE MAPS

LEGEND (NOT SHOWN TO SCALE)

- HYDRANT
- STAND PIPE
- ROOF DRAIN
- FLAG POLE
- PEDESTAL LIGHT
- STREET LIGHT
- AREA LIGHT
- SIGNAL POLE
- POWER POLE
- GUY WIRE
- ANCHOR POLE
- MANHOLE (TYPE AS LABELED)
- WATER VALVE
- GAS VALVE
- UNKNOWN VALVE
- CATCH BASIN
- CLEAN OUT
- TREE
- SIGN
- BOLLARD
- ELECTRIC BOX
- ELECTRIC METER
- GAS METER
- WATER METER
- TELEPHONE BOX
- TRAFFIC SIGNAL POLE
- MONITOR WELL
- BENCH
- DOOR
- DOUBLE DOOR
- ROLL UP DOOR
- YARD DRAIN
- MAILBOX
- DROP CURB
- POINT OF BEGINNING
- CONCRETE MASONRY UNIT
- BUILDING
- TYPICAL
- FENCE
- OVERHANG
- METAL COVER
- SQUARE FEET
- ACRES
- ON LINE
- NORTH
- SOUTH
- WEST
- EAST
- OVERHEAD WIRE
- GUIDE RAIL WOOD
- GUIDE RAIL METAL
- TREE LINE
- CHAINLINK FENCE
- STOCKADE FENCE
- IRON FENCE
- EASEMENT LINE
- PROPERTY LINE
- RIGHT-OF-WAY LINE

NOTES

1. THIS SURVEY IS BASED UPON EXISTING PHYSICAL CONDITIONS FOUND AT THE SUBJECT SITE, AND THE FOLLOWING REFERENCES:
   - A. BOROUGH OF BROOKLYN SECTION MAP NO. 23 AND 24.
   - B. CURRENT NEW YORK CITY TAX MAP OF BROOKLYN.
   - C. "BOUNDARY AND TOPOGRAPHIC SURVEY, 450 UNION STREET", BY LANGAN, PROJECT NO. 170301202, DRAWING NO. V1-101, DATED 06/13/17, LAST REVISED 12/04/19.
   - D. TITLE NO. KIN-246501-L, BY OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, EFFECTIVE DATE 05/26/14 AT 8:00AM.
   - E. CRFN 2004000753755, RECORDED/FILED 12-07-2004 11:58 (DEED) (PLOTTED)
   - F. BROWNFIELD SITE CLEANUP AGREEMENT, INDEX NO.: C224219-06-15, SIGNED BY ROBERT W. SCHICK, P.E., DIRECTOR, DIVISION OF ENVIRONMENTAL REMEDIATION, DATED 09/01/15.
2. THE SURVEYED PROPERTY IS SUBJECT BUT NOT LIMITED TO THE FOLLOWING FACTS AS REVEALED BY THE HEREON REFERENCED INFORMATION. THE INFORMATION SHOWN HEREON DOES NOT CONSTITUTE A TITLE SEARCH BY THE SURVEYOR. ALL INFORMATION THAT MAY AFFECT THE QUALITY OF TITLE TO BOTH THE SUBJECT AND ADJOINING PARCELS SHOULD BE VERIFIED BY AN ACCURATE AND CURRENT TITLE REPORT.
3. THE MERIDIAN OF THIS SURVEY IS REFERENCED TO THE NEW YORK LONG ISLAND COORDINATE SYSTEM, NYLI NAD 83 (2011) DERIVED USING LEICA GS-15 AND CS-15 GPS EQUIPMENT AND THE LEICA SMARTNET NETWORK.
4. STREET NAMES, R.O.W. WIDTHS, BLOCK, AND LOT NUMBERS AS PER MAPS REFERENCED IN NOTES 1A THROUGH 1C.
5. PLANIMETRIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE AND GEOLOGY, D.P.C. DURING JUNE OF 2020.
6. OFFSETS (IF SHOWN) ARE FOR SURVEY REFERENCES ONLY AND ARE NOT TO BE USED IN CONSTRUCTION OF ANY TYPE.
7. WETLANDS, ENVIRONMENTAL AND/OR HAZARDOUS MATERIALS LOCATION, IF ANY, NOT COVERED UNDER THIS CONTRACT.
8. UNLESS SPECIFICALLY NOTED HEREON, STORM AND SANITARY SEWER INFORMATION (INCLUDING PIPE INVERT, PIPE MATERIAL, AND PIPE SIZE) WAS OBSERVED AND MEASURED AT FIELD LOCATED STRUCTURES (MANHOLES/CATCH BASINS, ETC.). CONDITIONS CAN VARY FROM THOSE ENCOUNTERED AT THE TIMES WHEN AND THE LOCATIONS WHERE DATA WAS OBTAINED. DESPITE MEETING THE REQUIRED STANDARD OF CARE THE SURVEYOR CANNOT AND DOES NOT WARRANT THAT PIPE MATERIAL AND/OR PIPE SIZE THROUGHOUT THE PIPE RUN ARE THE SAME AS THOSE OBSERVED AT EACH STRUCTURE, OR THAT THE PIPE RUN IS STRAIGHT BETWEEN THE LOCATED STRUCTURES.

   ADDITIONAL UTILITY (WATER, GAS, ELECTRIC ETC..) DATA MAY BE SHOWN FROM FIELD LOCATED SURFACE MARKINGS (BY OTHERS), EXISTING STRUCTURES, AND/OR FROM EXISTING DRAWINGS.

   UNLESS SPECIFICALLY NOTED HEREON THE SURVEYOR HAS NOT EXCAVATED TO PHYSICALLY LOCATE THE UNDERGROUND UTILITIES. THE SURVEYOR MAKES NO GUARANTEES THAT THE SHOWN UNDERGROUND UTILITIES ARE EITHER IN SERVICE, ABANDONED OR SUITABLE FOR USE, NOR ARE IN THE EXACT LOCATION OR CONFIGURATION INDICATED HEREON.

   PRIOR TO ANY DESIGN OR CONSTRUCTION THE PROPER UTILITY AGENCIES MUST BE CONTACTED FOR VERIFICATION OF UTILITY TYPE AND FOR FIELD LOCATIONS.

   UNLESS NOTED BELOW SUPPLEMENTAL DOCUMENTS WERE NOT USED TO COMPILE THE SUBSURFACE UTILITY INFORMATION SHOWN HEREON.
9. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
10. THIS PLAN NOT VALID UNLESS EMBOSSED OR BLUE INK STAMPED WITH THE SEAL OF THE PROFESSIONAL.

BLOCK 438 LOT 7 & DEC EASEMENT WRITTEN DESCRIPTION (SEE NOTE 1E)

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE BOROUGH OF BROOKLYN, CITY AND STATE OF NEW YORK, COUNTY OF KINGS, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEASTERLY CORNER OF BOND AND UNION STREETS;

RUNNING THENCE EASTERLY AND ALONG THE SOUTHERLY SIDE OF UNION STREET, THREE HUNDRED (300) FEET TO THE WESTERLY SIDE OF GOWANUS CANAL;

THENCE SOUTHERLY AND ALONG SAID WESTERLY SIDE OF GOWANUS CANAL, ONE HUNDRED (100) FEET;

THENCE WESTERLY PARALLEL WITH THE SAID SOUTHERLY SIDE OF UNION STREET, TWO HUNDRED TWENTY-FIVE (225) FEET;

THENCE NORTHERLY AND PARALLEL WITH SAID EASTERLY SIDE OF BOND STREET, TWENTY (20) FEET;

THENCE WESTERLY AND PARALLEL WITH THE SAID SOUTHERLY SIDE OF UNION STREET, SEVENT-FIVE (75) FEET TO THE EASTERLY SIDE OF BOND STREET; AND

THENCE NORTHERLY AND ALONG THE SAID EASTERLY SIDE OF BOND STREET, EIGHTY FEET (80) TO THE POINT OR PLACE OF BEGINNING.

ENCOMPASSING AN AREA OF 28,500 SQUARE FEET OR 0.654 ACRES, MORE OR LESS.

6.096 0 1.524 3.048 6.096
SCALE: 1 INCH = 6.096 METERS

20 0 5 10 20
SCALE: 1 INCH = 20 FEET

THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL EASEMENT HELD BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION PURSUANT TO TITLE 36 OF ARTICLE 71 OF THE NEW YORK ENVIRONMENTAL CONSERVATION LAW. THE ENGINEERING AND INSTITUTIONAL CONTROLS FOR THIS EASEMENT ARE SET FORTH IN MORE DETAIL IN THE SITE MANAGEMENT PLAN (SMP). A COPY OF THE SMP MUST BE OBTAINED BY ANY PARTY WITH AN INTEREST IN THE PROPERTY. THE SMP CAN BE OBTAINED FROM NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF ENVIRONMENTAL REMEDIATION, SITE CONTROL SECTION, 625 BROADWAY, ALBANY, NY 12233 OR AT derweb@dec.ny.gov.

Date	Description	No.
REVISIONS		

"I hereby state that this plan is based on a field survey made by me or under my immediate supervision in accordance with NYSPLS Code of Practice for Land Surveys, and to the best of my professional knowledge, information and belief, and in my professional opinion, correctly represents the conditions found on the date of the field survey of the subject property".

LICENSED LAND SURVEYOR 050784

6-25-2020
SIGNATURE & PRAM FISHER — DATE SIGNED
PROFESSIONAL LAND SURVEYOR NY Lic. No. 050784-1

LANGAN
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com

Project: 450 UNION STREET
BLOCK No. 438, LOT No. 7
BOROUGH OF BROOKLYN
CITY OF NEW YORK
KINGS COUNTY NEW YORK

Drawing Title: DEC EASEMENT SURVEY

Project No.	170301202
Date	06/25/20
Scale	1"=20'
Drawn By	LB, DS
Checked By	PDF

Drawing No. DEC101
Sheet 001 of 001

Filename: \\langan.com\data\NY\Cdata2\170301202\Survey Data - 170301202\Carlson\Existing\170301202-EX-DEC-0101-FOR DEC EASEMENT SURVEY.dwg Date: 6/25/2020 Time: 09:08 User: dstolyarov Style Table: Langan.stb Layout: ARCH-BL

LANGAN PROJECT NO. 170301202

APPENDIX B
PERIODIC REVIEW REPORT EC/IC CERTIFICATION FORM

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

Site Details **Box 1**

Site No. C224219

Site Name 450 Union Street

Site Address: 450 UNION STREET Zip Code: 11231
City/Town: Brooklyn
County: Kings
Site Acreage: 0.654

Reporting Period: September 1, 2023 to June 30, 2024

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

Box 2

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

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

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

Signature of Owner, Remedial Party or Designated Representative Date

	Box 2A	
	YES	NO
8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	☒
If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.		
9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)	☒	☐
If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.		

SITE NO. C224219 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
438-7	450 Union LLC	Ground Water Use Restriction Landuse Restriction Monitoring Plan Site Management Plan O&M Plan IC/EC Plan

Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted residential use, commercial use or industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
- require compliance with the Department approved Site Management Plan.

Site Management Plan

A Site Management Plan is required, which includes the following:

a. An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

? Institutional Controls: The Environmental Easement discussed above.
? Engineering Controls: The Cover System, DNAPL recovery system discussed above and the bulkhead wall/contaminant barrier installed as an IRM.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- a provision for demolition of on-site buildings if and when they become unsafe, inactive or vacant;
- descriptions of the provisions of the environmental easement including any land use and/or groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs)
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
- a schedule of monitoring and frequency of submittals to the Department;
- monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c. An Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
- procedures for operating and maintaining the remedy;

- compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
- maintaining site access controls and Department notification; and
- providing the Department access to the site and O&M records.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
438-7	Cover System Subsurface Barriers

Cover System

A site cover currently exists in areas not occupied by buildings and will be maintained to allow for restricted residential, commercial or industrial use of the site. Any site redevelopment will maintain the existing site cover. The site cover may include paved surface parking areas, sidewalks or soil where the upper two feet of exposed surface soil meets the applicable soil cleanup objectives SCOs for restricted residential, commercial or industrial use. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6NYCRR part 375-6.7(d).
Coal Tar Recovery

Installation and operation of coal tar recovery wells along the eastern edge of the site bordering the Gowanus Canal to remove potentially mobile coal tar from the subsurface. The design calls for 2 extraction wells: the existing well screened to a depth of 52 feet, and a new well to be installed to a maximum depth of 65 feet below ground surface (bgs). These recovery wells will be spaced approximately 35 to 40 feet apart, adjacent to the bulkhead. Coal tar will be collected periodically from each well; however, if wells are determined by the Department to accumulate large quantities of coal tar over extended time periods, they can be converted to automated collection.

The bulkhead wall/contaminant barrier installed as an IRM.

Box 5

Periodic Review Report (PRR) Certification Statements

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

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

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

* Certification of the DNAPL recovery results are based on the results reported and certified by GZA GeoEnvironmental, Inc.

YES *	NO
☒	☐

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

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

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

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

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

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

YES	NO
☒	☐

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

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

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. C224219

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

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

I Robert Dosler at 2130 Broadway Suite 303 NY NY 10023
print name print business address

am certifying as OWNER (Owner or Remedial Party)

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

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

7-11-24
Date

EC CERTIFICATIONS

Box 7

Professional Engineer Signature

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

I Ariel Czemerinski (print name) at AMC Engineering, PLLC 18-36 42nd Street, Astoria, NY 11105 (print business address),

am certifying as a Professional Engineer for the Remedial Party (Owner or Remedial Party)

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

Stamp (Required for PE)

07/11/2024
Date

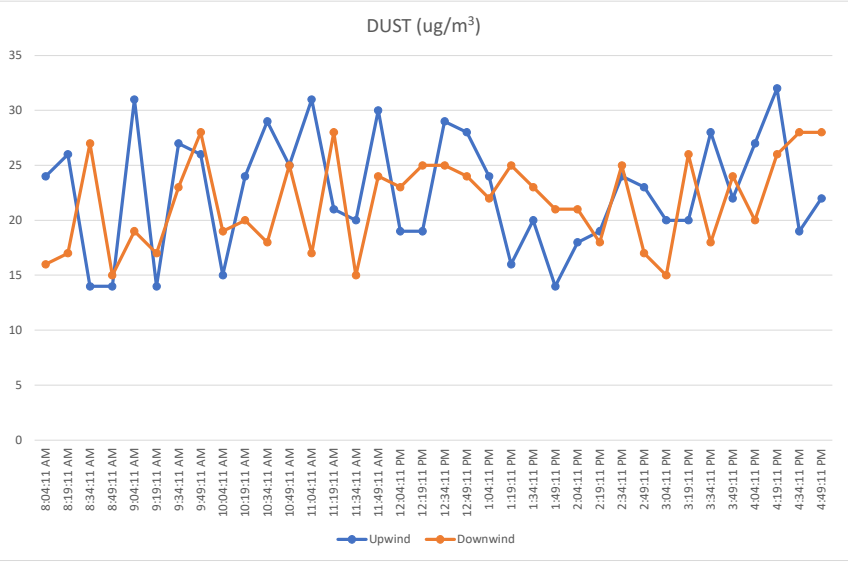
APPENDIX C
COMMUNITY AIR MONITORING DATA

Site:	450 Union Street
Location:	Upwind
Model Number:	DustTrak II
Serial Number:	8530152605
Date:	9/5/2023
Start Time:	8:02:27 AM
End Time:	4:47:27 PM
Log Period	00:15:00
CalFactor	1
Unit	0
Unit Name	ug/m3
TempUnits	C
RH Correct	Enabled

Datalog:	Date & Time	Mass [ug/m3]
	8:02:27 AM	24
	8:17:27 AM	26
	8:32:27 AM	14
	8:47:27 AM	14
	9:02:27 AM	31
	9:17:27 AM	14
	9:32:27 AM	27
	9:47:27 AM	26
	10:02:27 AM	15
	10:17:27 AM	24
	10:32:27 AM	29
	10:47:27 AM	25
	11:02:27 AM	31
	11:17:27 AM	21
	11:32:27 AM	20
	11:47:27 AM	30
	12:02:27 PM	19
	12:17:27 PM	19
	12:32:27 PM	29
	12:47:27 PM	28
	1:02:27 PM	24
	1:17:27 PM	16
	1:32:27 PM	20
	1:47:27 PM	14
	2:02:27 PM	18
	2:17:27 PM	19
	2:32:27 PM	24
	2:47:27 PM	23
	3:02:27 PM	20
	3:17:27 PM	20
	3:32:27 PM	28
	3:47:27 PM	22
	4:02:27 PM	27
	4:17:27 PM	32
	4:32:27 PM	19
	4:47:27 PM	22

Site:	450 Union Street
Location:	Downwind
Model Numb	DustTrak II
Serial Numbe	8530104413
Date:	9/5/2023
Start Time:	8:04:11 AM
End Time:	4:49:11 PM
Log Period	00:15:00
CalFactor	1
Unit	0
Unit Name	ug/m3
TempUnits	C
RH Correct	Enabled

Datalog:	Date & Time	Mass [ug/m3]
	8:04:11 AM	16
	8:19:11 AM	17
	8:34:11 AM	27
	8:49:11 AM	15
	9:04:11 AM	19
	9:19:11 AM	17
	9:34:11 AM	23
	9:49:11 AM	28
	10:04:11 AM	19
	10:19:11 AM	20
	10:34:11 AM	18
	10:49:11 AM	25
	11:04:11 AM	17
	11:19:11 AM	28
	11:34:11 AM	15
	11:49:11 AM	24
	12:04:11 PM	23
	12:19:11 PM	25
	12:34:11 PM	25
	12:49:11 PM	24
	1:04:11 PM	22
	1:19:11 PM	25
	1:34:11 PM	23
	1:49:11 PM	21
	2:04:11 PM	21
	2:19:11 PM	18
	2:34:11 PM	25
	2:49:11 PM	17
	3:04:11 PM	15
	3:19:11 PM	26
	3:34:11 PM	18
	3:49:11 PM	24
	4:04:11 PM	20
	4:19:11 PM	26
	4:34:11 PM	28
	4:49:11 PM	28



Site: 450 Union Street
Date: 9/5/2023
Location: Downwind
Summary: No VOC detections

Unit Name: MiniRAW (3000) (PGM-7320)
Serial Number: 592-915354
Running Mode: Hygiene Mode
Datalog Mode: Manual
Diagnostic Mode: No
Stop Reson:

	Date	Time
Begin:	9/5/2023	8:02:54 AM
End:	9/5/2023	4:47:54 PM

Low Alarm 5.0
High Alarm 25.0
Over Alarm 15000.0
STEL Alarm 250.0
TWA Alarm 100.0
Measurement Gas: Isobutylene
Calibration Time 9/5/2023 8:00

Peak: 0.4 ppm
Min: 0.0 ppm
Average: 0.1 ppm

Datalog:

Date	Time	PID (ppm)
9/5/2023	8:02:54 AM	0.1
9/5/2023	8:17:54 AM	0.2
9/5/2023	8:32:54 AM	0.2
9/5/2023	8:47:54 AM	0.2
9/5/2023	9:02:54 AM	0.3
9/5/2023	9:17:54 AM	0.1
9/5/2023	9:32:54 AM	0.0
9/5/2023	9:47:54 AM	0.0
9/5/2023	10:02:54 AM	0.0
9/5/2023	10:17:54 AM	0.3
9/5/2023	10:32:54 AM	0.3
9/5/2023	10:47:54 AM	0.3
9/5/2023	11:02:54 AM	0.3
9/5/2023	11:17:54 AM	0.4
9/5/2023	11:32:54 AM	0.3
9/5/2023	11:47:54 AM	0.0
9/5/2023	12:02:54 PM	0.0
9/5/2023	12:17:54 PM	0.0
9/5/2023	12:32:54 PM	0.2
9/5/2023	12:47:54 PM	0.1
9/5/2023	1:02:54 PM	0.1
9/5/2023	1:17:54 PM	0.1
9/5/2023	1:32:54 PM	0.1
9/5/2023	1:47:54 PM	0.0
9/5/2023	2:02:54 PM	0.0
9/5/2023	2:17:54 PM	0.0
9/5/2023	2:32:54 PM	0.0
9/5/2023	2:47:54 PM	0.2
9/5/2023	3:02:54 PM	0.0
9/5/2023	3:17:54 PM	0.0
9/5/2023	3:32:54 PM	0.0
9/5/2023	3:47:54 PM	0.2
9/5/2023	4:02:54 PM	0.3
9/5/2023	4:17:54 PM	0.0
9/5/2023	4:32:54 PM	0.0
9/5/2023	4:47:54 PM	0.0

Site: 450 Union Street
Date: 9/5/2023
Location: Upwind
Summary: No VOC detections

Unit Name: MiniRAW (3000) (PGM-7320)
Serial Number: 592-915354
Running Mode: Hygiene Mode
Datalog Mode: Manual
Diagnostic Mode: No
Stop Reson:

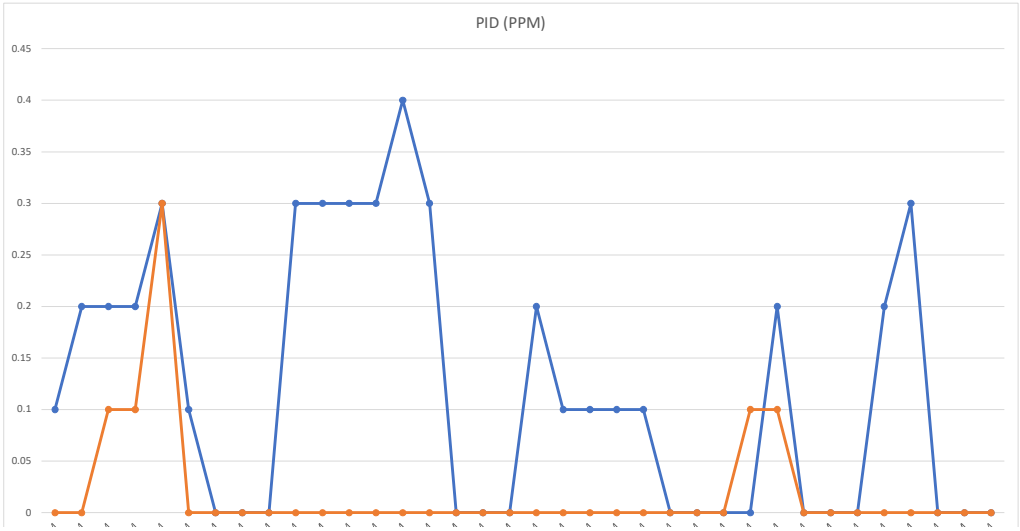
	Date	Time
Begin:	9/5/2023	8:03:44 AM
End:	9/5/2023	4:48:44 PM

Low Alarm 5.0
High Alarm 25.0
Over Alarm 15000.0
STEL Alarm 250.0
TWA Alarm 100.0
Measurement Gas: Isobutylene
Calibration Time 9/5/2023 8:00

Peak: 0.3 ppm
Min: 0.0 ppm
Average: 0.0 ppm

Datalog:

Date	Time	PID (ppm)
9/5/2023	8:03:44 AM	0.0
9/5/2023	8:18:44 AM	0.0
9/5/2023	8:33:44 AM	0.1
9/5/2023	8:48:44 AM	0.1
9/5/2023	9:03:44 AM	0.3
9/5/2023	9:18:44 AM	0.0
9/5/2023	9:33:44 AM	0.0
9/5/2023	9:48:44 AM	0.0
9/5/2023	10:03:44 AM	0.0
9/5/2023	10:18:44 AM	0.0
9/5/2023	10:33:44 AM	0.0
9/5/2023	10:48:44 AM	0.0
9/5/2023	11:03:44 AM	0.0
9/5/2023	11:18:44 AM	0.0
9/5/2023	11:33:44 AM	0.0
9/5/2023	11:48:44 AM	0.0
9/5/2023	12:03:44 PM	0.0
9/5/2023	12:18:44 PM	0.0
9/5/2023	12:33:44 PM	0.0
9/5/2023	12:48:44 PM	0.0
9/5/2023	1:03:44 PM	0.0
9/5/2023	1:18:44 PM	0.0
9/5/2023	1:33:44 PM	0.0
9/5/2023	1:48:44 PM	0.0
9/5/2023	2:03:44 PM	0.0
9/5/2023	2:18:44 PM	0.0
9/5/2023	2:33:44 PM	0.1
9/5/2023	2:48:44 PM	0.1
9/5/2023	3:03:44 PM	0.0
9/5/2023	3:18:44 PM	0.0
9/5/2023	3:33:44 PM	0.0
9/5/2023	3:48:44 PM	0.0
9/5/2023	4:03:44 PM	0.0
9/5/2023	4:18:44 PM	0.0
9/5/2023	4:33:44 PM	0.0
9/5/2023	4:48:44 PM	0.0

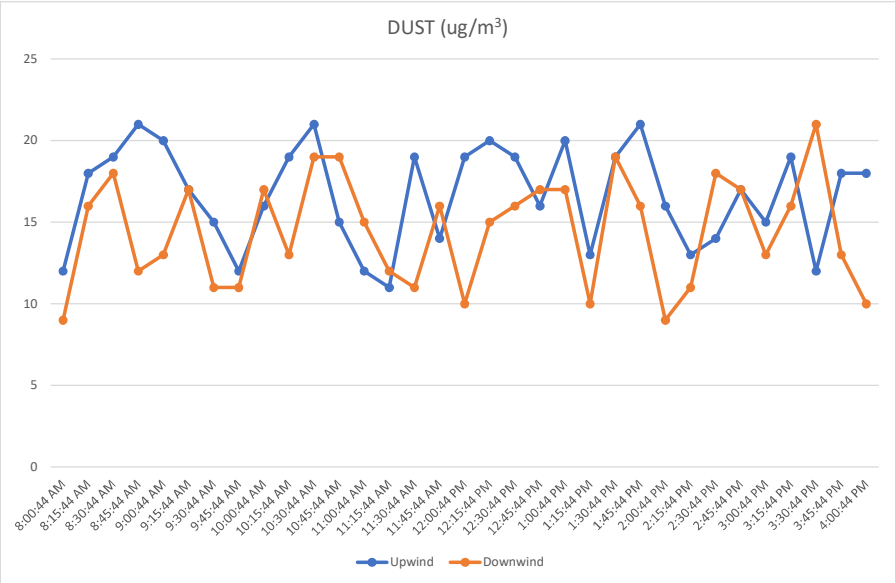


Site:	450 Union Street
Location:	Upwind
Model Number:	DustTrak II
Serial Number:	8530152605
Date:	9/6/2023
Start Time:	7:59:35 AM
End Time:	3:59:35 PM
Log Period	00:15:00
CalFactor	1
Unit	0
Unit Name	ug/m3
TempUnits	C
RH Correct	Enabled

Datalog:	Date & Time	Mass [ug/m3]
	7:59:35 AM	12
	8:14:35 AM	18
	8:29:35 AM	19
	8:44:35 AM	21
	8:59:35 AM	20
	9:14:35 AM	17
	9:29:35 AM	15
	9:44:35 AM	12
	9:59:35 AM	16
	10:14:35 AM	19
	10:29:35 AM	21
	10:44:35 AM	15
	10:59:35 AM	12
	11:14:35 AM	11
	11:29:35 AM	19
	11:44:35 AM	14
	11:59:35 AM	19
	12:14:35 PM	20
	12:29:35 PM	19
	12:44:35 PM	16
	12:59:35 PM	20
	1:14:35 PM	13
	1:29:35 PM	19
	1:44:35 PM	21
	1:59:35 PM	16
	2:14:35 PM	13
	2:29:35 PM	14
	2:44:35 PM	17
	2:59:35 PM	15
	3:14:35 PM	19
	3:29:35 PM	12
	3:44:35 PM	18
	3:59:35 PM	18

Site:	450 Union Street
Location:	Downwind
Model Numb	DustTrak II
Serial Numbe	8530104413
Date:	9/6/2023
Start Time:	8:00:44 AM
End Time:	4:00:44 PM
Log Period	00:15:00
CalFactor	1
Unit	0
Unit Name	ug/m3
TempUnits	C
RH Correct	Enabled

Datalog:	Date & Time	Mass [ug/m3]
	8:00:44 AM	9
	8:15:44 AM	16
	8:30:44 AM	18
	8:45:44 AM	12
	9:00:44 AM	13
	9:15:44 AM	17
	9:30:44 AM	11
	9:45:44 AM	11
	10:00:44 AM	17
	10:15:44 AM	13
	10:30:44 AM	19
	10:45:44 AM	19
	11:00:44 AM	15
	11:15:44 AM	12
	11:30:44 AM	11
	11:45:44 AM	16
	12:00:44 PM	10
	12:15:44 PM	15
	12:30:44 PM	16
	12:45:44 PM	17
	1:00:44 PM	17
	1:15:44 PM	10
	1:30:44 PM	19
	1:45:44 PM	16
	2:00:44 PM	9
	2:15:44 PM	11
	2:30:44 PM	18
	2:45:44 PM	17
	3:00:44 PM	13
	3:15:44 PM	16
	3:30:44 PM	21
	3:45:44 PM	13
	4:00:44 PM	10



Site:	450 Union Street
Date:	9/6/2023
Location:	Downwind
Unit Name:	MiniRAW (3000) (PGM-7320)
Serial Number:	592-908657
Running Mode:	Hygiene Mode
Datalog Mode:	Manual
Diagnostic Mode:	No
Stop Reason:	

	Date	Time
Begin:	9/6/2023	8:00:39 AM
End:	9/6/2023	4:47:54 PM

Low Alarm	5.0
High Alarm	25.0
Over Alarm	15000.0
STEL Alarm	250.0
TWA Alarm	100.0
Measurement Gas:	Isobutylene
Calibration Time	9/6/2023 8:00
Peak:	0.5 ppm
Min:	0.0 ppm
Average:	0.1 ppm

Datalog:

Date	Time	PID (ppm)
9/6/2023	8:00:39 AM	0.1
9/6/2023	8:15:39 AM	0.1
9/6/2023	8:30:39 AM	0.1
9/6/2023	8:45:39 AM	0.1
9/6/2023	9:00:39 AM	0.2
9/6/2023	9:15:39 AM	0.1
9/6/2023	9:30:39 AM	0.1
9/6/2023	9:45:39 AM	0.1
9/6/2023	10:00:39 AM	0.1
9/6/2023	10:15:39 AM	0.1
9/6/2023	10:30:39 AM	0.1
9/6/2023	10:45:39 AM	0.0
9/6/2023	11:00:39 AM	0.4
9/6/2023	11:15:39 AM	0.2
9/6/2023	11:30:39 AM	0.1
9/6/2023	11:45:39 AM	0.2
9/6/2023	12:00:39 PM	0.1
9/6/2023	12:15:39 PM	0.1
9/6/2023	12:30:39 PM	0.1
9/6/2023	12:45:39 PM	0.1
9/6/2023	1:00:39 PM	0.1
9/6/2023	1:15:39 PM	0.1
9/6/2023	1:30:39 PM	0.1
9/6/2023	1:45:39 PM	0.1
9/6/2023	2:00:39 PM	0.1
9/6/2023	2:15:39 PM	0.1
9/6/2023	2:30:39 PM	0.1
9/6/2023	2:45:39 PM	0.1
9/6/2023	3:00:39 PM	0.1
9/6/2023	3:15:39 PM	0.1
9/6/2023	3:30:39 PM	0.1
9/6/2023	3:45:39 PM	0.1
9/6/2023	4:00:39 PM	0.1

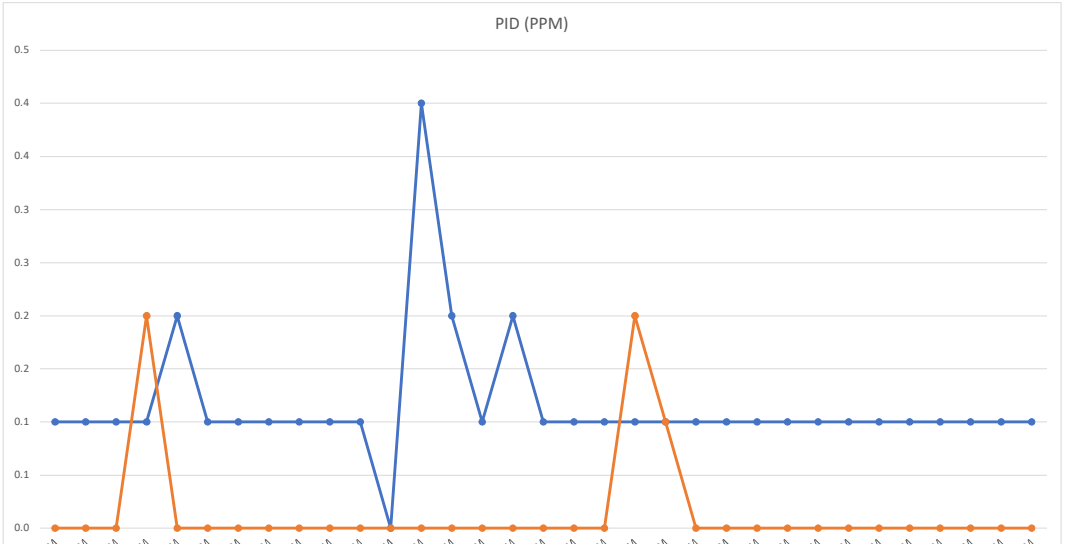
Site:	450 Union Street
Date:	9/6/2023
Location:	Upwind
Unit Name:	MiniRAW (3000) (PGM-7320)
Serial Number:	592-925076
Running Mode:	Hygiene Mode
Datalog Mode:	Manual
Diagnostic Mode:	No
Stop Reason:	

	Date	Time
Begin:	9/6/2023	8:02:14 AM
End:	9/6/2023	4:48:44 PM

Low Alarm	5.0
High Alarm	25.0
Over Alarm	15000.0
STEL Alarm	250.0
TWA Alarm	100.0
Measurement Gas:	Isobutylene
Calibration Time	9/6/2023 8:00
Peak:	0.2 ppm
Min:	0.0 ppm
Average:	0.0 ppm

Datalog:

Date	Time	PID (ppm)
9/6/2023	8:02:14 AM	0.0
9/6/2023	8:17:14 AM	0.0
9/6/2023	8:32:14 AM	0.0
9/6/2023	8:47:14 AM	0.2
9/6/2023	9:02:14 AM	0.0
9/6/2023	9:17:14 AM	0.0
9/6/2023	9:32:14 AM	0.0
9/6/2023	9:47:14 AM	0.0
9/6/2023	10:02:14 AM	0.0
9/6/2023	10:17:14 AM	0.0
9/6/2023	10:32:14 AM	0.0
9/6/2023	10:47:14 AM	0.0
9/6/2023	11:02:14 AM	0.0
9/6/2023	11:17:14 AM	0.0
9/6/2023	11:32:14 AM	0.0
9/6/2023	11:47:14 AM	0.0
9/6/2023	12:02:14 PM	0.0
9/6/2023	12:17:14 PM	0.0
9/6/2023	12:32:14 PM	0.0
9/6/2023	12:47:14 PM	0.2
9/6/2023	1:02:14 PM	0.1
9/6/2023	1:17:14 PM	0.0
9/6/2023	1:32:14 PM	0.0
9/6/2023	1:47:14 PM	0.0
9/6/2023	2:02:14 PM	0.0
9/6/2023	2:17:14 PM	0.0
9/6/2023	2:32:14 PM	0.0
9/6/2023	2:47:14 PM	0.0
9/6/2023	3:02:14 PM	0.0
9/6/2023	3:17:14 PM	0.0
9/6/2023	3:32:14 PM	0.0
9/6/2023	3:47:14 PM	0.0
9/6/2023	4:02:14 PM	0.0

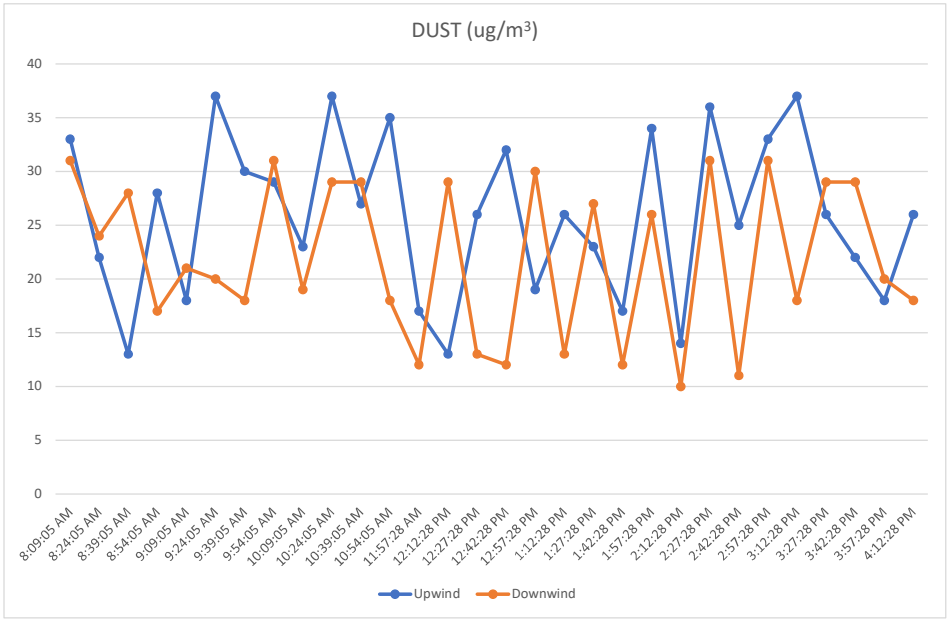


Site:	450 Union Street
Location:	Upwind
Model Number:	DustTrak II
Serial Number:	8530152605
Date:	9/7/2023
Start Time:	8:08:16 AM
End Time:	4:11:38 PM
Log Period	00:15:00
CalFactor	1
Unit	0
Unit Name	ug/m3
TempUnits	C
RH Correct	Enabled

Datalog:	Date & Time	Mass [ug/m3]
	8:08:16 AM	33
	8:23:16 AM	22
	8:38:16 AM	13
	8:53:16 AM	28
	9:08:16 AM	18
	9:23:16 AM	37
	9:38:16 AM	30
	9:53:16 AM	29
	10:08:16 AM	23
	10:23:16 AM	37
	10:38:16 AM	27
	10:53:16 AM	35
	11:56:38 AM	17
	12:11:38 PM	13
	12:26:38 PM	26
	12:41:38 PM	32
	12:56:38 PM	19
	1:11:38 PM	26
	1:26:38 PM	23
	1:41:38 PM	17
	1:56:38 PM	34
	2:11:38 PM	14
	2:26:38 PM	36
	2:41:38 PM	25
	2:56:38 PM	33
	3:11:38 PM	37
	3:26:38 PM	26
	3:41:38 PM	22
	3:56:38 PM	18
	4:11:38 PM	26

Site:	450 Union Street
Location:	Downwind
Model Numb	DustTrak II
Serial Numbe	8530104413
Date:	9/7/2023
Start Time:	8:09:05 AM
End Time:	4:12:28 PM
Log Period	00:15:00
CalFactor	1
Unit	0
Unit Name	ug/m3
TempUnits	C
RH Correct	Enabled

Datalog:	Date & Time	Mass [ug/m3]
	8:09:05 AM	31
	8:24:05 AM	24
	8:39:05 AM	28
	8:54:05 AM	17
	9:09:05 AM	21
	9:24:05 AM	20
	9:39:05 AM	18
	9:54:05 AM	31
	10:09:05 AM	19
	10:24:05 AM	29
	10:39:05 AM	29
	10:54:05 AM	18
	11:57:28 AM	12
	12:12:28 PM	29
	12:27:28 PM	13
	12:42:28 PM	12
	12:57:28 PM	30
	1:12:28 PM	13
	1:27:28 PM	27
	1:42:28 PM	12
	1:57:28 PM	26
	2:12:28 PM	10
	2:27:28 PM	31
	2:42:28 PM	11
	2:57:28 PM	31
	3:12:28 PM	18
	3:27:28 PM	29
	3:42:28 PM	29
	3:57:28 PM	20
	4:12:28 PM	18



Site:	450 Union Street
Date:	9/7/2023
Location:	Downwind
Unit Name:	MiniRAW (3000) (PGM-7320)
Serial Number:	592-908657
Running Mode:	Hygiene Mode
Datalog Mode:	Manual
Diagnostic Mode:	No
Stop Reason:	

	Date	Time
Begin:	9/7/2023	8:10:23 AM
End:	9/7/2023	4:11:57 PM

Low Alarm	5.0
High Alarm	25.0
Over Alarm	15000.0
STEL Alarm	250.0
TWA Alarm	100.0
Measurement Gas:	Isobutylene
Calibration Time	9/7/2023 8:05
Peak:	0.6 ppm
Min:	0.0 ppm
Average:	0.1 ppm

Datalog:

Date	Time	PID (ppm)
9/7/2023	8:10:23 AM	0.0
9/7/2023	8:25:23 AM	0.0
9/7/2023	8:40:23 AM	0.0
9/7/2023	8:55:23 AM	0.0
9/7/2023	9:10:23 AM	0.0
9/7/2023	9:25:23 AM	0.0
9/7/2023	9:40:23 AM	0.2
9/7/2023	9:55:23 AM	0.6
9/7/2023	10:10:23 AM	0.2
9/7/2023	10:25:23 AM	0.1
9/7/2023	10:40:23 AM	0.0
9/7/2023	10:55:23 AM	0.0
9/7/2023	11:56:47 AM	0.0
9/7/2023	12:11:47 PM	0.0
9/7/2023	12:26:47 PM	0.0
9/7/2023	12:41:47 PM	0.0
9/7/2023	12:56:47 PM	0.0
9/7/2023	1:11:47 PM	0.1
9/7/2023	1:26:47 PM	0.1
9/7/2023	1:41:47 PM	0.0
9/7/2023	1:56:47 PM	0.0
9/7/2023	2:11:47 PM	0.0
9/7/2023	2:26:47 PM	0.0
9/7/2023	2:41:47 PM	0.0
9/7/2023	2:56:47 PM	0.2
9/7/2023	3:11:47 PM	0.0
9/7/2023	3:26:47 PM	0.0
9/7/2023	3:41:47 PM	0.0
9/7/2023	3:56:47 PM	0.0
9/7/2023	4:11:47 PM	0.0

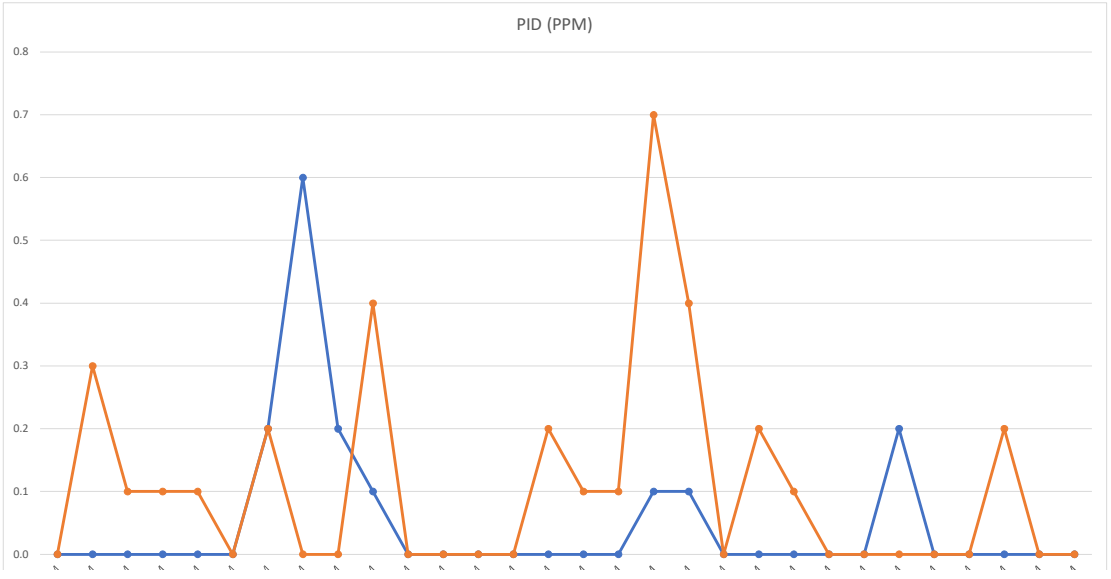
Site:	450 Union Street
Date:	9/7/2023
Location:	Upwind
Unit Name:	MiniRAW (3000) (PGM-7320)
Serial Number:	592-925076
Running Mode:	Hygiene Mode
Datalog Mode:	Manual
Diagnostic Mode:	No
Stop Reason:	

	Date	Time
Begin:	9/7/2023	8:07:38 AM
End:	9/7/2023	4:10:54 PM

Low Alarm	5.0
High Alarm	25.0
Over Alarm	15000.0
STEL Alarm	250.0
TWA Alarm	100.0
Measurement Gas:	Isobutylene
Calibration Time	9/7/2023 8:05
Peak:	0.7 ppm
Min:	0.0 ppm
Average:	0.1 ppm

Datalog:

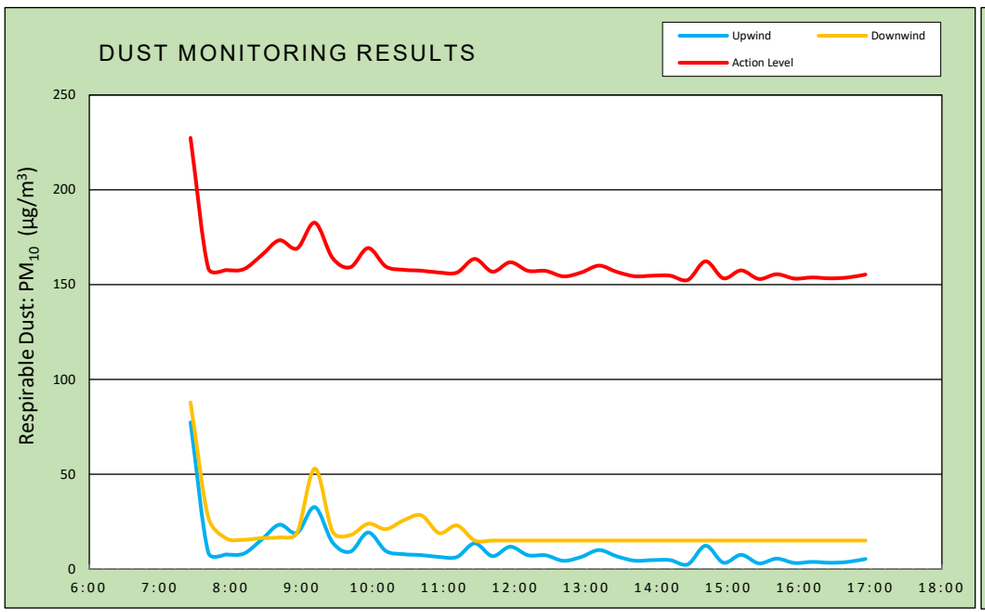
Date	Time	PID (ppm)
9/7/2023	8:07:38 AM	0.0
9/7/2023	8:22:38 AM	0.3
9/7/2023	8:37:38 AM	0.1
9/7/2023	8:52:38 AM	0.1
9/7/2023	9:07:38 AM	0.1
9/7/2023	9:22:38 AM	0.0
9/7/2023	9:37:38 AM	0.2
9/7/2023	9:52:38 AM	0.0
9/7/2023	10:07:38 AM	0.0
9/7/2023	10:22:38 AM	0.4
9/7/2023	10:37:38 AM	0.0
9/7/2023	10:52:38 AM	0.0
9/7/2023	11:55:54 AM	0.0
9/7/2023	12:10:54 PM	0.0
9/7/2023	12:25:54 PM	0.2
9/7/2023	12:40:54 PM	0.1
9/7/2023	12:55:54 PM	0.1
9/7/2023	1:10:54 PM	0.7
9/7/2023	1:25:54 PM	0.4
9/7/2023	1:40:54 PM	0.0
9/7/2023	1:55:54 PM	0.2
9/7/2023	2:10:54 PM	0.1
9/7/2023	2:25:54 PM	0.0
9/7/2023	2:40:54 PM	0.0
9/7/2023	2:55:54 PM	0.0
9/7/2023	3:10:54 PM	0.0
9/7/2023	3:25:54 PM	0.0
9/7/2023	3:40:54 PM	0.2
9/7/2023	3:55:54 PM	0.0
9/7/2023	4:10:54 PM	0.0

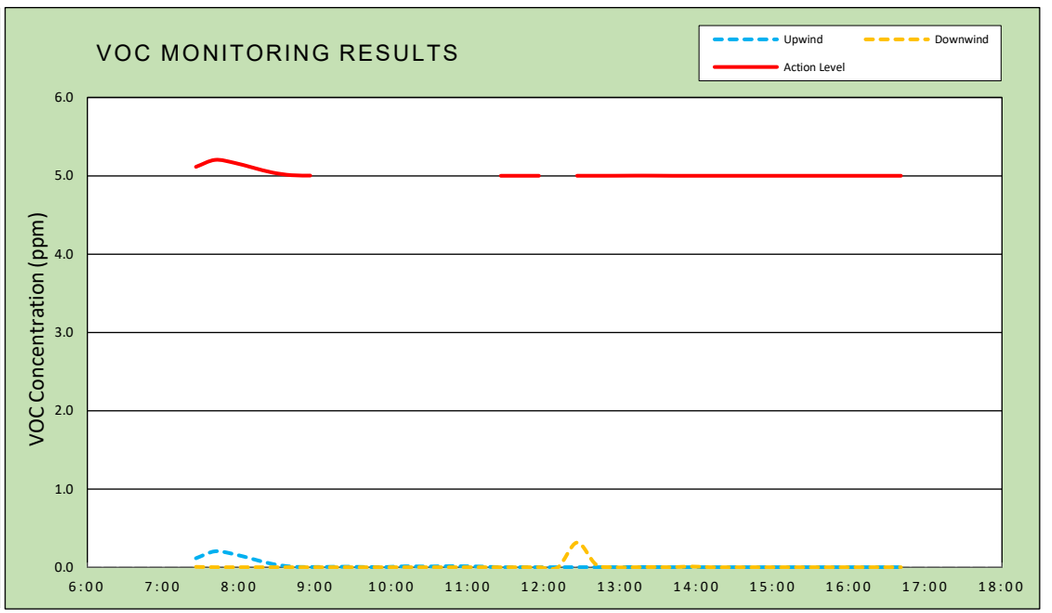


vEKtor consultants	**DAILY AIR MONITORING REPORT** **450 Union Street** **Brooklyn, New York**	**02/05/2024**	
37 W. 37th St, 6th Floor - New York, NY		Rev. No. 0	Page 1 of 2
		Project Number:	
		Dust Action Level	150 µg/m^3
		VOC Action Level	5 ppm

Weather Data Range for Work Day		Wind Direction	N	Relative Humidity (%)	33.0 - 57.0	Daily Rain Total (in)	0.00	Readings in the summary table and graphs below are the reported downwind concentrations.
Temperature (°F)	33.0 - 46.0	Wind Speed (MPH)	2.9 - 5.5	Barometer (inHg)	29.90 - 30.00	Avg. Dew Point Temp (°F)	20.2	

Station Location	Daily Avg. Dust Concentration (µg/m^3)	Max 15-Min Dust Concentration (µg/m^3)	Time of Max Dust Reading	Daily Avg. VOC Concentration (ppm)	Max 15-Min VOC Concentration (ppm)	Time of Max VOC Reading
Upwind	10.6	360.6	7:13	0.0	0.2	7:36
Downwind	19.8	208.0	7:17	0.0	0.7	7:30





Air Monitoring Notes:

Weather Notes:

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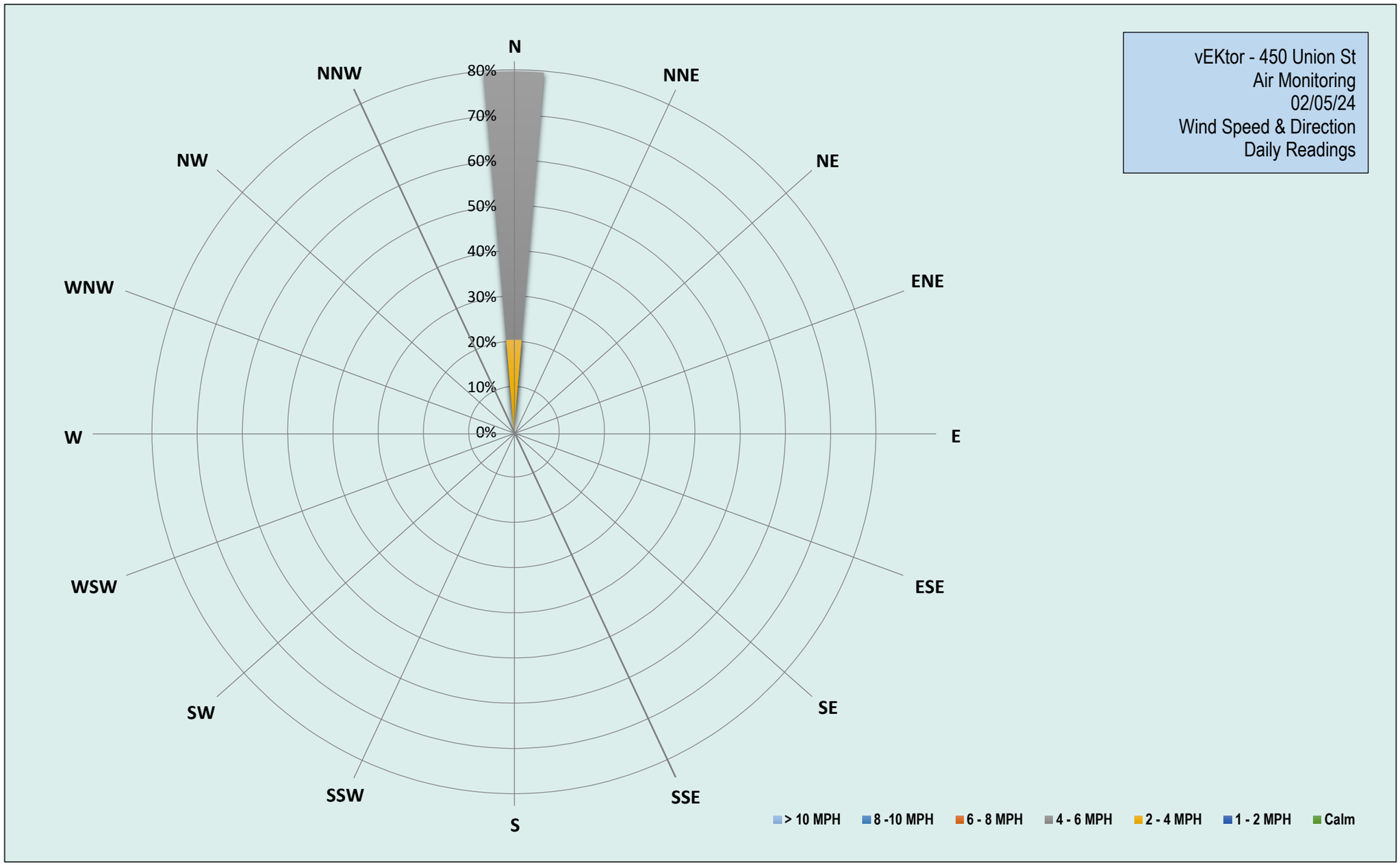
Wind Rose



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Monday, February 5, 2024	
Number of Instances Where Downwind Particulates	0
Number of Comparable Data Points =	39
Start Time:	7:26
End Time:	16:56

PARTICULATE DATA

Upwind		Downwind			
Time	15-Min Avg Concentration (ug/m^3)	Time	15-Min Avg Concentration (ug/m^3)	Exceeds Particulate Alarm Limit	Exceedance Level
7:26	77.3	7:26	87.9	-	227.3
7:41	8.7	7:41	27.2	-	158.7
7:56	7.7	7:56	16.2	-	157.7
8:11	8.1	8:11	15.4	-	158.1
8:26	15.5	8:26	16.3	-	165.5
8:41	23.4	8:41	16.7	-	173.4
8:56	19.0	8:56	19.2	-	169.0
9:11	32.6	9:11	53.0	-	182.6
9:26	14.0	9:26	19.7	-	164.0
9:41	9.2	9:41	17.9	-	159.2
9:56	19.3	9:56	23.9	-	169.3
10:11	9.5	10:11	21.0	-	159.5
10:26	7.8	10:26	25.7	-	157.8
10:41	7.3	10:41	28.3	-	157.3
10:56	6.4	10:56	18.9	-	156.4
11:11	6.3	11:11	23.0	-	156.3
11:26	13.5	11:26	15.0	-	163.5
11:41	6.8	11:41	15.0	-	156.8
11:56	11.8	11:56	15.0	-	161.8
12:11	7.3	12:11	15.0	-	157.3
12:26	7.2	12:26	15.0	-	157.2
12:41	4.3	12:41	15.0	-	154.3
12:56	6.4	12:56	15.0	-	156.4
13:11	10.0	13:11	15.0	-	160.0
13:26	6.7	13:26	15.0	-	156.7
13:41	4.4	13:41	15.0	-	154.4
13:56	4.7	13:56	15.0	-	154.7
14:11	4.7	14:11	15.0	-	154.7
14:26	2.5	14:26	15.0	-	152.5
14:41	12.3	14:41	15.0	-	162.3
14:56	3.3	14:56	15.0	-	153.3
15:11	7.5	15:11	15.0	-	157.5
15:26	3.0	15:26	15.0	-	153.0
15:41	5.5	15:41	15.0	-	155.5
15:56	3.2	15:56	15.0	-	153.2
16:11	3.7	16:11	15.0	-	153.7
16:26	3.3	16:26	15.0	-	153.3
16:41	3.7	16:41	15.0	-	153.7
16:56	5.3	16:56	15.0	-	155.3

Upwind DustTrak Data Summary		
Daily Maximum	721.3	ug/m^3
Daily Minimum	0.0	ug/m^3
Daily Average	10.6	ug/m^3
Maximum 15-Minute Average	77.3	ug/m^3

Downwind DustTrak Data Summary		
Daily Maximum	973.3	ug/m^3
Daily Minimum	9.0	ug/m^3
Daily Average	19.8	ug/m^3
Maximum 15-Minute Average	87.9	ug/m^3

Monday, February 5, 2024	
Number of Instances Where Downwind VOCs Exceeds	0
Number of Comparable Data Points =	0
Start Time:	7:27
End Time:	16:42

PID DATA					
Upwind		Downwind			
Time	15-Min Avg Concentration (ppm)	Time	15-Min Avg Concentration (ppm)	Exceeds VOC Alarm Limit	Exceedance Level
7:27	0.1	7:27	0.0	-	5.1
7:42	0.2	7:42	0.0	-	5.2
7:57	0.2	7:57	0.0	-	5.2
8:12	0.1	8:12	0.0	-	5.1
8:27	0.0	8:27	0.0	-	5.0
8:42	0.0	8:42	0.0	-	5.0
8:57	0.0	8:57	0.0	-	5.0
9:12	0.0	9:12	-	-	
9:27	0.0	9:27	-	-	
9:42	0.0	9:42	-	-	
9:57	0.0	9:57	-	-	
10:12	0.0	10:12	-	-	
10:27	0.0	10:27	-	-	
10:42	0.0	10:42	-	-	
10:57	0.0	10:57	-	-	
11:12	0.0	11:12	-	-	
11:27	0.0	11:27	0.0	-	5.0
11:42	0.0	11:42	0.0	-	5.0
11:57	0.0	11:57	0.0	-	5.0
12:12	0.0	12:12	-	-	
12:27	0.0	12:27	0.3	-	5.0
12:42	0.0	12:42	0.0	-	5.0
12:57	0.0	12:57	0.0	-	5.0
13:12	0.0	13:12	0.0	-	5.0
13:27	0.0	13:27	0.0	-	5.0
13:42	0.0	13:42	0.0	-	5.0
13:57	0.0	13:57	0.0	-	5.0
14:12	0.0	14:12	0.0	-	5.0
14:27	0.0	14:27	0.0	-	5.0
14:42	0.0	14:42	0.0	-	5.0
14:57	0.0	14:57	0.0	-	5.0
15:12	0.0	15:12	0.0	-	5.0
15:27	0.0	15:27	0.0	-	5.0
15:42	0.0	15:42	0.0	-	5.0
15:57	0.0	15:57	0.0	-	5.0
16:12	0.0	16:12	0.0	-	5.0
16:27	0.0	16:27	0.0	-	5.0
16:42	0.0	16:42	0.0	-	5.0

Upwind PID Data Summary		
Daily Maximum	0.3	ppm
Daily Minimum	0.0	ppm
Daily Average	0.0	ppm
Maximum 15-Minute Average	0.2	ppm

Downwind PID Data Summary		
Daily Maximum	0.7	ppm
Daily Minimum	0.0	ppm
Daily Average	0.0	ppm
Maximum 15-Minute Average	0.3	ppm

vEKtor consultants

37 W. 37th St, 6th Floor - New York, NY

DAILY AIR MONITORING REPORT
450 Union Street
Brooklyn, New York

02/06/2024

Rev. No. 0 | Page 1 of 2

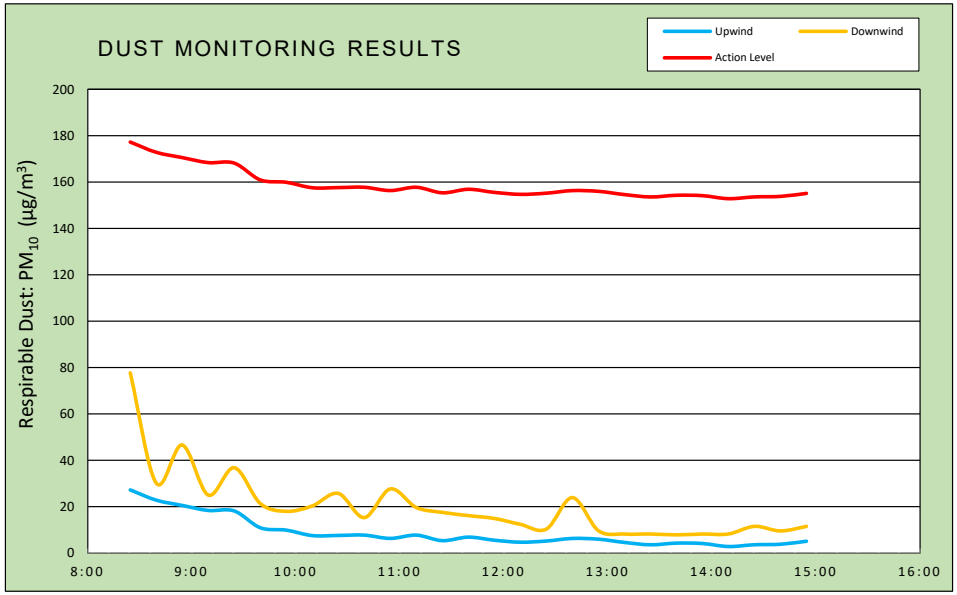
Project Number:

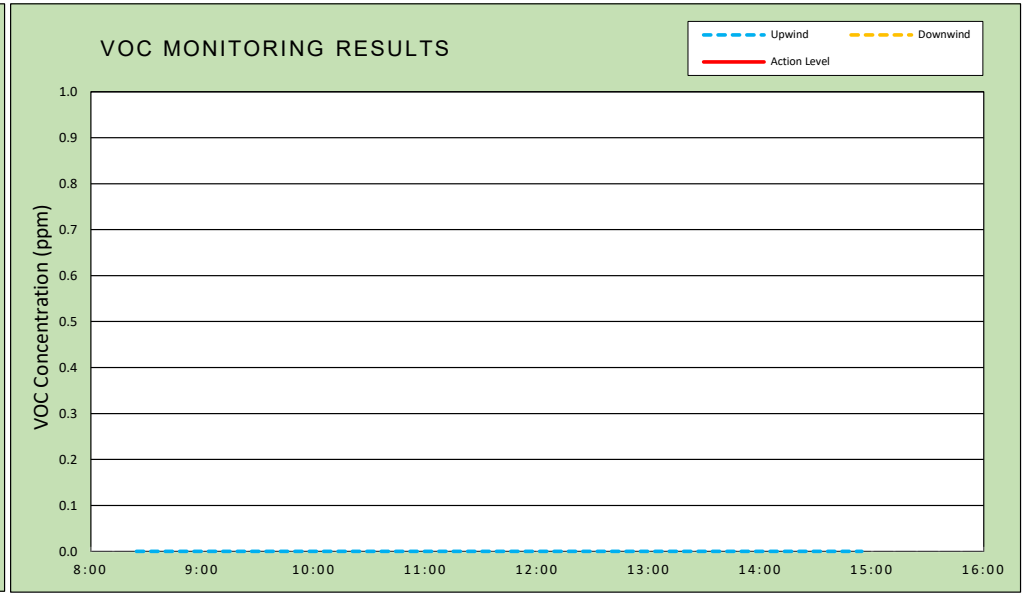
Dust Action Level: 150 µg/m^3

VOC Action Level: 5 ppm

Weather Data Range for Work Day		Wind Direction	NNE	Relative Humidity (%)	42.0 - 60.0	Daily Rain Total (in)	0.00	Readings in the summary table and graphs below are the reported downwind concentrations.
Temperature (°F)	30.0 - 43.0	Wind Speed (MPH)	3.3 - 5.7	Barometer (inHg)	30.20 - 30.20	Avg. Dew Point Temp (°F)	19.4	

Station Location	Daily Avg. Dust Concentration (µg/m^3)	Max 15-Min Dust Concentration (µg/m^3)	Time of Max Dust Reading	Daily Avg. VOC Concentration (ppm)	Max 15-Min VOC Concentration (ppm)	Time of Max VOC Reading
Upwind	8.6	27.3	8:25	0.0	0.0	8:26
Downwind	19.9	77.7	8:25	N/A	N/A	N/A





Air Monitoring Notes:

Weather Notes:

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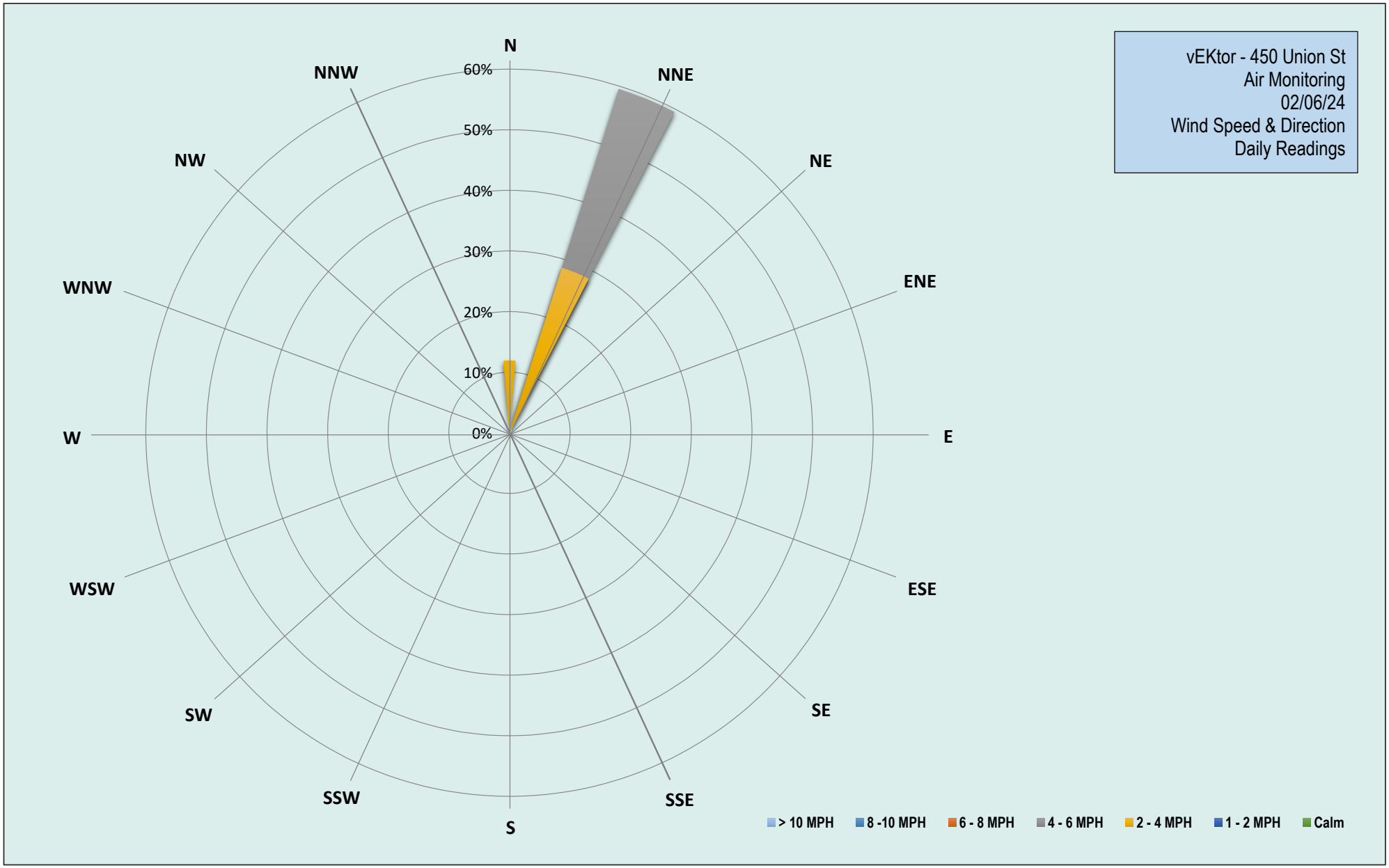
Wind Rose



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Tuesday, February 6, 2024					
Number of Instances Where Downwind Particulates				0	
Number of Comparable Data Points =				27	
Start Time:				8:25	
End Time:				14:55	
PARTICULATE DATA					
Upwind		Downwind		Exceeds Particulate Alarm Limit	Exceedance Level
Time	15-Min Avg Concentration (ug/m^3)	Time	15-Min Avg Concentration (ug/m^3)		
8:25	27.3	8:25	77.7	-	177.3
8:40	22.8	8:40	30.2	-	172.8
8:55	20.6	8:55	46.6	-	170.6
9:10	18.4	9:10	25.0	-	168.4
9:25	18.2	9:25	36.8	-	168.2
9:40	10.9	9:40	21.4	-	160.9
9:55	9.9	9:55	18.0	-	159.9
10:10	7.6	10:10	20.3	-	157.6
10:25	7.6	10:25	25.7	-	157.6
10:40	7.8	10:40	15.3	-	157.8
10:55	6.3	10:55	27.7	-	156.3
11:10	7.8	11:10	19.7	-	157.8
11:25	5.4	11:25	17.6	-	155.4
11:40	6.9	11:40	16.2	-	156.9
11:55	5.6	11:55	14.9	-	155.6
12:10	4.7	12:10	12.4	-	154.7
12:25	5.2	12:25	10.4	-	155.2
12:40	6.3	12:40	23.9	-	156.3
12:55	6.0	12:55	9.7	-	156.0
13:10	4.6	13:10	8.2	-	154.6
13:25	3.6	13:25	8.2	-	153.6
13:40	4.3	13:40	7.9	-	154.3
13:55	4.1	13:55	8.2	-	154.1
14:10	2.8	14:10	8.2	-	152.8
14:25	3.6	14:25	11.5	-	153.6
14:40	3.8	14:40	9.6	-	153.8
14:55	5.1	14:55	11.5	-	155.1

Upwind DustTrak Data Summary		
Daily Maximum	27.3	ug/m^3
Daily Minimum	2.8	ug/m^3
Daily Average	8.6	ug/m^3
Maximum 15-Minute Average	27.3	ug/m^3

Downwind DustTrak Data Summary		
Daily Maximum	77.7	ug/m^3
Daily Minimum	7.9	ug/m^3
Daily Average	19.9	ug/m^3
Maximum 15-Minute Average	77.7	ug/m^3

Tuesday, February 6, 2024				
Number of Instances Where Downwind VOCs Exceeds				0
Number of Comparable Data Points =				0
			Start Time:	#N/A
			End Time:	14:56
PID DATA				
Upwind		Downwind		
Time	15-Min Avg Concentration (ppm)	Time	15-Min Avg Concentration (ppm)	Exceeds VOC Alarm Limit
8:26	0.0	8:26	-	-
8:41	0.0	8:41	-	-
8:56	0.0	8:56	-	-
9:11	0.0	9:11	-	-
9:26	0.0	9:26	-	-
9:41	0.0	9:41	-	-
9:56	0.0	9:56	-	-
10:11	0.0	10:11	-	-
10:26	0.0	10:26	-	-
10:41	0.0	10:41	-	-
10:56	0.0	10:56	-	-
11:11	0.0	11:11	-	-
11:26	0.0	11:26	-	-
11:41	0.0	11:41	-	-
11:56	0.0	11:56	-	-
12:11	0.0	12:11	-	-
12:26	0.0	12:26	-	-
12:41	0.0	12:41	-	-
12:56	0.0	12:56	-	-
13:11	0.0	13:11	-	-
13:26	0.0	13:26	-	-
13:41	0.0	13:41	-	-
13:56	0.0	13:56	-	-
14:11	0.0	14:11	-	-
14:26	0.0	14:26	-	-
14:41	0.0	14:41	-	-
14:56	0.0	14:56	-	-

Exceedance Level

Upwind PID Data Summary		
Daily Maximum	0.0	ppm
Daily Minimum	0.0	ppm
Daily Average	0.0	ppm
Maximum 15-Minute Average	0.0	ppm

Downwind PID Data Summary		
Daily Maximum	0.0	ppm
Daily Minimum	0.0	ppm
Daily Average	#DIV/0!	ppm
Maximum 15-Minute Average	0.0	ppm

APPENDIX D
WASTE DISPOSAL DOCUMENTATION

CLEAN WATER of New York, Inc.

3249 Richmond Terrace
P.O. Box 030312
Staten Island, NY 10303-0312
Telephone (718) 981-4600
Fax (718) 816-4518
www.cwofny.com

PROFILE APPROVAL

Sep 01, 2023

BROOKSIDE ENVIRONMENTAL
22 Ocean Avenue
Copiague, NY 11726
Attn: Brian Graham

Generator:

2201 UNION LLC
450 Union Street
Brooklyn, NY 11231

Job Number 2921

Name of waste: Oily Water

The approval number for this waste stream is: **237-471**

The above referenced waste stream has been approved based on information provided by you on the Generator's Waste Profile Sheet. The waste characteristics must meet all parameters as indicated on the waste profile form. Clean Water reserves the right to reject shipments arriving at the facility due to treatability, physical or chemical characteristics.

Clean Water of New York, Inc. is a fully permitted and insured NYS DEC and USCG approved facility with the authorization and capacity to accept this material.

Please use the approval code on all documentation accompanying the loads.

Please call the facility to schedule a delivery of the material.

Sincerely,

Ralph Duca
President
Clean Water of New York, Inc.

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
Not required	1	631-608-8810	2921-9623

GENERATOR

5. Generator's Name and Mailing Address
2201 Union LLC
55 Washington Street, 551
Brooklyn NY 11201
Generator's Phone:

Generator's Site Address (if different than mailing address)
2201 Union LLC
450 Union Street
Brooklyn NY 11231

6. Transporter 1 Company Name: Brookside Environmental, Inc.
U.S. EPA ID Number: NYR000008681

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Water of New York
3249 Richmond Terrace
Staten Island NY 10303
Facility's Phone: 718 981-4600
U.S. EPA ID Number: NYD000968545

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non-RCRA, non-DOT waste, liquid	16	DM	720	G	
2.	~~Non-RCRA, non-DOT waste, solid~~		~~DM~~		~~P~~	
3.						
4.						

13. Special Handling Instructions and Additional Information
1) Groundwater. 237-471 2) Soil. 237-460

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: BRYAN GRAHAM / AS AGENT FOR GENERATOR
Signature:
Month: 9 Day: 6 Year: 23

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Daniel Kennecke
Signature:
Month: 9 Day: 6 Year: 23

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Carlos Herrera
Signature:
Month: 9 Day: 6 Year: 23

169-BLC-O 5 11977 (Rev. 9/09)

TRANSPORTER #1

CLEAN WATER of New York, Inc.

3249 Richmond Terrace
P.O. Box 030312
Staten Island, NY 10303-0312
Telephone (718) 981-4600
Fax (718) 816-4518
www.cwofny.com

PROFILE APPROVAL

Sep 01, 2023

BROOKSIDE ENVIRONMENTAL
22 Ocean Avenue
Copiague, NY 11726
Attn: Brian Graham

Generator:

2201 UNION LLC
450 Union Street
Brooklyn, NY 11231

Job Number 2921

Name of waste: Oily Water

The approval number for this waste stream is: **237-471**

The above referenced waste stream has been approved based on information provided by you on the Generator's Waste Profile Sheet. The waste characteristics must meet all parameters as indicated on the waste profile form. Clean Water reserves the right to reject shipments arriving at the facility due to treatability, physical or chemical characteristics.

Clean Water of New York, Inc. is a fully permitted and insured NYS DEC and USCG approved facility with the authorization and capacity to accept this material.

Please use the approval code on all documentation accompanying the loads.

Please call the facility to schedule a delivery of the material.

Sincerely,

Ralph Duca
President
Clean Water of New York, Inc.

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
Not required	1	631-608-8810	2021--42324

GENERATOR

5. Generator's Name and Mailing Address
2201 Union LLC
55 Washington Street, 551
Brooklyn NY 11201
Generator's Phone:

Generator's Site Address (if different than mailing address)
2201 Union LLC
450 Union Street
Brooklyn NY 11231

6. Transporter 1 Company Name: Brookside Environmental, Inc.
U.S. EPA ID Number: NYR000081661

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Water of New York
3249 Richmond Terrace
Staten Island NY 10303
Facility's Phone: 718 981-4600
U.S. EPA ID Number: NYD000968545

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non-RCRA, non-DOT waste, liquid (groundwater)	X2	DM	100	G	
2.	Non-RCRA, non-DOT waste, solid (soil)	X4	DM	1,600	P	
3.						
4.						

13. Special Handling Instructions and Additional Information
1) Groundwater. Approval # 237-471 2) Soil. Approval # 237-460

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: BRIAN GRAHAM / AS AGENT FOR GENERATOR
Signature: B. G
Month: 04 Day: 23 Year: 24

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Michael Librizzi
Signature: M
Month: 4 Day: 23 Year: 24

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Alexian Acevedo
Signature
Month: 4 Day: 23 Year: 24

APPENDIX E
POST-COC COMPLIANCE OPERATIONS DOCUMENTATION

vEKtor consultants

DAILY STATUS REPORT

Prepared By: Thomas Giordano

NYSDEC BCP Site No:	C224219	**Date:**	09/05/2023
Project Name:	450 Union Street	**Weather:**	Sunny, 80-90 ^{0}F
Client:	2201 Union LLC	**Time:**	8:00 – 17:00

Personnel On-Site:
Environmental Consultant: Vektor Consultants – Saranda Alka
WSP: Tim Williams
Demolition Contractor – Candid Construction

Work Activities Performed:

- Candid Construction used jackhammers to break up existing concrete to install new construction fence posts along the Union Street site boundary.
- Fence posts were installed, and concrete poured for new fence posts.

Samples Collected: None

Community Air Monitoring Program

Real-time Community Air Monitoring Plan (CAMP) was implemented during all intrusive work at an upwind and a downwind location. No exceedances were observed. Air monitoring results are appended to the end of this report.

Problems Encountered

None

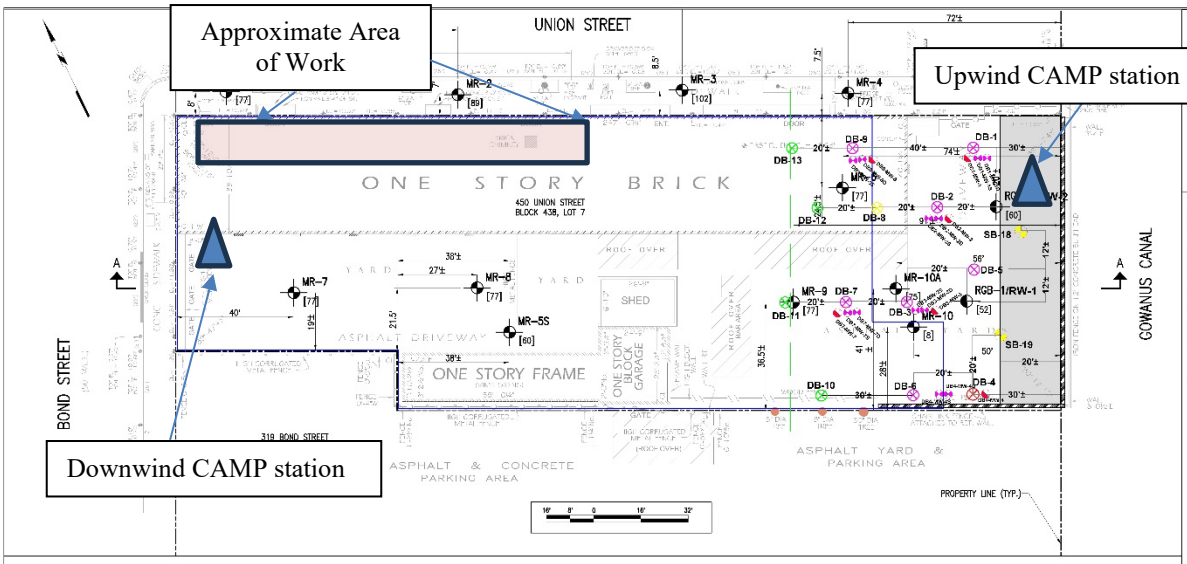
Planned Activities for the Next Day

Continued demolition of existing concrete and installation of new construction fence posts.

vEKtor consultants

BCP No: C224219
September 5, 2023

SITE PLAN / WORK AREAS



Legend:

- Site Boundary
- Proposed New Building Footprint
- MR-X — Prior Geotechnical Boring and ID
- RGB-X — Existing Recovery Well and ID
- SB-X — RI Soil Boring Location and ID (Feb. 2016)
- High-Level Relieving Platform
- Bulkhead/Containment Barrier
- Delineation Boring and ID (No Observed Impacts)
- Delineation Boring and ID (Staining, Odor)
- Delineation Boring and ID (Coated Material, Lenses)
- Delineation Boring and ID (Tar Saturated)
- Delineation Boring and ID (To be Installed in July 2023)
- Proposed Monitoring Wells (Shallow + Deep)
- Proposed NAPL Wells

EKtor consultants
t: +1.347.871.0750
f: +1.347.402.7735
e: info@vektorconsultants.com
www.vektorconsultants.com

Notes:

1. All feature locations are approximate
2. Base Plan is provided by Mueser Rutledge Engineers PLLC
3. DB-X: Delineation Boring and ID
4. DBX-MW-XD: Deep Monitoring Well screened below GCM and ID
5. DBX-MW-XS: Shallow Monitoring Well screened at groundwater interface and ID
6. DBX-MW-X: NAPL Mobility Well screened over GCM interval

Scale:	AS SHOWN
Figure No.	3.v12
Figure Name:	Delineation Borings & Proposed Wells
Report:	Remedial Optimization Work Plan
Date:	7/11/2023
Drawn By:	EK
Site Address:	450 Union Street Brooklyn, New York

vEKtor consultants

BCP No: C224219
September 5, 2023

PHOTO LOG

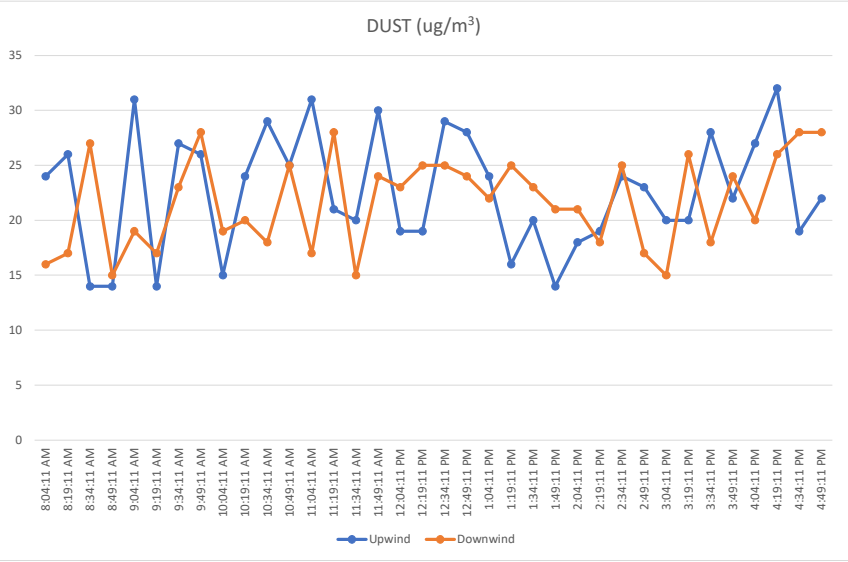
Photo 1: Area of work along Union Street site boundary, facing west.	
Photo 2: Breaking up concrete with jackhammers, facing southwest.	
Photo 3: Installed fence posts with concrete along Union Street site boundary, facing south.	

Site:	450 Union Street
Location:	Upwind
Model Number:	DustTrak II
Serial Number:	8530152605
Date:	9/5/2023
Start Time:	8:02:27 AM
End Time:	4:47:27 PM
Log Period	00:15:00
CalFactor	1
Unit	0
Unit Name	ug/m3
TempUnits	C
RH Correct	Enabled

Datalog:	Date & Time	Mass [ug/m3]
	8:02:27 AM	24
	8:17:27 AM	26
	8:32:27 AM	14
	8:47:27 AM	14
	9:02:27 AM	31
	9:17:27 AM	14
	9:32:27 AM	27
	9:47:27 AM	26
	10:02:27 AM	15
	10:17:27 AM	24
	10:32:27 AM	29
	10:47:27 AM	25
	11:02:27 AM	31
	11:17:27 AM	21
	11:32:27 AM	20
	11:47:27 AM	30
	12:02:27 PM	19
	12:17:27 PM	19
	12:32:27 PM	29
	12:47:27 PM	28
	1:02:27 PM	24
	1:17:27 PM	16
	1:32:27 PM	20
	1:47:27 PM	14
	2:02:27 PM	18
	2:17:27 PM	19
	2:32:27 PM	24
	2:47:27 PM	23
	3:02:27 PM	20
	3:17:27 PM	20
	3:32:27 PM	28
	3:47:27 PM	22
	4:02:27 PM	27
	4:17:27 PM	32
	4:32:27 PM	19
	4:47:27 PM	22

Site:	450 Union Street
Location:	Downwind
Model Numb	DustTrak II
Serial Numbe	8530104413
Date:	9/5/2023
Start Time:	8:04:11 AM
End Time:	4:49:11 PM
Log Period	00:15:00
CalFactor	1
Unit	0
Unit Name	ug/m3
TempUnits	C
RH Correct	Enabled

Datalog:	Date & Time	Mass [ug/m3]
	8:04:11 AM	16
	8:19:11 AM	17
	8:34:11 AM	27
	8:49:11 AM	15
	9:04:11 AM	19
	9:19:11 AM	17
	9:34:11 AM	23
	9:49:11 AM	28
	10:04:11 AM	19
	10:19:11 AM	20
	10:34:11 AM	18
	10:49:11 AM	25
	11:04:11 AM	17
	11:19:11 AM	28
	11:34:11 AM	15
	11:49:11 AM	24
	12:04:11 PM	23
	12:19:11 PM	25
	12:34:11 PM	25
	12:49:11 PM	24
	1:04:11 PM	22
	1:19:11 PM	25
	1:34:11 PM	23
	1:49:11 PM	21
	2:04:11 PM	21
	2:19:11 PM	18
	2:34:11 PM	25
	2:49:11 PM	17
	3:04:11 PM	15
	3:19:11 PM	26
	3:34:11 PM	18
	3:49:11 PM	24
	4:04:11 PM	20
	4:19:11 PM	26
	4:34:11 PM	28
	4:49:11 PM	28



Site: 450 Union Street
Date: 9/5/2023
Location: Downwind
Summary: No VOC detections

Unit Name: MiniRAW (3000) (PGM-7320)
Serial Number: 592-915354
Running Mode: Hygiene Mode
Datalog Mode: Manual
Diagnostic Mode: No
Stop Reson:

	Date	Time
Begin:	9/5/2023	8:02:54 AM
End:	9/5/2023	4:47:54 PM

Low Alarm 5.0
High Alarm 25.0
Over Alarm 15000.0
STEL Alarm 250.0
TWA Alarm 100.0
Measurement Gas: Isobutylene
Calibration Time 9/5/2023 8:00

Peak: 0.4 ppm
Min: 0.0 ppm
Average: 0.1 ppm

Datalog:

Date	Time	PID (ppm)
9/5/2023	8:02:54 AM	0.1
9/5/2023	8:17:54 AM	0.2
9/5/2023	8:32:54 AM	0.2
9/5/2023	8:47:54 AM	0.2
9/5/2023	9:02:54 AM	0.3
9/5/2023	9:17:54 AM	0.1
9/5/2023	9:32:54 AM	0.0
9/5/2023	9:47:54 AM	0.0
9/5/2023	10:02:54 AM	0.0
9/5/2023	10:17:54 AM	0.3
9/5/2023	10:32:54 AM	0.3
9/5/2023	10:47:54 AM	0.3
9/5/2023	11:02:54 AM	0.3
9/5/2023	11:17:54 AM	0.4
9/5/2023	11:32:54 AM	0.3
9/5/2023	11:47:54 AM	0.0
9/5/2023	12:02:54 PM	0.0
9/5/2023	12:17:54 PM	0.0
9/5/2023	12:32:54 PM	0.2
9/5/2023	12:47:54 PM	0.1
9/5/2023	1:02:54 PM	0.1
9/5/2023	1:17:54 PM	0.1
9/5/2023	1:32:54 PM	0.1
9/5/2023	1:47:54 PM	0.0
9/5/2023	2:02:54 PM	0.0
9/5/2023	2:17:54 PM	0.0
9/5/2023	2:32:54 PM	0.0
9/5/2023	2:47:54 PM	0.2
9/5/2023	3:02:54 PM	0.0
9/5/2023	3:17:54 PM	0.0
9/5/2023	3:32:54 PM	0.0
9/5/2023	3:47:54 PM	0.2
9/5/2023	4:02:54 PM	0.3
9/5/2023	4:17:54 PM	0.0
9/5/2023	4:32:54 PM	0.0
9/5/2023	4:47:54 PM	0.0

Site: 450 Union Street
Date: 9/5/2023
Location: Upwind
Summary: No VOC detections

Unit Name: MiniRAW (3000) (PGM-7320)
Serial Number: 592-915354
Running Mode: Hygiene Mode
Datalog Mode: Manual
Diagnostic Mode: No
Stop Reson:

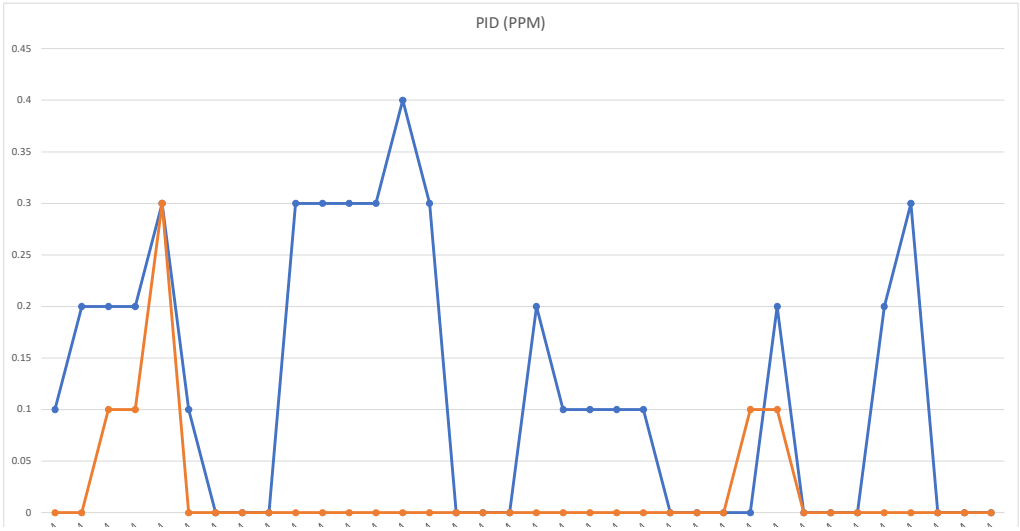
	Date	Time
Begin:	9/5/2023	8:03:44 AM
End:	9/5/2023	4:48:44 PM

Low Alarm 5.0
High Alarm 25.0
Over Alarm 15000.0
STEL Alarm 250.0
TWA Alarm 100.0
Measurement Gas: Isobutylene
Calibration Time 9/5/2023 8:00

Peak: 0.3 ppm
Min: 0.0 ppm
Average: 0.0 ppm

Datalog:

Date	Time	PID (ppm)
9/5/2023	8:03:44 AM	0.0
9/5/2023	8:18:44 AM	0.0
9/5/2023	8:33:44 AM	0.1
9/5/2023	8:48:44 AM	0.1
9/5/2023	9:03:44 AM	0.3
9/5/2023	9:18:44 AM	0.0
9/5/2023	9:33:44 AM	0.0
9/5/2023	9:48:44 AM	0.0
9/5/2023	10:03:44 AM	0.0
9/5/2023	10:18:44 AM	0.0
9/5/2023	10:33:44 AM	0.0
9/5/2023	10:48:44 AM	0.0
9/5/2023	11:03:44 AM	0.0
9/5/2023	11:18:44 AM	0.0
9/5/2023	11:33:44 AM	0.0
9/5/2023	11:48:44 AM	0.0
9/5/2023	12:03:44 PM	0.0
9/5/2023	12:18:44 PM	0.0
9/5/2023	12:33:44 PM	0.0
9/5/2023	12:48:44 PM	0.0
9/5/2023	1:03:44 PM	0.0
9/5/2023	1:18:44 PM	0.0
9/5/2023	1:33:44 PM	0.0
9/5/2023	1:48:44 PM	0.0
9/5/2023	2:03:44 PM	0.0
9/5/2023	2:18:44 PM	0.0
9/5/2023	2:33:44 PM	0.1
9/5/2023	2:48:44 PM	0.1
9/5/2023	3:03:44 PM	0.0
9/5/2023	3:18:44 PM	0.0
9/5/2023	3:33:44 PM	0.0
9/5/2023	3:48:44 PM	0.0
9/5/2023	4:03:44 PM	0.0
9/5/2023	4:18:44 PM	0.0
9/5/2023	4:33:44 PM	0.0
9/5/2023	4:48:44 PM	0.0



vEKtor consultants

DAILY STATUS REPORT

Prepared By: Thomas Giordano

NYSDEC BCP Site No:	C224219	**Date:**	09/06/2023
Project Name:	450 Union Street	**Weather:**	Sunny, 80-92 ^{0}F
Client:	2201 Union LLC	**Time:**	8:00 – 16:00

Personnel On-Site:
Environmental Consultant: Vektor Consultants – Saranda Alka
WSP: Tim Williams
Demolition Contractor – Candid Construction

Work Activities Performed:

- Candid Construction continued jackhammers to break up existing concrete to install new construction fence posts along the Union Street site boundary.
- Fence posts were installed, and concrete poured for new fence posts.
- Construction fence was relocated along the Bond Street site boundary.
- 16 drums of groundwater from the RSO/GCM delineation investigation work were loaded and transported by Brookside Environmental to Clean Water of New York, Staten Island, NY, for disposal. The manifest is appended to the end of this report.

Samples Collected: None

Community Air Monitoring Program

Real-time Community Air Monitoring Plan (CAMP) was implemented during all intrusive work at an upwind and a downwind location. No exceedances were observed. Air monitoring results are appended to the end of this report.

Problems Encountered

None

Planned Activities for the Next Day

Continued demolition of existing concrete and installation of new construction fence posts.

vEKtor consultants

BCP No: C224219
September 6, 2023

SITE PLAN / WORK AREAS

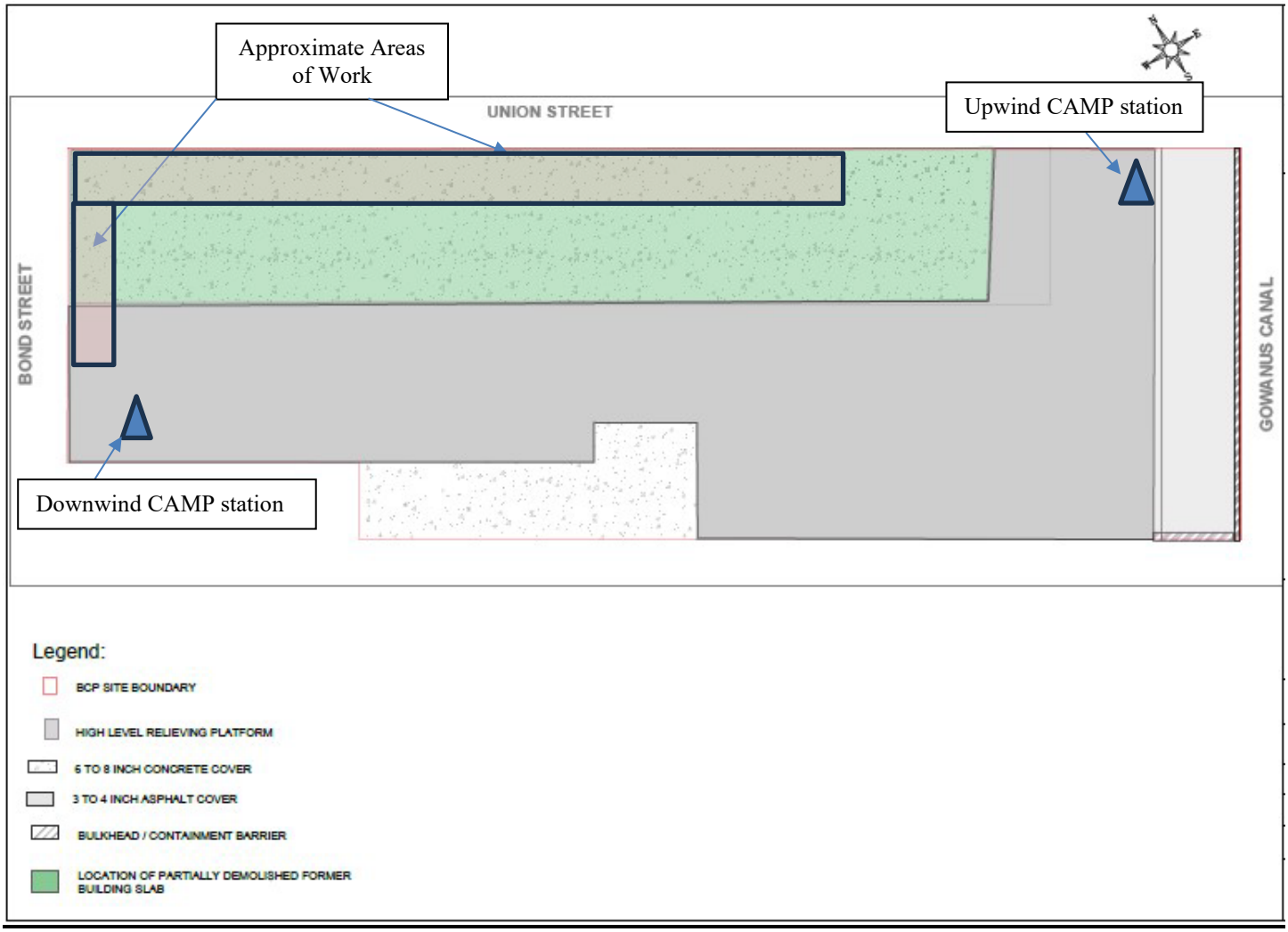


PHOTO LOG

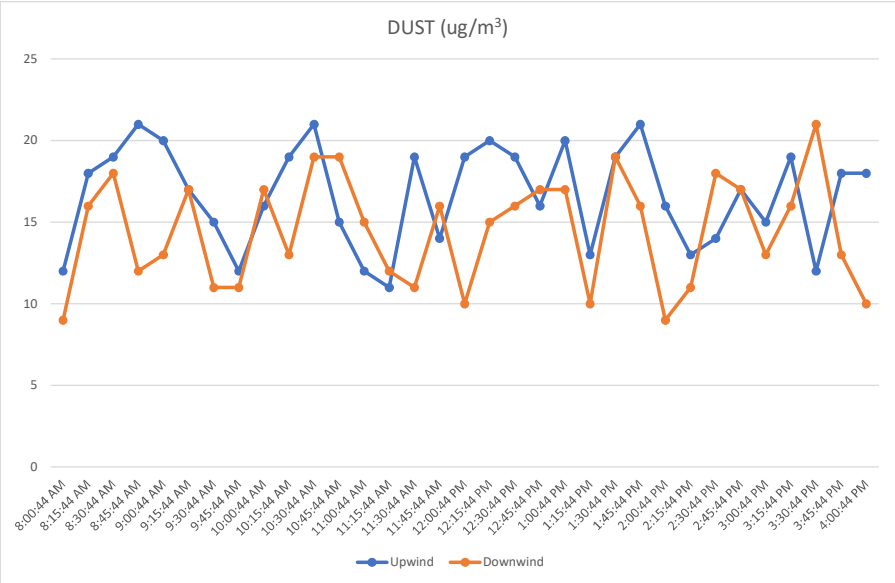
Photo 1: Breaking up concrete with jackhammers, facing southwest.	
Photo 2: General work area along Union Street property boundary, facing west.	
Photo 3: Relocation of fence along Bond Street, facing southwest.	

Site:	450 Union Street
Location:	Upwind
Model Number:	DustTrak II
Serial Number:	8530152605
Date:	9/6/2023
Start Time:	7:59:35 AM
End Time:	3:59:35 PM
Log Period	00:15:00
CalFactor	1
Unit	0
Unit Name	ug/m3
TempUnits	C
RH Correct	Enabled

Datalog:	Date & Time	Mass [ug/m3]
	7:59:35 AM	12
	8:14:35 AM	18
	8:29:35 AM	19
	8:44:35 AM	21
	8:59:35 AM	20
	9:14:35 AM	17
	9:29:35 AM	15
	9:44:35 AM	12
	9:59:35 AM	16
	10:14:35 AM	19
	10:29:35 AM	21
	10:44:35 AM	15
	10:59:35 AM	12
	11:14:35 AM	11
	11:29:35 AM	19
	11:44:35 AM	14
	11:59:35 AM	19
	12:14:35 PM	20
	12:29:35 PM	19
	12:44:35 PM	16
	12:59:35 PM	20
	1:14:35 PM	13
	1:29:35 PM	19
	1:44:35 PM	21
	1:59:35 PM	16
	2:14:35 PM	13
	2:29:35 PM	14
	2:44:35 PM	17
	2:59:35 PM	15
	3:14:35 PM	19
	3:29:35 PM	12
	3:44:35 PM	18
	3:59:35 PM	18

Site:	450 Union Street
Location:	Downwind
Model Numb	DustTrak II
Serial Numbe	8530104413
Date:	9/6/2023
Start Time:	8:00:44 AM
End Time:	4:00:44 PM
Log Period	00:15:00
CalFactor	1
Unit	0
Unit Name	ug/m3
TempUnits	C
RH Correct	Enabled

Datalog:	Date & Time	Mass [ug/m3]
	8:00:44 AM	9
	8:15:44 AM	16
	8:30:44 AM	18
	8:45:44 AM	12
	9:00:44 AM	13
	9:15:44 AM	17
	9:30:44 AM	11
	9:45:44 AM	11
	10:00:44 AM	17
	10:15:44 AM	13
	10:30:44 AM	19
	10:45:44 AM	19
	11:00:44 AM	15
	11:15:44 AM	12
	11:30:44 AM	11
	11:45:44 AM	16
	12:00:44 PM	10
	12:15:44 PM	15
	12:30:44 PM	16
	12:45:44 PM	17
	1:00:44 PM	17
	1:15:44 PM	10
	1:30:44 PM	19
	1:45:44 PM	16
	2:00:44 PM	9
	2:15:44 PM	11
	2:30:44 PM	18
	2:45:44 PM	17
	3:00:44 PM	13
	3:15:44 PM	16
	3:30:44 PM	21
	3:45:44 PM	13
	4:00:44 PM	10



Site:	450 Union Street
Date:	9/6/2023
Location:	Downwind
Unit Name:	MiniRAW (3000) (PGM-7320)
Serial Number:	592-908657
Running Mode:	Hygiene Mode
Datalog Mode:	Manual
Diagnostic Mode:	No
Stop Reason:	

	Date	Time
Begin:	9/6/2023	8:00:39 AM
End:	9/6/2023	4:47:54 PM

Low Alarm	5.0
High Alarm	25.0
Over Alarm	15000.0
STEL Alarm	250.0
TWA Alarm	100.0
Measurement Gas:	Isobutylene
Calibration Time	9/6/2023 8:00
Peak:	0.5 ppm
Min:	0.0 ppm
Average:	0.1 ppm

Datalog:

Date	Time	PID (ppm)
9/6/2023	8:00:39 AM	0.1
9/6/2023	8:15:39 AM	0.1
9/6/2023	8:30:39 AM	0.1
9/6/2023	8:45:39 AM	0.1
9/6/2023	9:00:39 AM	0.2
9/6/2023	9:15:39 AM	0.1
9/6/2023	9:30:39 AM	0.1
9/6/2023	9:45:39 AM	0.1
9/6/2023	10:00:39 AM	0.1
9/6/2023	10:15:39 AM	0.1
9/6/2023	10:30:39 AM	0.1
9/6/2023	10:45:39 AM	0.0
9/6/2023	11:00:39 AM	0.4
9/6/2023	11:15:39 AM	0.2
9/6/2023	11:30:39 AM	0.1
9/6/2023	11:45:39 AM	0.2
9/6/2023	12:00:39 PM	0.1
9/6/2023	12:15:39 PM	0.1
9/6/2023	12:30:39 PM	0.1
9/6/2023	12:45:39 PM	0.1
9/6/2023	1:00:39 PM	0.1
9/6/2023	1:15:39 PM	0.1
9/6/2023	1:30:39 PM	0.1
9/6/2023	1:45:39 PM	0.1
9/6/2023	2:00:39 PM	0.1
9/6/2023	2:15:39 PM	0.1
9/6/2023	2:30:39 PM	0.1
9/6/2023	2:45:39 PM	0.1
9/6/2023	3:00:39 PM	0.1
9/6/2023	3:15:39 PM	0.1
9/6/2023	3:30:39 PM	0.1
9/6/2023	3:45:39 PM	0.1
9/6/2023	4:00:39 PM	0.1

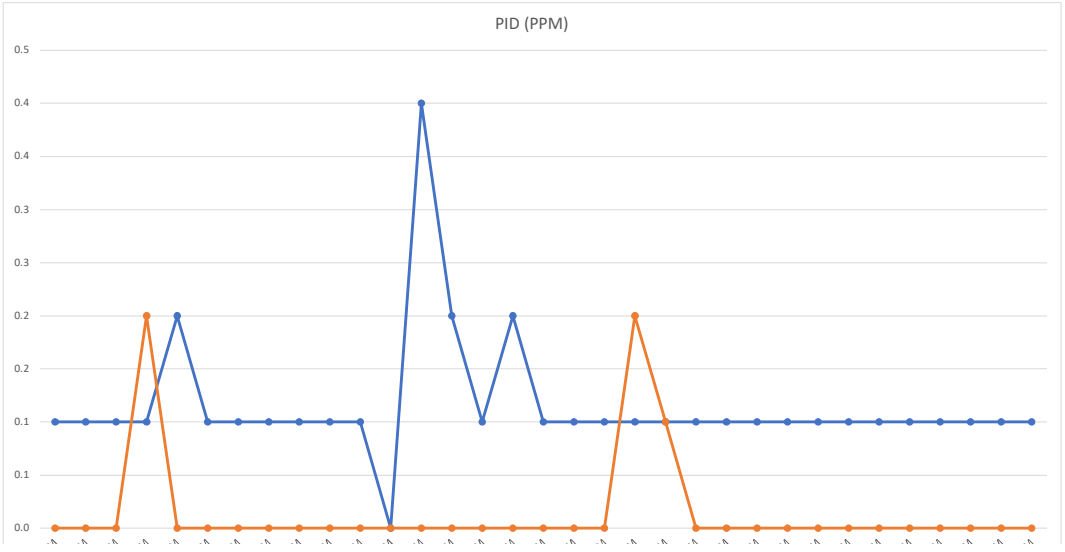
Site:	450 Union Street
Date:	9/6/2023
Location:	Upwind
Unit Name:	MiniRAW (3000) (PGM-7320)
Serial Number:	592-925076
Running Mode:	Hygiene Mode
Datalog Mode:	Manual
Diagnostic Mode:	No
Stop Reason:	

	Date	Time
Begin:	9/6/2023	8:02:14 AM
End:	9/6/2023	4:48:44 PM

Low Alarm	5.0
High Alarm	25.0
Over Alarm	15000.0
STEL Alarm	250.0
TWA Alarm	100.0
Measurement Gas:	Isobutylene
Calibration Time	9/6/2023 8:00
Peak:	0.2 ppm
Min:	0.0 ppm
Average:	0.0 ppm

Datalog:

Date	Time	PID (ppm)
9/6/2023	8:02:14 AM	0.0
9/6/2023	8:17:14 AM	0.0
9/6/2023	8:32:14 AM	0.0
9/6/2023	8:47:14 AM	0.2
9/6/2023	9:02:14 AM	0.0
9/6/2023	9:17:14 AM	0.0
9/6/2023	9:32:14 AM	0.0
9/6/2023	9:47:14 AM	0.0
9/6/2023	10:02:14 AM	0.0
9/6/2023	10:17:14 AM	0.0
9/6/2023	10:32:14 AM	0.0
9/6/2023	10:47:14 AM	0.0
9/6/2023	11:02:14 AM	0.0
9/6/2023	11:17:14 AM	0.0
9/6/2023	11:32:14 AM	0.0
9/6/2023	11:47:14 AM	0.0
9/6/2023	12:02:14 PM	0.0
9/6/2023	12:17:14 PM	0.0
9/6/2023	12:32:14 PM	0.0
9/6/2023	12:47:14 PM	0.2
9/6/2023	1:02:14 PM	0.1
9/6/2023	1:17:14 PM	0.0
9/6/2023	1:32:14 PM	0.0
9/6/2023	1:47:14 PM	0.0
9/6/2023	2:02:14 PM	0.0
9/6/2023	2:17:14 PM	0.0
9/6/2023	2:32:14 PM	0.0
9/6/2023	2:47:14 PM	0.0
9/6/2023	3:02:14 PM	0.0
9/6/2023	3:17:14 PM	0.0
9/6/2023	3:32:14 PM	0.0
9/6/2023	3:47:14 PM	0.0
9/6/2023	4:02:14 PM	0.0



NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
Not required	1	631-608-8810	2021-9623

GENERATOR

5. Generator's Name and Mailing Address
2201 Union LLC
55 Washington Street, 551
Brooklyn NY 11201
Generator's Phone:

Generator's Site Address (if different than mailing address)
2201 Union LLC
450 Union Street
Brooklyn NY 11231

6. Transporter 1 Company Name — U.S. EPA ID Number
Brookside Environmental, Inc. — NYR000081661

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
Clean Water of New York
3249 Richmond Terrace
Staten Island NY 10303
Facility's Phone: 718 981-4600
NYD000968545

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non-RCRA, non-DOT waste, liquid	16	DM	720	G	
2.	~~Non-RCRA, non-DOT waste, solid~~		~~DM~~		~~P~~	
3.						
4.						

13. Special Handling Instructions and Additional Information
1) Groundwater. 237-471 2) Soil. 237-460

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: BRYAN GRAHAM / AS AGENT FOR GENERATOR — Signature: B. Gr — Month 9 Day 6 Year 23

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Daniel Kennecke — Signature: — Month 9 Day 6 Year 23

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Carlos Herrera — Signature: — Month 9 Day 6 Year 23

169-BLC-O 5 11977 (Rev. 9/09)

TRANSPORTER #2

vEKtor consultants

DAILY STATUS REPORT

Prepared By: Thomas Giordano

NYSDEC BCP Site No:	C224219	**Date:**	09/07/2023
Project Name:	450 Union Street	**Weather:**	Sunny, 85-95 ^{0}F
Client:	2201 Union LLC	**Time:**	8:00 – 16:15

Personnel On-Site:
Environmental Consultant: Vektor Consultants – Saranda Alka
WSP: Tim Williams
Demolition Contractor – Candid Construction

Work Activities Performed:

- Candid Construction continued utilizing jackhammers to break up existing concrete to remove former construction fence posts along the Union Street site boundary.
- Concrete was poured in locations of former construction fence posts along the Union Street sidewalk.
- Construction fence was relocated along the Union Street site boundary.

Samples Collected: None

Community Air Monitoring Program

Real-time Community Air Monitoring Plan (CAMP) was implemented during all intrusive work at an upwind and a downwind location. No exceedances were observed. Air monitoring results are appended to the end of this report.

Problems Encountered

None

Planned Activities for the Next Day

Continued demolition of existing concrete and installation of new construction fence posts.

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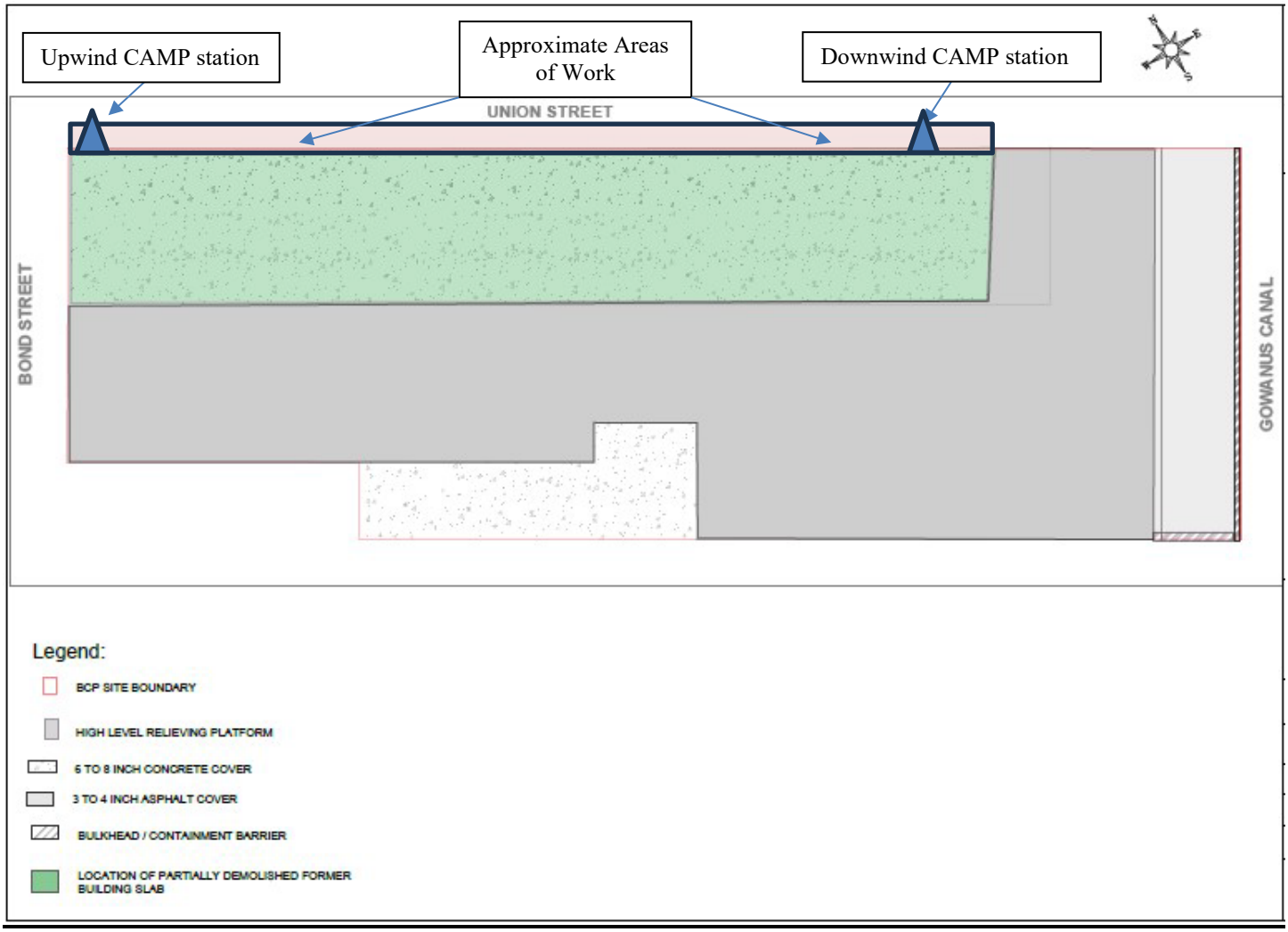
BCP No: C224219
September 7, 2023

SITE PLAN / WORK AREAS



vEKtor consultants

BCP No: C224219
September 7, 2023

PHOTO LOG

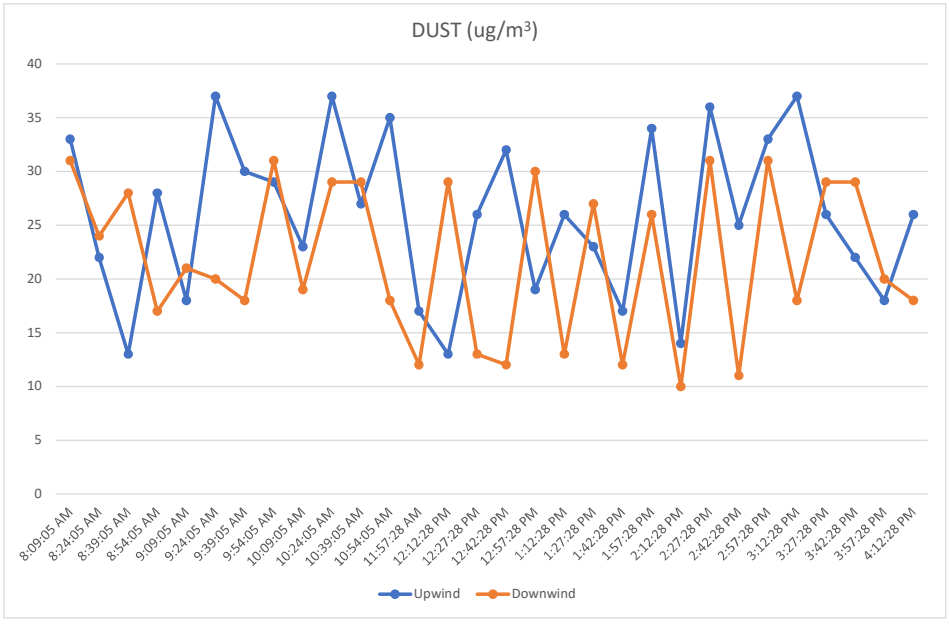
Photo 1: Breaking up concrete around former fence posts after Union Street fence was relocated, facing west.	
Photo 2: Poured concrete for former construction fence post locations, facing west.	
Photo 3: General view of work area with CAMP, facing west.	

Site:	450 Union Street
Location:	Upwind
Model Number:	DustTrak II
Serial Number:	8530152605
Date:	9/7/2023
Start Time:	8:08:16 AM
End Time:	4:11:38 PM
Log Period	00:15:00
CalFactor	1
Unit	0
Unit Name	ug/m3
TempUnits	C
RH Correct	Enabled

Datalog:	Date & Time	Mass [ug/m3]
	8:08:16 AM	33
	8:23:16 AM	22
	8:38:16 AM	13
	8:53:16 AM	28
	9:08:16 AM	18
	9:23:16 AM	37
	9:38:16 AM	30
	9:53:16 AM	29
	10:08:16 AM	23
	10:23:16 AM	37
	10:38:16 AM	27
	10:53:16 AM	35
	11:56:38 AM	17
	12:11:38 PM	13
	12:26:38 PM	26
	12:41:38 PM	32
	12:56:38 PM	19
	1:11:38 PM	26
	1:26:38 PM	23
	1:41:38 PM	17
	1:56:38 PM	34
	2:11:38 PM	14
	2:26:38 PM	36
	2:41:38 PM	25
	2:56:38 PM	33
	3:11:38 PM	37
	3:26:38 PM	26
	3:41:38 PM	22
	3:56:38 PM	18
	4:11:38 PM	26

Site:	450 Union Street
Location:	Downwind
Model Numb	DustTrak II
Serial Numbe	8530104413
Date:	9/7/2023
Start Time:	8:09:05 AM
End Time:	4:12:28 PM
Log Period	00:15:00
CalFactor	1
Unit	0
Unit Name	ug/m3
TempUnits	C
RH Correct	Enabled

Datalog:	Date & Time	Mass [ug/m3]
	8:09:05 AM	31
	8:24:05 AM	24
	8:39:05 AM	28
	8:54:05 AM	17
	9:09:05 AM	21
	9:24:05 AM	20
	9:39:05 AM	18
	9:54:05 AM	31
	10:09:05 AM	19
	10:24:05 AM	29
	10:39:05 AM	29
	10:54:05 AM	18
	11:57:28 AM	12
	12:12:28 PM	29
	12:27:28 PM	13
	12:42:28 PM	12
	12:57:28 PM	30
	1:12:28 PM	13
	1:27:28 PM	27
	1:42:28 PM	12
	1:57:28 PM	26
	2:12:28 PM	10
	2:27:28 PM	31
	2:42:28 PM	11
	2:57:28 PM	31
	3:12:28 PM	18
	3:27:28 PM	29
	3:42:28 PM	29
	3:57:28 PM	20
	4:12:28 PM	18



Site:	450 Union Street
Date:	9/7/2023
Location:	Downwind
Unit Name:	MiniRAW (3000) (PGM-7320)
Serial Number:	592-908657
Running Mode:	Hygiene Mode
Datalog Mode:	Manual
Diagnostic Mode:	No
Stop Reason:	

	Date	Time
Begin:	9/7/2023	8:10:23 AM
End:	9/7/2023	4:11:57 PM

Low Alarm	5.0
High Alarm	25.0
Over Alarm	15000.0
STEL Alarm	250.0
TWA Alarm	100.0
Measurement Gas:	Isobutylene
Calibration Time	9/7/2023 8:05
Peak:	0.6 ppm
Min:	0.0 ppm
Average:	0.1 ppm

Datalog:

Date	Time	PID (ppm)
9/7/2023	8:10:23 AM	0.0
9/7/2023	8:25:23 AM	0.0
9/7/2023	8:40:23 AM	0.0
9/7/2023	8:55:23 AM	0.0
9/7/2023	9:10:23 AM	0.0
9/7/2023	9:25:23 AM	0.0
9/7/2023	9:40:23 AM	0.2
9/7/2023	9:55:23 AM	0.6
9/7/2023	10:10:23 AM	0.2
9/7/2023	10:25:23 AM	0.1
9/7/2023	10:40:23 AM	0.0
9/7/2023	10:55:23 AM	0.0
9/7/2023	11:56:47 AM	0.0
9/7/2023	12:11:47 PM	0.0
9/7/2023	12:26:47 PM	0.0
9/7/2023	12:41:47 PM	0.0
9/7/2023	12:56:47 PM	0.0
9/7/2023	1:11:47 PM	0.1
9/7/2023	1:26:47 PM	0.1
9/7/2023	1:41:47 PM	0.0
9/7/2023	1:56:47 PM	0.0
9/7/2023	2:11:47 PM	0.0
9/7/2023	2:26:47 PM	0.0
9/7/2023	2:41:47 PM	0.0
9/7/2023	2:56:47 PM	0.2
9/7/2023	3:11:47 PM	0.0
9/7/2023	3:26:47 PM	0.0
9/7/2023	3:41:47 PM	0.0
9/7/2023	3:56:47 PM	0.0
9/7/2023	4:11:47 PM	0.0

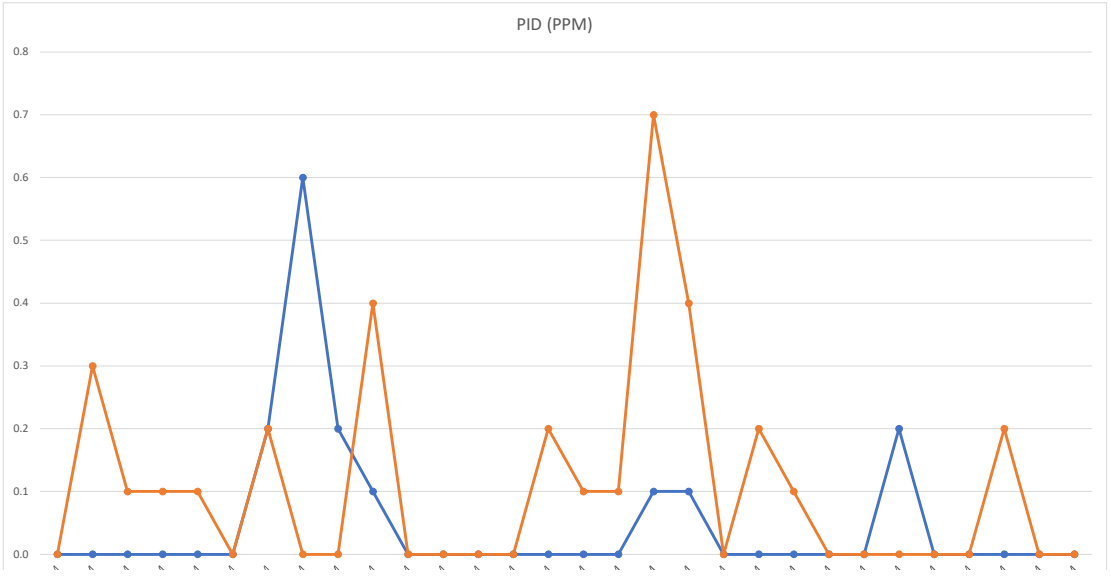
Site:	450 Union Street
Date:	9/7/2023
Location:	Upwind
Unit Name:	MiniRAW (3000) (PGM-7320)
Serial Number:	592-925076
Running Mode:	Hygiene Mode
Datalog Mode:	Manual
Diagnostic Mode:	No
Stop Reason:	

	Date	Time
Begin:	9/7/2023	8:07:38 AM
End:	9/7/2023	4:10:54 PM

Low Alarm	5.0
High Alarm	25.0
Over Alarm	15000.0
STEL Alarm	250.0
TWA Alarm	100.0
Measurement Gas:	Isobutylene
Calibration Time	9/7/2023 8:05
Peak:	0.7 ppm
Min:	0.0 ppm
Average:	0.1 ppm

Datalog:

Date	Time	PID (ppm)
9/7/2023	8:07:38 AM	0.0
9/7/2023	8:22:38 AM	0.3
9/7/2023	8:37:38 AM	0.1
9/7/2023	8:52:38 AM	0.1
9/7/2023	9:07:38 AM	0.1
9/7/2023	9:22:38 AM	0.0
9/7/2023	9:37:38 AM	0.2
9/7/2023	9:52:38 AM	0.0
9/7/2023	10:07:38 AM	0.0
9/7/2023	10:22:38 AM	0.4
9/7/2023	10:37:38 AM	0.0
9/7/2023	10:52:38 AM	0.0
9/7/2023	11:55:54 AM	0.0
9/7/2023	12:10:54 PM	0.0
9/7/2023	12:25:54 PM	0.2
9/7/2023	12:40:54 PM	0.1
9/7/2023	12:55:54 PM	0.1
9/7/2023	1:10:54 PM	0.7
9/7/2023	1:25:54 PM	0.4
9/7/2023	1:40:54 PM	0.0
9/7/2023	1:55:54 PM	0.2
9/7/2023	2:10:54 PM	0.1
9/7/2023	2:25:54 PM	0.0
9/7/2023	2:40:54 PM	0.0
9/7/2023	2:55:54 PM	0.0
9/7/2023	3:10:54 PM	0.0
9/7/2023	3:25:54 PM	0.0
9/7/2023	3:40:54 PM	0.2
9/7/2023	3:55:54 PM	0.0
9/7/2023	4:10:54 PM	0.0



vEKtor consultants

DAILY STATUS REPORT

Prepared By: Thomas Giordano

NYSDEC BCP Site No:	C224219	**Date:**	02/05/2024
Project Name:	450 Union Street	**Weather:**	Sunny, 33-46 ^{0}F
Client:	2201 Union LLC	**Time:**	7:00 – 17:00

Personnel On-Site:
Environmental Consultant: Vektor Consultants – Peter Rathsack and Eugenia Papisov
WSP: Tim Williams
Drilling Subcontractor: Coastal Environmental Solutions

Work Activities Performed:

- Coastal Environmental Solutions, under the direction of Vektor, advanced soil borings at two locations within the proposed treatment area as proposed in the NYSDEC-conditionally approved Remedial Site Optimization Treatability Study Work Plan for the sampling of soil with grossly contaminated material (GCM) or non-aqueous phase liquid (NAPL) between elevations -10 and -28 NAVD88 for submission to Geo-Solutions, Inc for a In-Situ Stabilization (ISS) study and to ReSolutions Partners for a In-Situ Geochemical Stabilization (ISGS) study. In order to collect a sufficient volume of soil for both treatability studies concurrently, an additional two soil borings were advanced at each original soil boring location within the proposed treatment area. Vektor utilized a PID to field screen soil borings during logging of soil descriptions for the presence to ensure that samples contain soils with GCM or NAPL impacts during the investigation. Soil samples were collected in 5-gallon buckets.
- A headspace reading for DB3-MW-3 was collected utilizing a PID, DB3-MW-3 was gauged and sampled. The depths were measured from top of casing (TOC).
- Vektor used a peristatic pump to collect low flow groundwater samples from DB3-MW-3 for the ISGS groundwater study. Groundwater was purged from each well to measure water quality parameters (pH, specific conductivity, oxygen reduction potential, dissolved oxygen, turbidity, and temperature) for stabilization criteria prior to sampling into laboratory provided containers. Groundwater samples were collected in 9.5L stainless steel containers.

Samples Collected:

ISS: ISS-TS-Soil-1, ISS-TS-Soil-2, ISS-TS-Soil-3, and ISS-TS-Soil-4

ISGS: ISGS-TS-Soil-1, ISGS-TS-Soil-2, ISGS-TS-GW-4, ISGS-TS-GW-5, and ISGS-TS-GW-6

Community Air Monitoring Program

Real-time Community Air Monitoring Plan (CAMP) was implemented during all intrusive work at an upwind and a downwind location. No exceedances were observed; however, elevated readings were recorded on both upwind and downwind locations upon equipment startup and do not constitute exceedances. Air monitoring results are appended to the end of this report.

Problems Encountered

None

Planned Activities for the Next Day

Continued gauging of existing well network within the proposed treatment area, collection of groundwater samples and collection of NAPL sample for the ISGS groundwater investigation study.

SITE PLAN / WORK AREAS

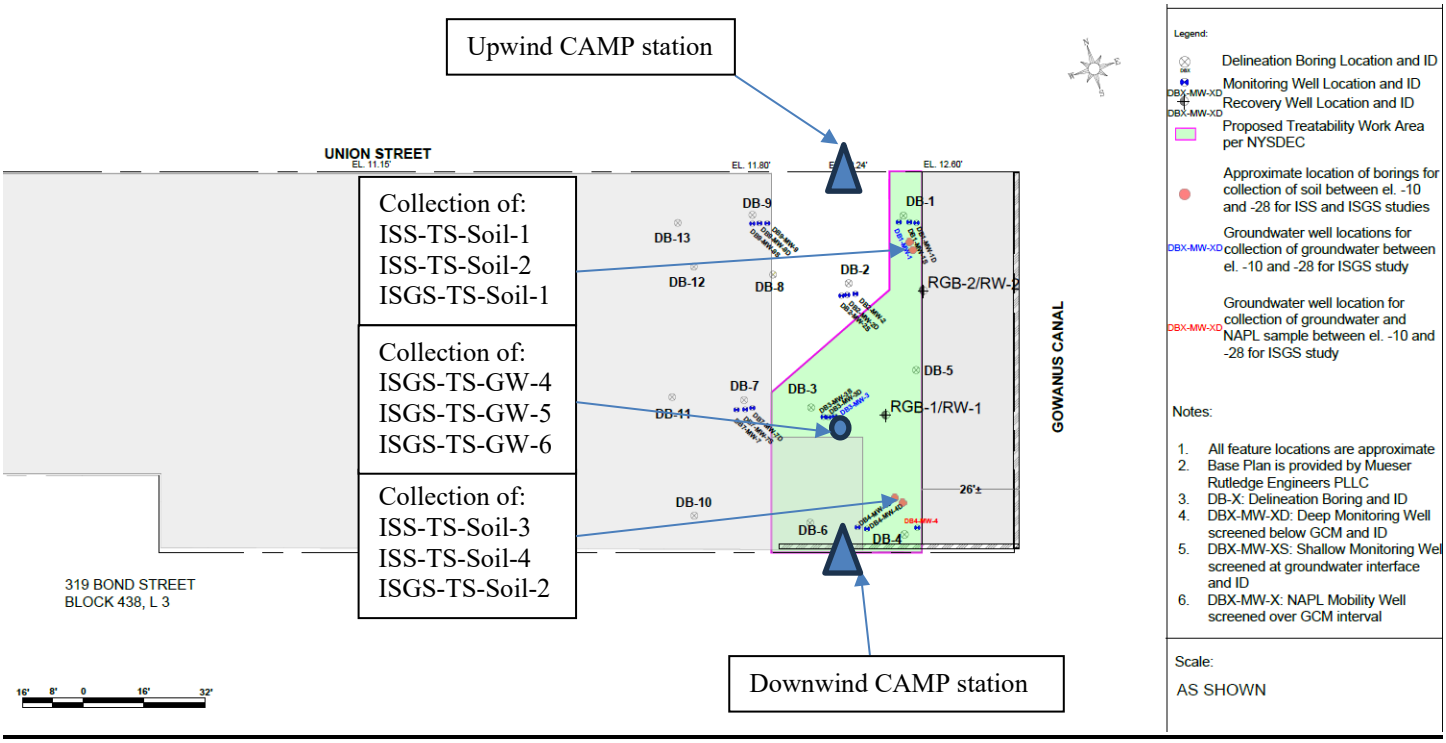
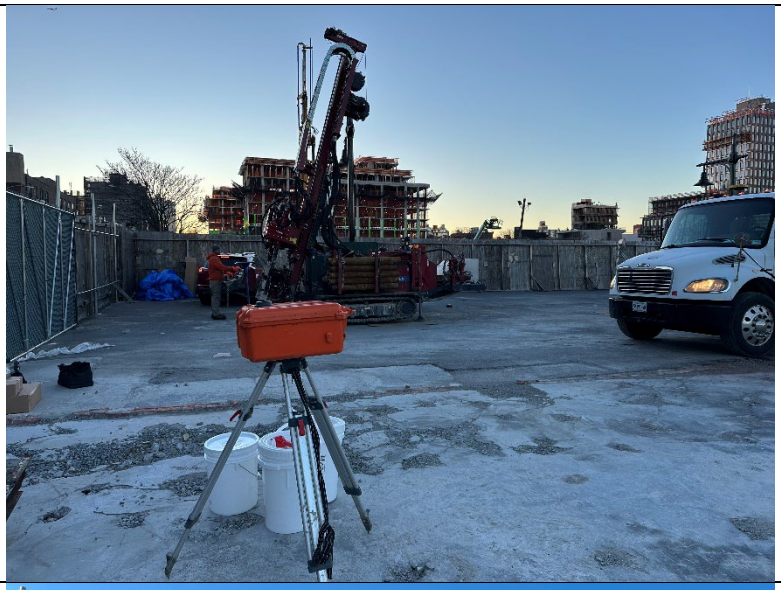


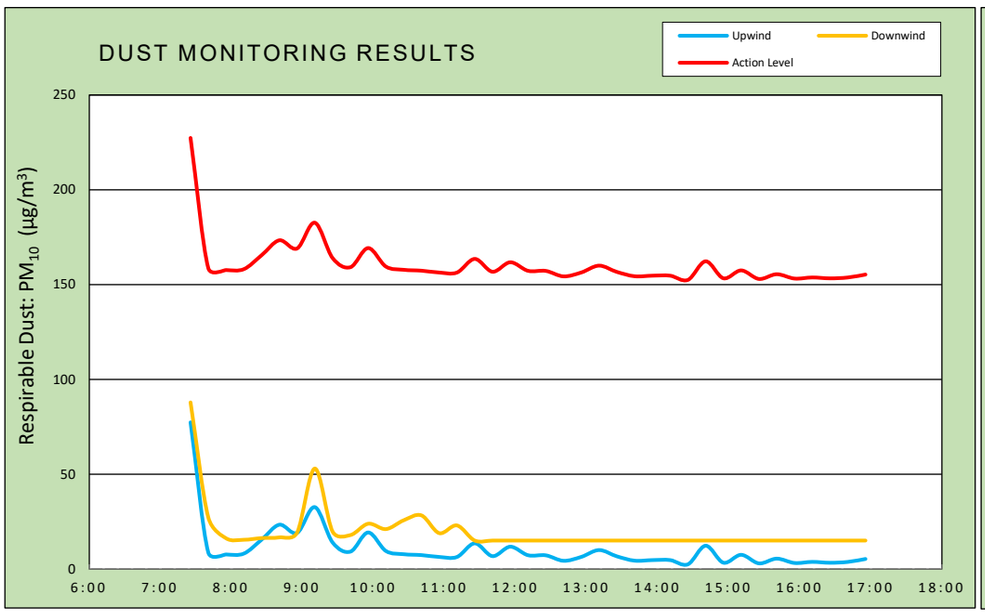
PHOTO LOG

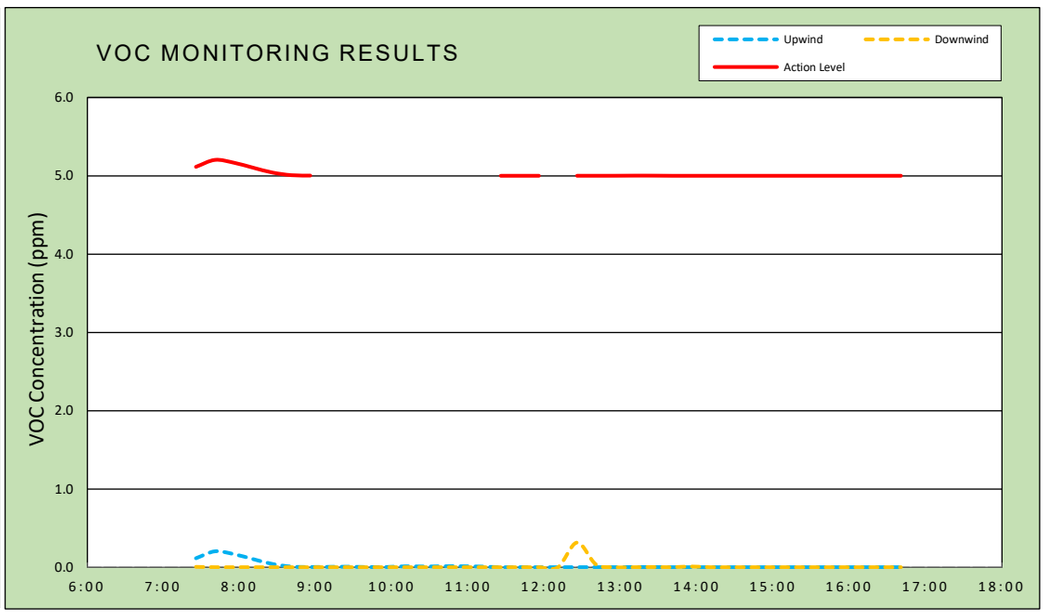
Photo 1: Operation of CAMP during drilling activities for the treatability study investigation, facing south.	
Photo 2: Drilling of soil borings to collect samples from el. -10 to -28 NAVD88 for the treatability study investigation, facing south.	
Photo 3: Soil logging and screening activities, facing south.	

vEKtor consultants	**DAILY AIR MONITORING REPORT** **450 Union Street** **Brooklyn, New York**	**02/05/2024**	
37 W. 37th St, 6th Floor - New York, NY		Rev. No. 0	Page 1 of 2
		Project Number:	
		Dust Action Level	150 µg/m^3
		VOC Action Level	5 ppm

Weather Data Range for Work Day		Wind Direction	N	Relative Humidity (%)	33.0 - 57.0	Daily Rain Total (in)	0.00	Readings in the summary table and graphs below are the reported downwind concentrations.
Temperature (°F)	33.0 - 46.0	Wind Speed (MPH)	2.9 - 5.5	Barometer (inHg)	29.90 - 30.00	Avg. Dew Point Temp (°F)	20.2	

Station Location	Daily Avg. Dust Concentration (µg/m^3)	Max 15-Min Dust Concentration (µg/m^3)	Time of Max Dust Reading	Daily Avg. VOC Concentration (ppm)	Max 15-Min VOC Concentration (ppm)	Time of Max VOC Reading
Upwind	10.6	360.6	7:13	0.0	0.2	7:36
Downwind	19.8	208.0	7:17	0.0	0.7	7:30



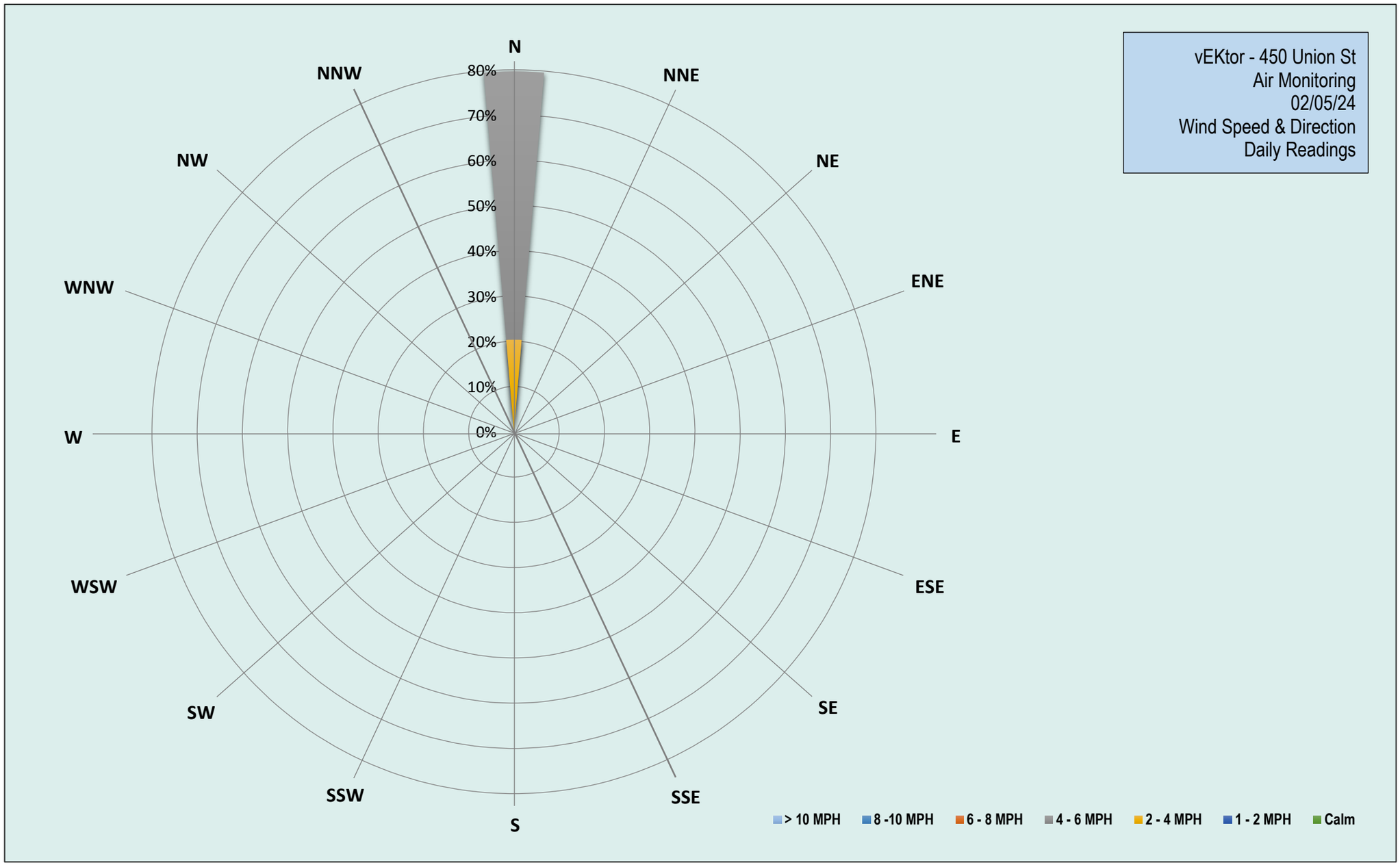


Air Monitoring Notes:

Weather Notes:

EMILCOTT
A Triumvirate Environmental Company

Wind Rose



EMILCOTT
A Triumvirate Environmental Company

Monday, February 5, 2024	
Number of Instances Where Downwind Particulates	0
Number of Comparable Data Points =	39
Start Time:	7:26
End Time:	16:56

PARTICULATE DATA

Upwind		Downwind			
Time	15-Min Avg Concentration (ug/m^3)	Time	15-Min Avg Concentration (ug/m^3)	Exceeds Particulate Alarm Limit	Exceedance Level
7:26	77.3	7:26	87.9	-	227.3
7:41	8.7	7:41	27.2	-	158.7
7:56	7.7	7:56	16.2	-	157.7
8:11	8.1	8:11	15.4	-	158.1
8:26	15.5	8:26	16.3	-	165.5
8:41	23.4	8:41	16.7	-	173.4
8:56	19.0	8:56	19.2	-	169.0
9:11	32.6	9:11	53.0	-	182.6
9:26	14.0	9:26	19.7	-	164.0
9:41	9.2	9:41	17.9	-	159.2
9:56	19.3	9:56	23.9	-	169.3
10:11	9.5	10:11	21.0	-	159.5
10:26	7.8	10:26	25.7	-	157.8
10:41	7.3	10:41	28.3	-	157.3
10:56	6.4	10:56	18.9	-	156.4
11:11	6.3	11:11	23.0	-	156.3
11:26	13.5	11:26	15.0	-	163.5
11:41	6.8	11:41	15.0	-	156.8
11:56	11.8	11:56	15.0	-	161.8
12:11	7.3	12:11	15.0	-	157.3
12:26	7.2	12:26	15.0	-	157.2
12:41	4.3	12:41	15.0	-	154.3
12:56	6.4	12:56	15.0	-	156.4
13:11	10.0	13:11	15.0	-	160.0
13:26	6.7	13:26	15.0	-	156.7
13:41	4.4	13:41	15.0	-	154.4
13:56	4.7	13:56	15.0	-	154.7
14:11	4.7	14:11	15.0	-	154.7
14:26	2.5	14:26	15.0	-	152.5
14:41	12.3	14:41	15.0	-	162.3
14:56	3.3	14:56	15.0	-	153.3
15:11	7.5	15:11	15.0	-	157.5
15:26	3.0	15:26	15.0	-	153.0
15:41	5.5	15:41	15.0	-	155.5
15:56	3.2	15:56	15.0	-	153.2
16:11	3.7	16:11	15.0	-	153.7
16:26	3.3	16:26	15.0	-	153.3
16:41	3.7	16:41	15.0	-	153.7
16:56	5.3	16:56	15.0	-	155.3

Upwind DustTrak Data Summary		
Daily Maximum	721.3	ug/m^3
Daily Minimum	0.0	ug/m^3
Daily Average	10.6	ug/m^3
Maximum 15-Minute Average	77.3	ug/m^3

Downwind DustTrak Data Summary		
Daily Maximum	973.3	ug/m^3
Daily Minimum	9.0	ug/m^3
Daily Average	19.8	ug/m^3
Maximum 15-Minute Average	87.9	ug/m^3

Monday, February 5, 2024	
Number of Instances Where Downwind VOCs Exceeds	0
Number of Comparable Data Points =	0
Start Time:	7:27
End Time:	16:42

PID DATA					
Upwind		Downwind			
Time	15-Min Avg Concentration (ppm)	Time	15-Min Avg Concentration (ppm)	Exceeds VOC Alarm Limit	Exceedance Level
7:27	0.1	7:27	0.0	-	5.1
7:42	0.2	7:42	0.0	-	5.2
7:57	0.2	7:57	0.0	-	5.2
8:12	0.1	8:12	0.0	-	5.1
8:27	0.0	8:27	0.0	-	5.0
8:42	0.0	8:42	0.0	-	5.0
8:57	0.0	8:57	0.0	-	5.0
9:12	0.0	9:12	-	-	
9:27	0.0	9:27	-	-	
9:42	0.0	9:42	-	-	
9:57	0.0	9:57	-	-	
10:12	0.0	10:12	-	-	
10:27	0.0	10:27	-	-	
10:42	0.0	10:42	-	-	
10:57	0.0	10:57	-	-	
11:12	0.0	11:12	-	-	
11:27	0.0	11:27	0.0	-	5.0
11:42	0.0	11:42	0.0	-	5.0
11:57	0.0	11:57	0.0	-	5.0
12:12	0.0	12:12	-	-	
12:27	0.0	12:27	0.3	-	5.0
12:42	0.0	12:42	0.0	-	5.0
12:57	0.0	12:57	0.0	-	5.0
13:12	0.0	13:12	0.0	-	5.0
13:27	0.0	13:27	0.0	-	5.0
13:42	0.0	13:42	0.0	-	5.0
13:57	0.0	13:57	0.0	-	5.0
14:12	0.0	14:12	0.0	-	5.0
14:27	0.0	14:27	0.0	-	5.0
14:42	0.0	14:42	0.0	-	5.0
14:57	0.0	14:57	0.0	-	5.0
15:12	0.0	15:12	0.0	-	5.0
15:27	0.0	15:27	0.0	-	5.0
15:42	0.0	15:42	0.0	-	5.0
15:57	0.0	15:57	0.0	-	5.0
16:12	0.0	16:12	0.0	-	5.0
16:27	0.0	16:27	0.0	-	5.0
16:42	0.0	16:42	0.0	-	5.0

Upwind PID Data Summary		
Daily Maximum	0.3	ppm
Daily Minimum	0.0	ppm
Daily Average	0.0	ppm
Maximum 15-Minute Average	0.2	ppm

Downwind PID Data Summary		
Daily Maximum	0.7	ppm
Daily Minimum	0.0	ppm
Daily Average	0.0	ppm
Maximum 15-Minute Average	0.3	ppm

vEKtor consultants

DAILY STATUS REPORT

Prepared By: Thomas Giordano

NYSDEC BCP Site No:	C224219	**Date:**	02/05/2024
Project Name:	450 Union Street	**Weather:**	Sunny, 33-46 ^{0}F
Client:	2201 Union LLC	**Time:**	8:00 – 18:00

Personnel On-Site:
Environmental Consultant: Vektor Consultants –Eugenia Papisov
WSP: Tim Williams
IET (ISGS Subcontractor): Ian Connor

Work Activities Performed:

- A headspace reading for DB1-MW-1 and DB4-MW-4 were collected utilizing a PID, and DB1-MW-1 and DB4-MW-4 were gauged and sampled. The depths were measured from top of casing (TOC).
- Vektor used a peristatic pump to collect low flow groundwater samples from DB1-MW-1 and DB4-MW-4 for the ISGS groundwater study. Groundwater was purged from each well to measure water quality parameters (pH, specific conductivity, oxygen reduction potential, dissolved oxygen, turbidity, and temperature) for stabilization criteria prior to sampling into laboratory provided containers. Groundwater samples were collected in 9.5L stainless steel containers.
- Vektor used a peristatic pump to collect one liter of NAPL from DB4-MW-4.
- All investigation derived waste was properly transferred into DOT 55-gallon drums, secured and labelled for future off-site disposal

Samples Collected:

ISGS: ISGS-TS-GW-1, ISGS-TS-GW-2, ISGS-TS-GW-3, ISGS-TS-GW-7, ISGS-TS-GW-8, ISGS-TS-GW-9, and ISGS-TS-NAPL-1.

Community Air Monitoring Program

Real-time Community Air Monitoring Plan (CAMP) was implemented at an upwind and a downwind location despite lack of intrusive work performed. No exceedances were observed. The downwind PID experienced data transmission issues, showing no collected data from the real time CAMP station and is not represented in this report. Vektor worked to troubleshoot the issue but was not able to troubleshoot the issue by the end of the workday. Air monitoring results are appended to the end of this report.

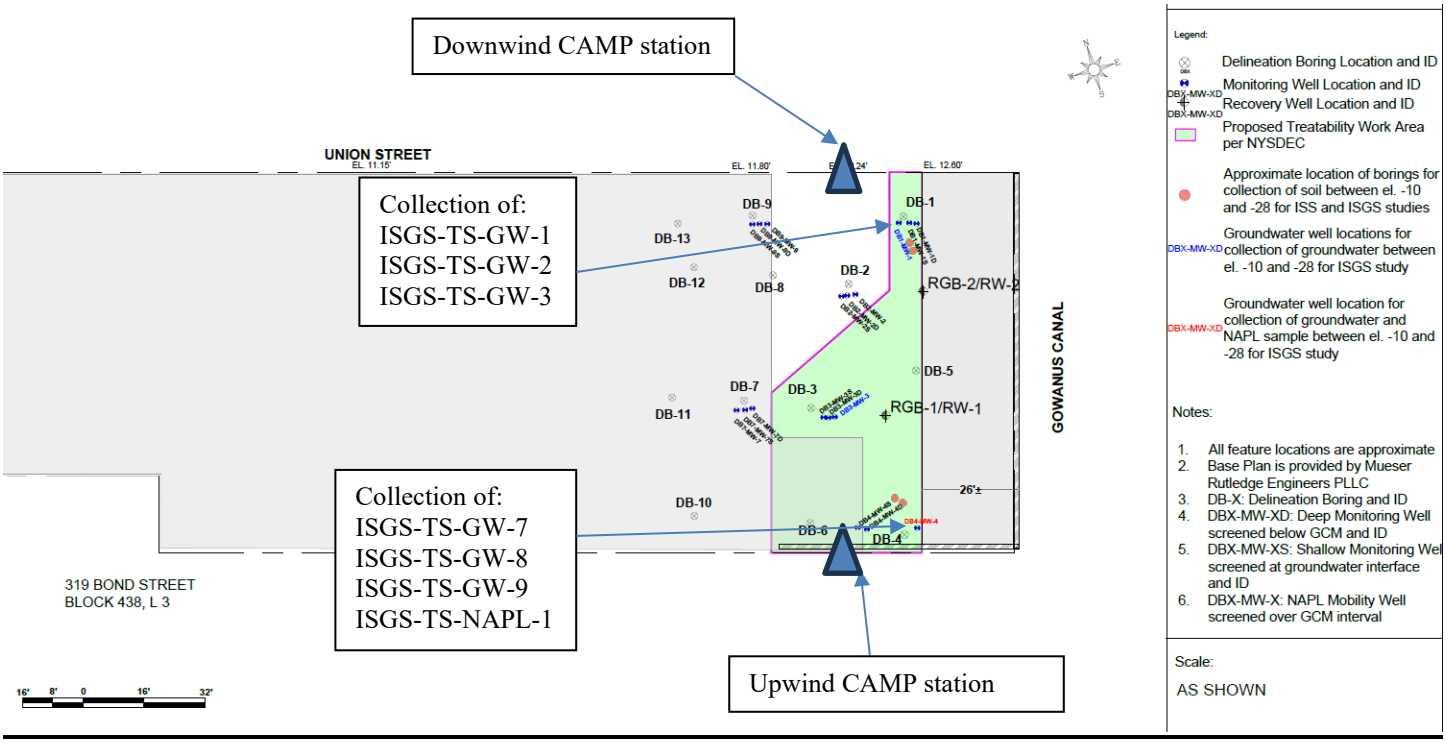
Problems Encountered

The downwind PID experienced data transmission issues, showing no collected data from the real time CAMP station and is not represented in this report. Vektor worked to troubleshoot the issue but was not able to troubleshoot the issue by the end of the workday.

Planned Activities for the Next Day

Coordination for off-site disposal of all investigation derived waste.

SITE PLAN / WORK AREAS



vEKtor consultants

BCP No: C224219
February 6, 2024

PHOTO LOG

Photo 1: Preparation for gauging and sampling of DB1-MW-1 and setup of downwind CAMP, facing northwest.		
Photo 2: View of groundwater/NAPL sampling setup from DB4-MW-4.		
Photo 3: ISGS sampling completed and prepared for delivery to the ISGS laboratories in Madison, WI.		

vEKtor consultants

37 W. 37th St, 6th Floor - New York, NY

DAILY AIR MONITORING REPORT
450 Union Street
Brooklyn, New York

02/06/2024

Rev. No. 0 | Page 1 of 2

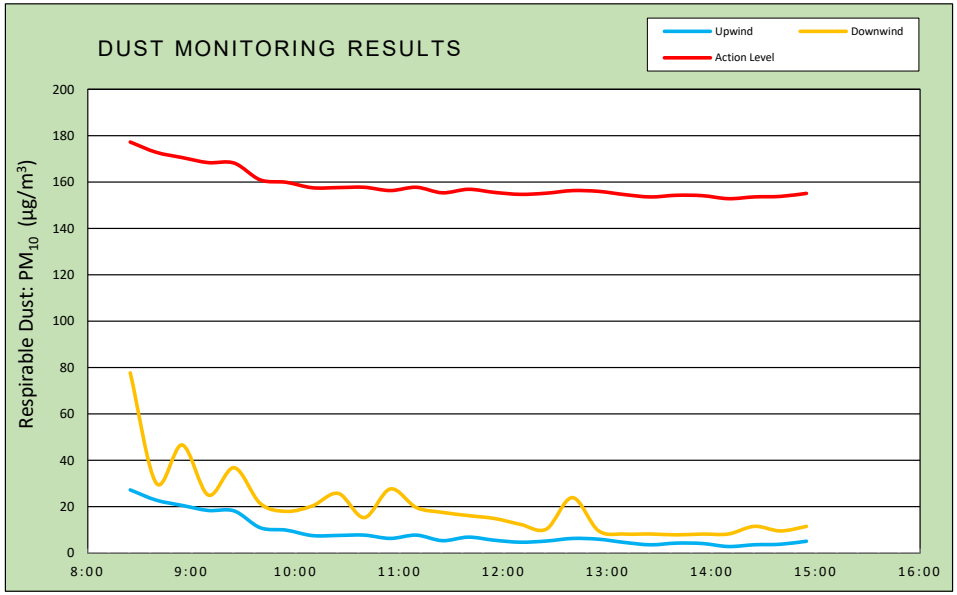
Project Number:

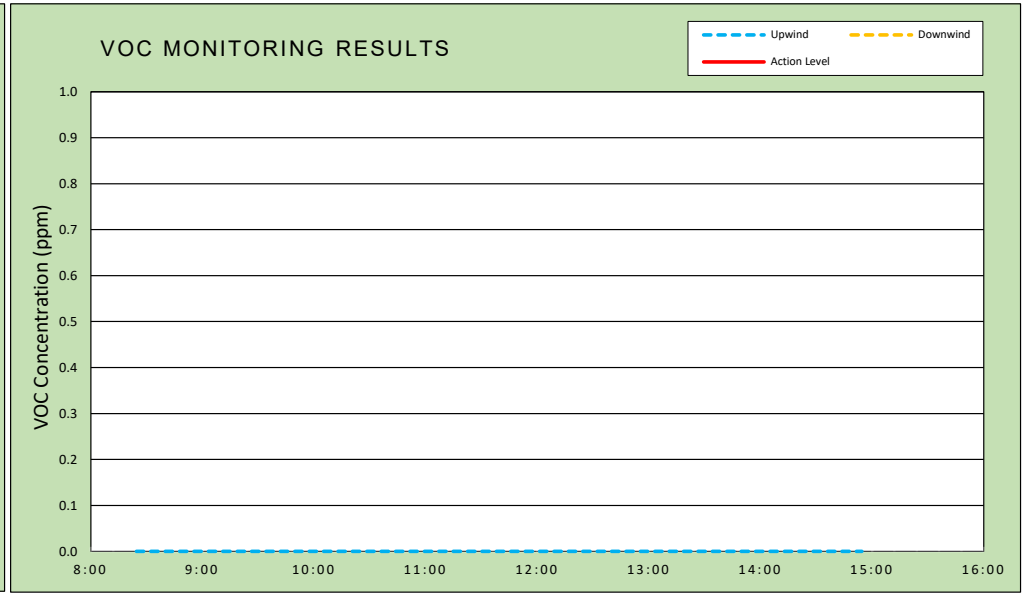
Dust Action Level: 150 µg/m^3

VOC Action Level: 5 ppm

Weather Data Range for Work Day		Wind Direction	NNE	Relative Humidity (%)	42.0 - 60.0	Daily Rain Total (in)	0.00	Readings in the summary table and graphs below are the reported downwind concentrations.
Temperature (°F)	30.0 - 43.0	Wind Speed (MPH)	3.3 - 5.7	Barometer (inHg)	30.20 - 30.20	Avg. Dew Point Temp (°F)	19.4	

Station Location	Daily Avg. Dust Concentration (µg/m^3)	Max 15-Min Dust Concentration (µg/m^3)	Time of Max Dust Reading	Daily Avg. VOC Concentration (ppm)	Max 15-Min VOC Concentration (ppm)	Time of Max VOC Reading
Upwind	8.6	27.3	8:25	0.0	0.0	8:26
Downwind	19.9	77.7	8:25	N/A	N/A	N/A



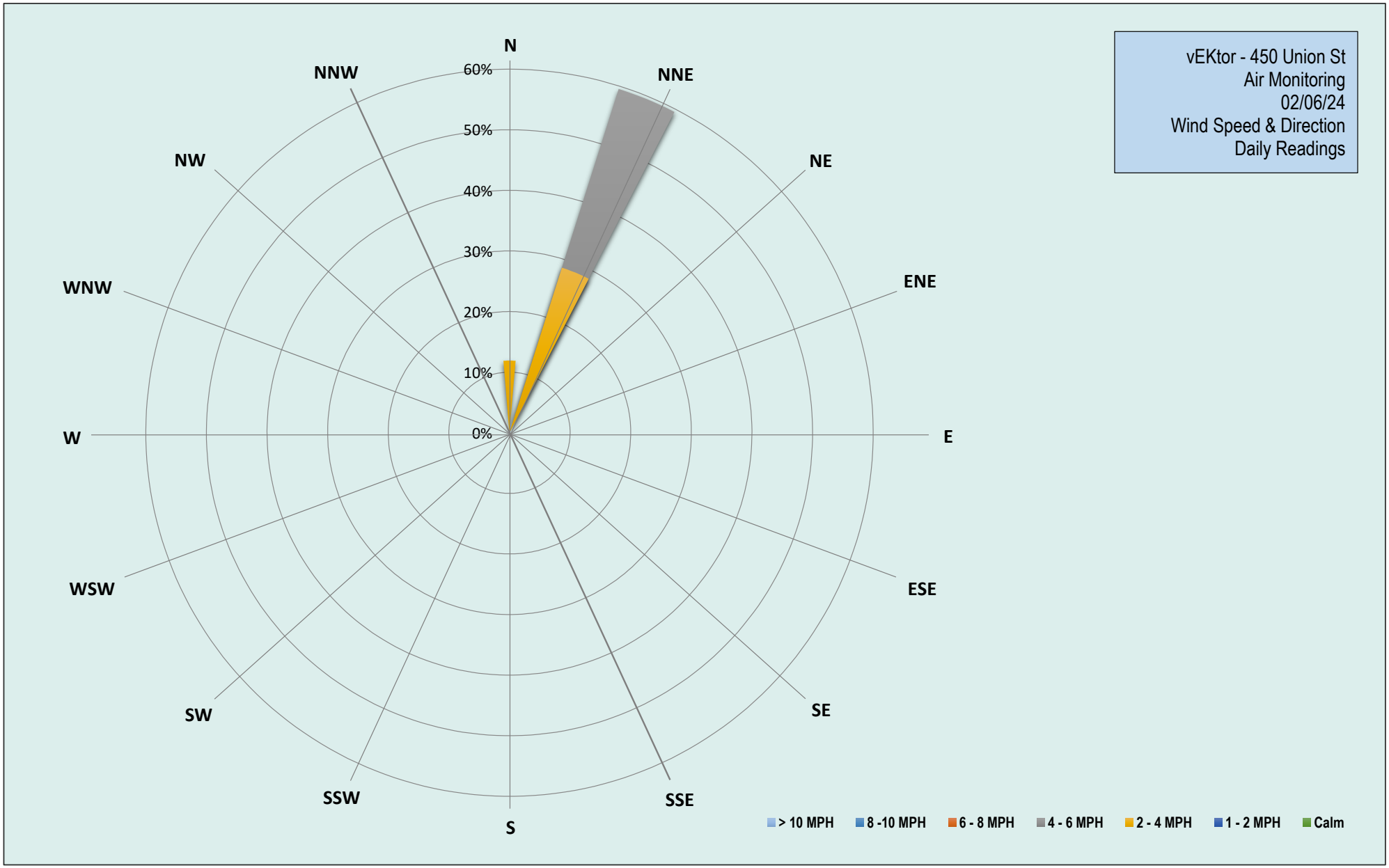


Air Monitoring Notes:

Weather Notes:

EMILCOTT
A Triumvirate Environmental Company

Wind Rose



EMILCOTT
A Triumvirate Environmental Company

Tuesday, February 6, 2024					
Number of Instances Where Downwind Particulates				0	
Number of Comparable Data Points =				27	
Start Time:				8:25	
End Time:				14:55	
PARTICULATE DATA					
Upwind		Downwind		Exceeds Particulate Alarm Limit	Exceedance Level
Time	15-Min Avg Concentration (ug/m^3)	Time	15-Min Avg Concentration (ug/m^3)		
8:25	27.3	8:25	77.7	-	177.3
8:40	22.8	8:40	30.2	-	172.8
8:55	20.6	8:55	46.6	-	170.6
9:10	18.4	9:10	25.0	-	168.4
9:25	18.2	9:25	36.8	-	168.2
9:40	10.9	9:40	21.4	-	160.9
9:55	9.9	9:55	18.0	-	159.9
10:10	7.6	10:10	20.3	-	157.6
10:25	7.6	10:25	25.7	-	157.6
10:40	7.8	10:40	15.3	-	157.8
10:55	6.3	10:55	27.7	-	156.3
11:10	7.8	11:10	19.7	-	157.8
11:25	5.4	11:25	17.6	-	155.4
11:40	6.9	11:40	16.2	-	156.9
11:55	5.6	11:55	14.9	-	155.6
12:10	4.7	12:10	12.4	-	154.7
12:25	5.2	12:25	10.4	-	155.2
12:40	6.3	12:40	23.9	-	156.3
12:55	6.0	12:55	9.7	-	156.0
13:10	4.6	13:10	8.2	-	154.6
13:25	3.6	13:25	8.2	-	153.6
13:40	4.3	13:40	7.9	-	154.3
13:55	4.1	13:55	8.2	-	154.1
14:10	2.8	14:10	8.2	-	152.8
14:25	3.6	14:25	11.5	-	153.6
14:40	3.8	14:40	9.6	-	153.8
14:55	5.1	14:55	11.5	-	155.1

Upwind DustTrak Data Summary		
Daily Maximum	27.3	ug/m^3
Daily Minimum	2.8	ug/m^3
Daily Average	8.6	ug/m^3
Maximum 15-Minute Average	27.3	ug/m^3

Downwind DustTrak Data Summary		
Daily Maximum	77.7	ug/m^3
Daily Minimum	7.9	ug/m^3
Daily Average	19.9	ug/m^3
Maximum 15-Minute Average	77.7	ug/m^3

Tuesday, February 6, 2024				
Number of Instances Where Downwind VOCs Exceeds				0
Number of Comparable Data Points =				0
			Start Time:	#N/A
			End Time:	14:56
PID DATA				
Upwind		Downwind		
Time	15-Min Avg Concentration (ppm)	Time	15-Min Avg Concentration (ppm)	Exceeds VOC Alarm Limit
8:26	0.0	8:26	-	-
8:41	0.0	8:41	-	-
8:56	0.0	8:56	-	-
9:11	0.0	9:11	-	-
9:26	0.0	9:26	-	-
9:41	0.0	9:41	-	-
9:56	0.0	9:56	-	-
10:11	0.0	10:11	-	-
10:26	0.0	10:26	-	-
10:41	0.0	10:41	-	-
10:56	0.0	10:56	-	-
11:11	0.0	11:11	-	-
11:26	0.0	11:26	-	-
11:41	0.0	11:41	-	-
11:56	0.0	11:56	-	-
12:11	0.0	12:11	-	-
12:26	0.0	12:26	-	-
12:41	0.0	12:41	-	-
12:56	0.0	12:56	-	-
13:11	0.0	13:11	-	-
13:26	0.0	13:26	-	-
13:41	0.0	13:41	-	-
13:56	0.0	13:56	-	-
14:11	0.0	14:11	-	-
14:26	0.0	14:26	-	-
14:41	0.0	14:41	-	-
14:56	0.0	14:56	-	-

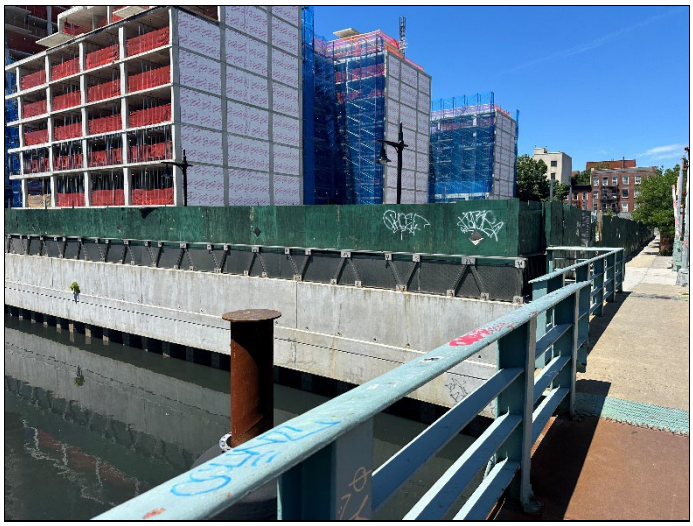
Exceedance Level

Upwind PID Data Summary		
Daily Maximum	0.0	ppm
Daily Minimum	0.0	ppm
Daily Average	0.0	ppm
Maximum 15-Minute Average	0.0	ppm

Downwind PID Data Summary		
Daily Maximum	0.0	ppm
Daily Minimum	0.0	ppm
Daily Average	#DIV/0!	ppm
Maximum 15-Minute Average	0.0	ppm

APPENDIX F
SITE INSPECTION PHOTOGRAPHIC DOCUMENTATION

Site Inspection Photographs



1. View of high-level relieving platform and sheeting, facing southwest.

2. View of the Site facing west.

3. View of the Site's cover system closest to the bulkhead facing east.

4. View of the Site's cover system closest to the bulkhead facing southeast.

5. View of the Site facing northwest.

6. View of the western half of the site facing west.

7. View of the Site's cover system facing northeast.

8. View of the Site's cover system facing east.

APPENDIX G
SITE INSPECTION FORMS

SITE INSPECTION CHECKLIST

Site Name: 450 Union Street Location: 450 Union Street, Brooklyn, NY Project Number: C224219

Inspector Name: PR Date: 6/28/2024 Weather Conditions: Clear - 82° F

Reason for Inspection (i.e., routine, severe condition, etc.): 2024 Periodic Review Report Annual Inspection

Check one of the following: **Y:** Yes **N:** No **NA**: Not Applicable

		Y	N	NA	Normal Situation	Remarks
	General					
1	What are the current site conditions?				Y	No significant changes since the 2023 PRR.
2	Site Cover System	Y			Y	
	Environmental Easement					
3	Has the site use changed since the last inspection?		N		N	
4	Does it appear that all environmental easement restrictions have been followed?	Y			Y	All field activities that breached the site cover system were NYSDEC-approved.
	Site Cover System					
5	Are there any indications of a breach in the site cover system at the time of this inspection?	Y			N	The building slab of the former building has been cracked as part of development activities. Cover system repairs from NYSDEC approved breaches were in good condition.
6	Are there any cracks in the building slabs or site cover?	Y			N	No cracks were observed outside of the NYSDEC-approved building slab cracking.
7	Are there any cracks in the building walls?			N/A	Y	
8	Is there any construction activity, or indication of any construction activity within the past certification year (including any tenant improvements), that included the breaching of the capping system, on-site at the time of this inspection?	Y			N	All field activities (investigations) including environmental work that breach the site cover system are NYSDEC-approved.
9	If YES to number 8, is there documentation that the Soil Management Plan, HASP, and CAMP for the site was/is being followed?	Y			Y	All NYSDEC-approved field activities will be documented in the 2024 PRR report.
	Bulkhead Wall/Containment Barrier					
10	Are there any indications of damage to the bulkhead at the time of this inspection?		N		N	
	Recovery Well Network					
11	Are all wells within the recovery well network intact and secured at the time of this inspection?	Y			Y	

***** If the answer to any of the above questions indicate non-compliance with any IC/ECs for the site, additional remarks must be provided and, where applicable, documentation attached to this checklist detailing additional inspection and repair activities.**

SITE INSPECTION CHECKLIST

Additional remarks All NYSDEC-approved field activities (investigations) to date and within the future (in the reporting year) are and will be in compliance with the SMP, Excavation Work Plan (EWP), HASP and CAMP guidance. All NYSDEC-approved field activites will be documented and summarized in the 2024 PRR report.

Minimum Inspection Schedule: Site-wide inspections will be conducted annually, per certification year, at a minimum. Additional inspections will also be conducted at times of severe condition events. All inspection events will utilize this checklist.

APPENDIX F
DNAPL RECOVERY REPORTS

October 2023
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

450 UNION STREET
NAPL GAUGING AND RECOVERY
MONTHLY REPORT SEPTEMBER 2023

BCP Site No. C224219

This report serves to document Dense Non-Aqueous Phase Liquid (DNAPL) gauging and recovery performed by GZA GeoEnvironmental, Inc. (GZA), on behalf of National Grid, at the 450 Union Street property in Brooklyn, New York (Site). Consistent with the October 2020 Remedial Action Work Plan (RAWP) prepared by Langan on behalf of 450 Union LLC and 450 Union Developer LLC, DNAPL gauging, and recovery was performed at two wells (RW-01 and RW-02) which are located on the eastern portion of the Site.

Summary of Field Activities:

- On September 19, 2023, GZA performed DNAPL gauging and recovery at RW-01 and RW-02. The table below provides a summary of this event, and the attached **Table 1** summarizes gauging and recovery data collected by GZA to date.

Pre-Recovery						Post Recovery	
Well ID	Date	Depth to Water (ft)	Depth to NAPL (ft)	DNAPL Thickness (ft)	DNAPL Volume Removed (gal)	Depth to NAPL (ft)	DNAPL Thickness (ft)
RW-01	9/19/23	9.62	43.80	5.10	25	Trace	Trace
RW-02	9/19/23	9.70	51.81	6.54	110	Trace	Trace

- The area around each well was covered with polyethylene sheeting prior to performance of gauging and recovery activities.

- Approximately 135 gallons of DNAPL/water mixture was recovered from the two wells during the September 19, 2023, recovery event with a submersible pump and the Pulse Pump ® Model LP1301.

- The recovered DNAPL/water and polyethylene sheeting/PPE were containerized in 55-gallon drums. Prior to leaving the Site, these drums were transported off-Site for disposal by Miller Environmental Group at the Waterworks, facility in Newburgh, New York (PPE), and Norlite facility in Cohoes, New York (DNAPL). A copy of the disposal manifests are attached**.**

Attachments: Table 1: Summary of NAPL Gauging and Recovery Activities

Attachment A: Disposal Manifest

October 2023
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

Certification

I, James J. Clark, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this field report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

James J. Clark, P.E., LEP	10/18/2023	
Qualified Environmental Professional	Date	Signature

TABLE 1

SUMMARY OF NAPL GAUGING ACTIVITIES

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Post DNAPL Recovery			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	
RW-01 **Total well depth = 48.90 ft.**	4/19/2022	38.2	10.7	4/19/22 8:30	Trace	Trace	14	14	Flooding oberved prior to DNAPL recovery
	5/20/2022	40	8.90	5/20/22 8:55	Trace	Trace	20	34	Some flooding oberved prior to DNAPL recovery
	6/21/2022	39.17	9.73	6/21/2022	Trace	Trace	40	74	No flooding oberved
	7/28/2022	39.34	9.56	7/28/2022	Trace	Trace	16	90	Flooding oberved prior to DNAPL recovery
	8/30/2022	39.15	9.75	8/30/2022	Trace	Trace	20	110	No flooding oberved
	9/28/2022	39.19	9.71	9/28/2022	Trace	Trace	15	125	No flooding oberved
	10/26/2022	38.65	10.25	10/26/2022	Trace	Trace	35	160	Some flooding oberved prior to DNAPL recovery
	11/29/2022	45.30	3.6	11/29/2022	Trace	Trace	20	180	No flooding oberved
	12/28/2022	39.51	9.39	12/28/2022	Trace	Trace	35	215	No flooding oberved
	1/31/2023	39.10	9.8	1/31/2023	Trace	Trace	25	240	Flooding observed prior to DNAPL recovery
	2/21/2023	39.05	9.85	2/21/2023	Trace	Trace	27	267	Flooding observed prior to DNAPL recovery
	3/28/2023	38.45	10.45	3/28/2023	Trace	Trace	50	317	No flooding oberved
	4/1/2023								Site Inaccessible due to demolition
	5/1/2023								Site Inaccessible due to demolition
	6/8/2023	38.60	10.3	3/28/2023	Trace	Trace	40	357	No flooding oberved
	7/6/2023	39.45	9.45	7/6/2023	Trace	Trace	40	397	No flooding oberved
	8/15/2023	38.85	10.05	8/15/2023	Trace	Trace	20	417	Flooding observed prior to DNAPL recovery
	9/19/2023	43.80	5.1	9/19/2023	Trace	Trace	25	442	Flooding observed prior to DNAPL recovery

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Recovery after Removal			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Total Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	(gallons)	
RW-02 **Total well depth = 58.35 ft.**	4/19/2022	39.00	19.35	4/19/22 10:30	42.0	16.35	31	31	45	Well cap damaged - needs to be replaced
	5/20/2022	39.75	18.60	5/20/22 11:00	50.41	10.66	68	99	133	Well cap damaged - needs to be replaced
	6/21/2022	43.17	15.18	6/21/2022	Trace	Trace	80	179	253	Well cap replaced wih a 6-inch J-Plug
	7/28/2022	51.75	6.60	7/28/2022	Trace	Trace	22	201	291	
	8/30/2022	49.9	8.45	8/30/2022	56.85	1.5	35	236	346	
	9/28/2022	46.82	11.53	9/28/2022	Trace	Trace	65	301	426	
	10/26/2022	47.20	11.15	10/26/2022	Trace	Trace	105	406	566	
	11/29/2022	49.20	9.15	11/29/2022	Trace	Trace	80	486	666	
	12/28/2022	50.53	7.82	12/28/2022	Trace	Trace	55	541	756	
	1/31/2023	52.60	5.75	1/31/2023	Trace	Trace	70	611	851	
	2/21/2023	52.67	5.68	2/21/2023	57.5	0.85	82	693	960	
	3/28/2023	52.53	5.82	2/21/2023	Trace	Trace	50	743	1060	
										Site Inaccessible due to demolition
										Site Inaccessible due to demolition
	6/8/2023	45.40	12.95	6/8/2023	56.5	1.85	140	883	1240	
	7/6/2023	48.25	10.10	7/6/2023	57	1.35	110	993	1390	
	8/15/2023	49.50	8.85	8/15/2023	Trace	Trace	130	1123	1540	
	9/19/2023	51.81	6.54	9/19/2023	Trace	Trace	110	1233	1675	

October 2023
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

ATTACHMENT A

DISPOSAL MANIFEST

90804612 METRUO2385 3770818

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 347-213-8874	4. Waste Tracking Number METRO 2385

5. Generator's Name and Mailing Address

NATIONAL GRID
175 East Old Country Road
Hicksville, NY 11801

Generator's Phone: 347-213-8874

Generator's Site Address (if different than mailing address)

NATIONAL GRID
450 UNION ST
BROOKLYN, NY 11231

6. Transporter 1 Company Name
MILLER ENVIRONMENTAL GROUP, INC — U.S. EPA ID Number NYD986908085

7. Transporter 2 Company Name
Tradebe Transportation LLC — U.S. EPA ID Number CTD021816889

8. Designated Facility Name and Site Address
~~TRADEBE TREATMENT AND RECYCLING~~
~~50 CROSS STREET~~
~~BRIDGEPORT, CT 06610~~
Norlite Corp
628 South Saratoga St
Cohoes NY 12047 518-235-0401

Facility's Phone: ~~888-276-0887~~

U.S. EPA ID Number ~~CTD002593887~~ NYD080469935

	9. Waste Shipping Name and Description	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.
1.	NON RCRA, NON DOT REGULATED LIQUIDS (DNAPL)	3	DM	165	G
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information Document # D41262 Job#: NY02231774 PO#:

1) Approval #: PO# 27500 2) Container Size: METAL DRUMS 3) Truck #: 8807

REFERENCE # 3770818

Re-Routed to alternate facility

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: AS AGENT FOR NAT GRID F. Santos — Signature: Felipe Sant — Month 9 Day 19 Year 23

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: F Santos — Signature: Felipe Sant — Month 9 Day 19 Year 23
Transporter 2 Printed/Typed Name: Mark Simpson — Signature: [signature] — Month 9 Day 22 Year 23

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Jennifer Bishop — Signature: [signature] — Month 9 Day 25 Year 23

GENERATOR / TRANSPORTER / INT'L / DESIGNATED FACILITY

Printed in USA by GC Labels — DESIGNATED FACILITY TO GENERATOR — Reorder Part# MANIFEST-C6NHW

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
N/A	1	347-213-8874	METRO 2389

GENERATOR

5. Generator's Name and Mailing Address

NATIONAL GRID
300 ERIE BOULEVARD
SYRACUSE, NY 13202
Generator's Phone: 3472138874

Generator's Site Address (if different than mailing address)

National Grid
450 Union St.
Brooklyn, NY 11231

6. Transporter 1 Company Name — U.S. EPA ID Number

MILLER ENVIRONMENTAL GROUP, INC — NYD986908085

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

WATERWORKS
77 STEWART AVENUE
NEWBURGH, NY 12550
Facility's Phone: 845-590-0408

NYR000236349

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON RCRA, NON DOT REGULATED SOLIDS	1	DM	35	P	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

Document # D41261 Job#: NY02231774 PO#:

1) Approval #: 23D0158

2) Container Size: METAL DRUMS 3) Truck #: 8807

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: AS AGENT FOR NAT GRID F. Santos — Signature: Felix Sant — Month: 9 — Day: 19 — Year: 23

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: F. Santos — Signature: Felix Sant — Month: 9 — Day: 19 — Year: 23

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month — Day — Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Steven Fsolaw — Signature — Month: 9 — Day: 22 — Year: 23

GZA GeoEnvironmental of New York

November 2023
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

450 UNION STREET
NAPL GAUGING AND RECOVERY
MONTHLY REPORT OCTOBER 2023

BCP Site No. C224219

This report serves to document Dense Non-Aqueous Phase Liquid (DNAPL) gauging and recovery performed by GZA GeoEnvironmental, Inc. (GZA), on behalf of National Grid, at the 450 Union Street property in Brooklyn, New York (Site). Consistent with the October 2020 Remedial Action Work Plan (RAWP) prepared by Langan on behalf of 450 Union LLC and 450 Union Developer LLC, DNAPL gauging, and recovery was performed at two wells (RW-01 and RW-02) which are located on the eastern portion of the Site.

Summary of Field Activities:

- On October 17, 2023, GZA performed DNAPL gauging and recovery at RW-01 and RW-02. The table below provides a summary of this event, and the attached **Table 1** summarizes gauging and recovery data collected by GZA to date.

Pre-Recovery						Post Recovery	
Well ID	Date	Depth to Water (ft)	Depth to NAPL (ft)	DNAPL Thickness (ft)	DNAPL Volume Removed (gal)	Depth to NAPL (ft)	DNAPL Thickness (ft)
RW-01	10/17/23	9.10	45.35	3.55	30	Trace	Trace
RW-02	10/17/23	9.25	54.70	3.65	40	Trace	Trace

- The area around each well was covered with polyethylene sheeting prior to performance of gauging and recovery activities.

- Approximately 70 gallons of DNAPL/water mixture was recovered from the two wells during the October 17, 2023, recovery event with a submersible pump and the Pulse Pump ® Model LP1301.

- The recovered DNAPL/water and polyethylene sheeting/PPE were containerized in 55-gallon drums. Prior to leaving the Site, these drums were transported off-Site for disposal by Miller Environmental Group at the Waterworks, facility in Newburgh, New York (PPE), and Norlite facility in Cohoes, New York (DNAPL). A copy of the disposal manifests are attached**.**

Attachments: Table 1: Summary of NAPL Gauging and Recovery Activities

Attachment A: Disposal Manifest

November 2023
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

Certification

I, James J. Clark, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this field report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

James J. Clark, P.E., LEP	11/7/2023	
Qualified Environmental Professional	Date	Signature

TABLE 1

SUMMARY OF NAPL GAUGING ACTIVITIES

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Post DNAPL Recovery			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	
RW-01 **Total well depth = 48.90 ft.**	4/19/2022	38.2	10.7	4/19/22 8:30	Trace	Trace	14	14	Flooding oberved prior to DNAPL recovery
	5/20/2022	40	8.90	5/20/22 8:55	Trace	Trace	20	34	Some flooding oberved prior to DNAPL recovery
	6/21/2022	39.17	9.73	6/21/2022	Trace	Trace	40	74	No flooding oberved
	7/28/2022	39.34	9.56	7/28/2022	Trace	Trace	16	90	Flooding oberved prior to DNAPL recovery
	8/30/2022	39.15	9.75	8/30/2022	Trace	Trace	20	110	No flooding oberved
	9/28/2022	39.19	9.71	9/28/2022	Trace	Trace	15	125	No flooding oberved
	10/26/2022	38.65	10.25	10/26/2022	Trace	Trace	35	160	Some flooding oberved prior to DNAPL recovery
	11/29/2022	45.30	3.6	11/29/2022	Trace	Trace	20	180	No flooding oberved
	12/28/2022	39.51	9.39	12/28/2022	Trace	Trace	35	215	No flooding oberved
	1/31/2023	39.10	9.8	1/31/2023	Trace	Trace	25	240	Flooding observed prior to DNAPL recovery
	2/21/2023	39.05	9.85	2/21/2023	Trace	Trace	27	267	Flooding observed prior to DNAPL recovery
	3/28/2023	38.45	10.45	3/28/2023	Trace	Trace	50	317	No flooding oberved
	4/1/2023								Site Inaccessible due to demolition
	5/1/2023								Site Inaccessible due to demolition
	6/8/2023	38.60	10.3	3/28/2023	Trace	Trace	40	357	No flooding oberved
	7/6/2023	39.45	9.45	7/6/2023	Trace	Trace	40	397	No flooding oberved
	8/15/2023	38.85	10.05	8/15/2023	Trace	Trace	20	417	Flooding observed prior to DNAPL recovery
	9/19/2023	43.80	5.1	9/19/2023	Trace	Trace	25	442	Flooding observed prior to DNAPL recovery
	10/17/2023	45.35	3.55	10/17/2023	Trace	Trace	30	472	No flooding oberved

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Recovery after Removal			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Total Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	(gallons)	
RW-02 **Total well depth = 58.35 ft.**	4/19/2022	39.00	19.35	4/19/22 10:30	42.0	16.35	31	31	45	Well cap damaged - needs to be replaced
	5/20/2022	39.75	18.60	5/20/22 11:00	50.41	10.66	68	99	133	Well cap damaged - needs to be replaced
	6/21/2022	43.17	15.18	6/21/2022	Trace	Trace	80	179	253	Well cap replaced wih a 6-inch J-Plug
	7/28/2022	51.75	6.60	7/28/2022	Trace	Trace	22	201	291	
	8/30/2022	49.9	8.45	8/30/2022	56.85	1.5	35	236	346	
	9/28/2022	46.82	11.53	9/28/2022	Trace	Trace	65	301	426	
	10/26/2022	47.20	11.15	10/26/2022	Trace	Trace	105	406	566	
	11/29/2022	49.20	9.15	11/29/2022	Trace	Trace	80	486	666	
	12/28/2022	50.53	7.82	12/28/2022	Trace	Trace	55	541	756	
	1/31/2023	52.60	5.75	1/31/2023	Trace	Trace	70	611	851	
	2/21/2023	52.67	5.68	2/21/2023	57.5	0.85	82	693	960	
	3/28/2023	52.53	5.82	3/28/2023	Trace	Trace	50	743	1060	
										Site Inaccessible due to demolition
										Site Inaccessible due to demolition
	6/8/2023	45.40	12.95	6/8/2023	56.5	1.85	140	883	1240	
	7/6/2023	48.25	10.10	7/6/2023	57	1.35	110	993	1390	
	8/15/2023	49.50	8.85	8/15/2023	Trace	Trace	130	1123	1540	
	9/19/2023	51.81	6.54	9/19/2023	Trace	Trace	110	1233	1675	
	10/17/2023	54.70	3.65	10/17/2023	Trace	Trace	40	1273	1745	

ATTACHMENT A

DISPOSAL MANIFEST

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	N/A	1		METRO 2341

5. Generator's Name and Mailing Address
NATIONAL GRID
175 East Old Country Road
Hicksville, NY 11801
Generator's Phone: 516-405-8828

Generator's Site Address (if different than mailing address)
National GRID
450 Union Blvd
Brooklyn, NY 11231

6. Transporter 1 Company Name
MILLER ENVIRONMENTAL GROUP, INC
U.S. EPA ID Number NYD986908085
800-394-8806

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
WATERWORKS
77... AVENUE
N...URGH, NY 12550
Facility's Phone: 845-590-0406
U.S. EPA ID Number NYR000236349

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. NON-RCRA, NON-DOT REGULATED SOLIDS (OILY DEBRIS)	1	DM	50	P
	2.				
	3.				
	4.				

13. Special Handling Instructions and Additional Information

Document# ______________ Job #: NY0223196? PO# ______________

1)Approval # 23D0158 2) Container Type: DM 3)Truck# 8806

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: CRAIG PEARCE as agent
Signature: Craig Pearce
Month 10 Day 17 Year 23

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Justin ...
Signature
Month Day Year

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Christopher Morgan
Signature
Month 10 Day 23 Year 23

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

DESIGNATED FACILITY'S COPY

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

2. Page 1 of 1

3. Emergency Response Phone 347-213-8874

4. Waste Tracking Number

5. Generator's Name and Mailing Address NATIONAL GRID
175 E. Old Country Rd.
Hicksville NY 11801

Generator's Phone: 347-213-8874

Generator's Site Address (if different than mailing address)
National Grid
450 Union St.
Brooklyn NY 11231

6. Transporter 1 Company Name
Miller Environmental Group Inc.

U.S. EPA ID Number NYD986908085

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Norlite Corp.
628 South Saratoga St.
Cohoes NY 12047

U.S. EPA ID Number NYD080469935

Facility's Phone: 518-235-0401

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt/Vol.	
1.	NON RCRA, NON DOT Regulated Liquids (DNAPL)	2	DM	100	GL	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
TRUCK # 8806
(DM)
App# ~~1000362876~~ 3805375
PASS by [illegible] 10/23/23
NY0223967

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: CRAIG PEARCE as agent
Signature: Craig Pearce
Month 10 Day 17 Year 23

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: JUSTIN HANCOCK
Signature: Justin Hancock
Month 10 Day 17 Year 23

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name
Signature
Month Day Year

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

DESIGNATED FACILITY TO GENERATOR

GZA GeoEnvironmental of New York

January 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

450 UNION STREET
NAPL GAUGING AND RECOVERY
MONTHLY REPORT NOVEMBER 2023

BCP Site No. C224219

This report serves to document Dense Non-Aqueous Phase Liquid (DNAPL) gauging and recovery performed by GZA GeoEnvironmental, Inc. (GZA), on behalf of National Grid, at the 450 Union Street property in Brooklyn, New York (Site). Consistent with the October 2020 Remedial Action Work Plan (RAWP) prepared by Langan on behalf of 450 Union LLC and 450 Union Developer LLC, DNAPL gauging, and recovery was performed at two wells (RW-01 and RW-02) which are located on the eastern portion of the Site.

Summary of Field Activities:

- On November 21, 2023, GZA performed DNAPL gauging and recovery at RW-01 and RW-02. The table below provides a summary of this event, and the attached **Table 1** summarizes gauging and recovery data collected by GZA to date.

Pre-Recovery						Post Recovery	
Well ID	Date	Depth to Water (ft)	Depth to NAPL (ft)	DNAPL Thickness (ft)	DNAPL Volume Removed (gal)	Depth to NAPL (ft)	DNAPL Thickness (ft)
RW-01	11/21/23	9.70	45.05	3.85	40	Trace	Trace
RW-02	11/21/23	10.20	53.65	4.70	50	Trace	Trace

- The area around each well was covered with polyethylene sheeting prior to performance of gauging and recovery activities.

- Approximately 90 gallons of DNAPL/water mixture was recovered from the two wells during the November 21, 2023, recovery event with a submersible pump and the Pulse Pump ® Model LP1301.

- The recovered DNAPL/water and polyethylene sheeting/PPE were containerized in 55-gallon drums. Prior to leaving the Site, these drums were transported off-Site for disposal by Miller Environmental Group at the Waterworks, facility in Newburgh, New York (PPE), and Norlite facility in Cohoes, New York (DNAPL). A copy of the disposal manifests are attached**.**

Attachments: Table 1: Summary of NAPL Gauging and Recovery Activities

Attachment A: Disposal Manifest

January 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

Certification

I, James J. Clark, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this field report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

James J. Clark, P.E., LEP	1/8/2024	
Qualified Environmental Professional	Date	Signature

TABLE 1

SUMMARY OF NAPL GAUGING ACTIVITIES

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Post DNAPL Recovery			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	
RW-01 **Total well depth = 48.90 ft.**	4/19/2022	38.2	10.7	4/19/22 8:30	Trace	Trace	14	14	Flooding oberved prior to DNAPL recovery
	5/20/2022	40	8.90	5/20/22 8:55	Trace	Trace	20	34	Some flooding oberved prior to DNAPL recovery
	6/21/2022	39.17	9.73	6/21/2022	Trace	Trace	40	74	No flooding oberved
	7/28/2022	39.34	9.56	7/28/2022	Trace	Trace	16	90	Flooding oberved prior to DNAPL recovery
	8/30/2022	39.15	9.75	8/30/2022	Trace	Trace	20	110	No flooding oberved
	9/28/2022	39.19	9.71	9/28/2022	Trace	Trace	15	125	No flooding oberved
	10/26/2022	38.65	10.25	10/26/2022	Trace	Trace	35	160	Some flooding oberved prior to DNAPL recovery
	11/29/2022	45.30	3.6	11/29/2022	Trace	Trace	20	180	No flooding oberved
	12/28/2022	39.51	9.39	12/28/2022	Trace	Trace	35	215	No flooding oberved
	1/31/2023	39.10	9.8	1/31/2023	Trace	Trace	25	240	Flooding observed prior to DNAPL recovery
	2/21/2023	39.05	9.85	2/21/2023	Trace	Trace	27	267	Flooding observed prior to DNAPL recovery
	3/28/2023	38.45	10.45	3/28/2023	Trace	Trace	50	317	No flooding oberved
	4/1/2023								Site Inaccessible due to demolition
	5/1/2023								Site Inaccessible due to demolition
	6/8/2023	38.60	10.3	3/28/2023	Trace	Trace	40	357	No flooding oberved
	7/6/2023	39.45	9.45	7/6/2023	Trace	Trace	40	397	No flooding oberved
	8/15/2023	38.85	10.05	8/15/2023	Trace	Trace	20	417	Flooding observed prior to DNAPL recovery
	9/19/2023	43.80	5.1	9/19/2023	Trace	Trace	25	442	Flooding observed prior to DNAPL recovery
	10/17/2023	45.35	3.55	10/17/2023	Trace	Trace	30	472	No flooding oberved
	11/21/2023	45.05	3.85	11/21/2023	Trace	Trace	40	512	No flooding oberved

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Recovery after Removal			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Total Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	(gallons)	
RW-02 **Total well depth = 58.35 ft.**	4/19/2022	39.00	19.35	4/19/22 10:30	42.0	16.35	31	31	45	Well cap damaged - needs to be replaced
	5/20/2022	39.75	18.60	5/20/22 11:00	50.41	10.66	68	99	133	Well cap damaged - needs to be replaced
	6/21/2022	43.17	15.18	6/21/2022	Trace	Trace	80	179	253	Well cap replaced wih a 6-inch J-Plug
	7/28/2022	51.75	6.60	7/28/2022	Trace	Trace	22	201	291	
	8/30/2022	49.9	8.45	8/30/2022	56.85	1.5	35	236	346	
	9/28/2022	46.82	11.53	9/28/2022	Trace	Trace	65	301	426	
	10/26/2022	47.20	11.15	10/26/2022	Trace	Trace	105	406	566	
	11/29/2022	49.20	9.15	11/29/2022	Trace	Trace	80	486	666	
	12/28/2022	50.53	7.82	12/28/2022	Trace	Trace	55	541	756	
	1/31/2023	52.60	5.75	1/31/2023	Trace	Trace	70	611	851	
	2/21/2023	52.67	5.68	2/21/2023	57.5	0.85	82	693	960	
	3/28/2023	52.53	5.82	3/28/2023	Trace	Trace	50	743	1060	
										Site Inaccessible due to demolition
										Site Inaccessible due to demolition
	6/8/2023	45.40	12.95	6/8/2023	56.5	1.85	140	883	1240	
	7/6/2023	48.25	10.10	7/6/2023	57	1.35	110	993	1390	
	8/15/2023	49.50	8.85	8/15/2023	Trace	Trace	130	1123	1540	
	9/19/2023	51.81	6.54	9/19/2023	Trace	Trace	110	1233	1675	
	10/17/2023	54.70	3.65	10/17/2023	Trace	Trace	40	1273	1745	
	11/21/2023	53.65	4.70	11/21/2023	Trace	Trace	50	1323	1835	

January 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

ATTACHMENT A

DISPOSAL MANIFEST

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	N/A	1	347-213-9874	METRO 2658

GENERATOR

5. Generator's Name and Mailing Address

NATIONAL GRID
175 East Old Country Road
Hicksville, NY 11801
Generator's Phone: 347-213-9874

Generator's Site Address (if different than mailing address)

NATIONAL GRID
450 UNION ST
BROOKLYN, NY 11231

6. Transporter 1 Company Name — U.S. EPA ID Number

MILLER ENVIRONMENTAL GROUP INC — NYD986909085

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

WATERWORKS
77 STEWART AVENUE
NEWBURGH, NY 12550
Facility's Phone: 845-560-0408

NYR000236349

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON RCRA, NON DOT REGULATED SOLIDS	1	DM	25	P	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

1)Approval #: 2000158 Document# D42484 Job#: NY02232083 PO#: 2) Container Size: 55-gal drums 3) Truck # E606

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Associate for Joel Crespo — Signature — Month 11 Day 21 Year 09

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Joel Crespo — Signature — Month 11 Day 21 Year 09

Transporter 2 Printed/Typed Name: Daniel medina — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Stefan Ifrim — Signature — Month 11 Day 23 Year 09

90821349 METRO2657 3850815 USNH 145859 LN ~~45846~~

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	N/A	1	347-213-8874	METRO 2657

GENERATOR

5. Generator's Name and Mailing Address

NATIONAL GRID
175 East Old Country Road
Hicksville, NY 11801
Generator's Phone: 347-213-8874

Generator's Site Address (if different than mailing address)

NATIONAL GRID
450 UNION ST
BROOKLYN, NY 11231

6. Transporter 1 Company Name — U.S. EPA ID Number

MILLER ENVIRONMENTAL GROUP, INC — NYD986906085

7. Transporter 2 Company Name — U.S. EPA ID Number

Tradebe Transportation LLC — CTR0216889

8. Designated Facility Name and Site Address — U.S. EPA ID Number

~~NORLITE, LLC~~
~~628 S. SARATOGA ST.~~
~~COHOES, NY 12047~~
136 ~~Gracey Avenue~~ Norlite Corp
Meriden CT 06451 698 South Saratoga
Cohoes NY 12047
Facility's Phone: ~~518-235-0401~~ 518-235-0401 — ~~NYD986469935~~ NYD986469935

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	NON-RCRA, NON-DOT REGULATED LIQUIDS N.O.S.(DNAPLE)	2	DM	90	P
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information

Document # D42483 Job#: NY02232083 PO#:

1) Approval #: 1000362516 **2) Container Size: 55-gal drums** **3) Truck #**

Ref # 3850815 PO 29875

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: ASC Agents For Joel Crespo — Signature — Month 11 Day 21 Year 23

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Joel Crespo — Signature — Month 11 Day 21 Year 23

Transporter 2 Printed/Typed Name: Abel Ruiz — Signature — Month 12 Day 6 Year 23

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Jennifer Bishop — Signature — Month 12 Day 8 Year 23

GZA GeoEnvironmental of New York

January 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

450 UNION STREET
NAPL GAUGING AND RECOVERY
MONTHLY REPORT DECEMBER 2023

BCP Site No. C224219

This report serves to document Dense Non-Aqueous Phase Liquid (DNAPL) gauging and recovery performed by GZA GeoEnvironmental, Inc. (GZA), on behalf of National Grid, at the 450 Union Street property in Brooklyn, New York (Site). Consistent with the October 2020 Remedial Action Work Plan (RAWP) prepared by Langan on behalf of 450 Union LLC and 450 Union Developer LLC, DNAPL gauging, and recovery was performed at two wells (RW-01 and RW-02) which are located on the eastern portion of the Site.

Summary of Field Activities:

- On December 27, 2023, GZA performed DNAPL gauging and recovery at RW-01 and RW-02. The table below provides a summary of this event, and the attached **Table 1** summarizes gauging and recovery data collected by GZA to date.

Pre-Recovery						Post Recovery	
Well ID	Date	Depth to Water (ft)	Depth to NAPL (ft)	DNAPL Thickness (ft)	DNAPL Volume Removed (gal)	Depth to NAPL (ft)	DNAPL Thickness (ft)
RW-01	12/27/23	9.60	45.00	3.90	15	Trace	Trace
RW-02	12/27/23	9.87	55.50	2.85	10	Trace	Trace

- The area around each well was covered with polyethylene sheeting prior to performance of gauging and recovery activities.
- Approximately 25 gallons of DNAPL/water mixture was recovered from the two wells during the December 27, 2023, recovery event with a submersible pump and the Pulse Pump ® Model LP1301.
- The recovered DNAPL/water and polyethylene sheeting/PPE were containerized in 55-gallon drums. Prior to leaving the Site, these drums were transported off-Site for disposal by Miller Environmental Group at the Waterworks, facility in Newburgh, New York. A copy of the disposal manifests are attached**.**

Attachments: Table 1: Summary of NAPL Gauging and Recovery Activities

Attachment A: Disposal Manifest

January 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

Certification

I, James J. Clark, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this field report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

James J. Clark, P.E., LEP	1/24/2024	
Qualified Environmental Professional	Date	Signature

TABLE 1

SUMMARY OF NAPL GAUGING ACTIVITIES

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Post DNAPL Recovery			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	
RW-01 **Total well depth = 48.90 ft.**	4/19/2022	38.2	10.7	4/19/22 8:30	Trace	Trace	14	14	Flooding oberved prior to DNAPL recovery
	5/20/2022	40	8.90	5/20/22 8:55	Trace	Trace	20	34	Some flooding oberved prior to DNAPL recovery
	6/21/2022	39.17	9.73	6/21/2022	Trace	Trace	40	74	No flooding oberved
	7/28/2022	39.34	9.56	7/28/2022	Trace	Trace	16	90	Flooding oberved prior to DNAPL recovery
	8/30/2022	39.15	9.75	8/30/2022	Trace	Trace	20	110	No flooding oberved
	9/28/2022	39.19	9.71	9/28/2022	Trace	Trace	15	125	No flooding oberved
	10/26/2022	38.65	10.25	10/26/2022	Trace	Trace	35	160	Some flooding oberved prior to DNAPL recovery
	11/29/2022	45.30	3.6	11/29/2022	Trace	Trace	20	180	No flooding oberved
	12/28/2022	39.51	9.39	12/28/2022	Trace	Trace	35	215	No flooding oberved
	1/31/2023	39.10	9.8	1/31/2023	Trace	Trace	25	240	Flooding observed prior to DNAPL recovery
	2/21/2023	39.05	9.85	2/21/2023	Trace	Trace	27	267	Flooding observed prior to DNAPL recovery
	3/28/2023	38.45	10.45	3/28/2023	Trace	Trace	50	317	No flooding oberved
	4/1/2023								Site Inaccessible due to demolition
	5/1/2023								Site Inaccessible due to demolition
	6/8/2023	38.60	10.3	3/28/2023	Trace	Trace	40	357	No flooding oberved
	7/6/2023	39.45	9.45	7/6/2023	Trace	Trace	40	397	No flooding oberved
	8/15/2023	38.85	10.05	8/15/2023	Trace	Trace	20	417	Flooding observed prior to DNAPL recovery
	9/19/2023	43.80	5.1	9/19/2023	Trace	Trace	25	442	Flooding observed prior to DNAPL recovery
	10/17/2023	45.35	3.55	10/17/2023	Trace	Trace	30	472	No flooding oberved
	11/21/2023	45.05	3.85	11/21/2023	Trace	Trace	40	512	No flooding oberved
	12/27/2023	45.00	3.9	12/27/2023	Trace	Trace	15	527	No flooding oberved

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Recovery after Removal			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Total Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	(gallons)	
RW-02 **Total well depth = 58.35 ft.**	4/19/2022	39.00	19.35	4/19/22 10:30	42.0	16.35	31	31	45	Well cap damaged - needs to be replaced
	5/20/2022	39.75	18.60	5/20/22 11:00	50.41	10.66	68	99	133	Well cap damaged - needs to be replaced
	6/21/2022	43.17	15.18	6/21/2022	Trace	Trace	80	179	253	Well cap replaced wih a 6-inch J-Plug
	7/28/2022	51.75	6.60	7/28/2022	Trace	Trace	22	201	291	
	8/30/2022	49.9	8.45	8/30/2022	56.85	1.5	35	236	346	
	9/28/2022	46.82	11.53	9/28/2022	Trace	Trace	65	301	426	
	10/26/2022	47.20	11.15	10/26/2022	Trace	Trace	105	406	566	
	11/29/2022	49.20	9.15	11/29/2022	Trace	Trace	80	486	666	
	12/28/2022	50.53	7.82	12/28/2022	Trace	Trace	55	541	756	
	1/31/2023	52.60	5.75	1/31/2023	Trace	Trace	70	611	851	
	2/21/2023	52.67	5.68	2/21/2023	57.5	0.85	82	693	960	
	3/28/2023	52.53	5.82	3/28/2023	Trace	Trace	50	743	1060	
										Site Inaccessible due to demolition
										Site Inaccessible due to demolition
	6/8/2023	45.40	12.95	6/8/2023	56.5	1.85	140	883	1240	
	7/6/2023	48.25	10.10	7/6/2023	57	1.35	110	993	1390	
	8/15/2023	49.50	8.85	8/15/2023	Trace	Trace	130	1123	1540	
	9/19/2023	51.81	6.54	9/19/2023	Trace	Trace	110	1233	1675	
	10/17/2023	54.70	3.65	10/17/2023	Trace	Trace	40	1273	1745	
	11/21/2023	53.65	4.70	11/21/2023	Trace	Trace	50	1323	1835	
	12/27/2023	55.50	2.85	12/27/2023	Trace	Trace	10	1333	1860	

January 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

ATTACHMENT A

DISPOSAL MANIFEST

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N/A
2. Page 1 of
3. Emergency Response Phone: METRO 2644
4. Waste Tracking Number: 1

GENERATOR

5. Generator's Name and Mailing Address

NATIONAL GRID
175 East Old Country Road
Hicksville, NY 11801
Generator's Phone: **516-408-6928**

Generator's Site Address (if different than mailing address)
450 Union St
Brooklyn NY 11201

6. Transporter 1 Company Name: **MILLER ENVIRONMENTAL GROUP, INC** — U.S. EPA ID Number: **NYD986908085** — **800-394-8606**

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address

WATERWORKS
77 STEWART AVENUE
NEWBURGH, NY 12550
Facility's Phone: **845-590-0408**

U.S. EPA ID Number: **NYR000236349**

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	**NON-RCRA, NON-DOT REGULATED SOLIDS (OILY DEBRIS)** (oily PPE)	1	DM	15	P
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information: generated with manifest #2526

Document # 2644 **Job #:** 02232083 **PO#** _____

1)Approval # 19GD0002M **2) Container Type:** DM **3)Truck#** 8806

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: As Agent for National Grid Nicholas Dumont — Signature: ND — Month 12 Day 27 Year 23

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Nicholas Dumont — Signature: ND — Month 12 Day 27 Year 23

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Christopher Morgan — Signature: Christopher Morgan — Month 12 Day 28 Year 23

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N/A
2. Page 1 of
3. Emergency Response Phone: METRO
4. Waste Tracking Number: 2526 1

GENERATOR

5. Generator's Name and Mailing Address

NATIONAL GRID
175 East Old Country Road
Hicksville NY 11801

Generator's Phone: 516-408-8928

Generator's Site Address (if different than mailing address)
450 Union St
Brooklyn NY 11201

6. Transporter 1 Company Name: MILLER ENVIRONMENTAL GROUP, INC
U.S. EPA ID Number: NYD986908085
800-394-8606

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address

WATERWORKS
77 STEWART AVENUE
NEWBURGH, NY 12550

U.S. EPA ID Number: NYR000236349

Facility's Phone: 845-590-0408

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON-RCRA, NON-DOT REGULATED LIQUIDS (OILY WATER)	1	DM	25	9	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information: generated with manifest #2644

Document # 2526 Job #: 02232083 PO# _____

1) Approval # 19GD0002M 2) Container Type: DM 3) Truck# 8806

INT'L

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: AS Agent for National Grid Nicholas Dumont
Signature: ND
Month: 12 Day: 27 Year: 23

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Nicholas Dumont
Signature: ND
Month: 12 Day: 27 Year: 23

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Christopher Morgan
Signature:
Month: 12 Day: 29 Year: 23

DESIGNATED FACILITY TO GENERATOR

GZA GeoEnvironmental of New York

May 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

450 UNION STREET
NAPL GAUGING AND RECOVERY
MONTHLY REPORT JANUARY 2024

BCP Site No. C224219

This report serves to document Dense Non-Aqueous Phase Liquid (DNAPL) gauging and recovery performed by GZA GeoEnvironmental, Inc. (GZA), on behalf of National Grid, at the 450 Union Street property in Brooklyn, New York (Site). Consistent with the October 2020 Remedial Action Work Plan (RAWP) prepared by Langan on behalf of 450 Union LLC and 450 Union Developer LLC, DNAPL gauging, and recovery was performed at two wells (RW-01 and RW-02) which are located on the eastern portion of the Site.

Summary of Field Activities:

- On January 30, 2024, GZA performed DNAPL gauging and recovery at RW-01 and RW-02. The table below provides a summary of this event, and the attached **Table 1** summarizes gauging and recovery data collected by GZA to date.

Pre-Recovery						Post Recovery	
Well ID	Date	Depth to Water (ft)	Depth to NAPL (ft)	DNAPL Thickness (ft)	DNAPL Volume Removed (gal)	Depth to NAPL (ft)	DNAPL Thickness (ft)
RW-01	1/30/24	9.55	41.20	7.70	35	Trace	Trace
RW-02	1/30/24	9.90	52.90	5.45	50	Trace	Trace

- The area around each well was covered with polyethylene sheeting prior to performance of gauging and recovery activities.

- Approximately 85 gallons of DNAPL/water mixture was recovered from the two wells during the January 30, 2024, recovery event with a submersible pump and the Pulse Pump ® Model LP1301.

- The recovered DNAPL/water and polyethylene sheeting/PPE were containerized in 55-gallon drums. Prior to leaving the Site, these drums were transported off-Site for disposal by Miller Environmental Group at the Waterworks, facility in Newburgh, New York (PPE) and Tradabe facility in East Chicago, Indiana (DNAPL). A copy of the disposal manifests are attached**.**

Attachments: Table 1: Summary of NAPL Gauging and Recovery Activities

Attachment A: Disposal Manifests

May 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

Certification

I, James J. Clark, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this field report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

James J. Clark, P.E., LEP	5/30/2024	
Qualified Environmental Professional	Date	Signature

TABLE 1

SUMMARY OF NAPL GAUGING ACTIVITIES

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Post DNAPL Recovery			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	
RW-01 **Total well depth = 48.90 ft.**	4/19/2022	38.2	10.7	4/19/22 8:30	Trace	Trace	14	14	Flooding oberved prior to DNAPL recovery
	5/20/2022	40	8.90	5/20/22 8:55	Trace	Trace	20	34	Some flooding oberved prior to DNAPL recovery
	6/21/2022	39.17	9.73	6/21/2022	Trace	Trace	40	74	No flooding oberved
	7/28/2022	39.34	9.56	7/28/2022	Trace	Trace	16	90	Flooding oberved prior to DNAPL recovery
	8/30/2022	39.15	9.75	8/30/2022	Trace	Trace	20	110	No flooding oberved
	9/28/2022	39.19	9.71	9/28/2022	Trace	Trace	15	125	No flooding oberved
	10/26/2022	38.65	10.25	10/26/2022	Trace	Trace	35	160	Some flooding oberved prior to DNAPL recovery
	11/29/2022	45.30	3.6	11/29/2022	Trace	Trace	20	180	No flooding oberved
	12/28/2022	39.51	9.39	12/28/2022	Trace	Trace	35	215	No flooding oberved
	1/31/2023	39.10	9.8	1/31/2023	Trace	Trace	25	240	Flooding observed prior to DNAPL recovery
	2/21/2023	39.05	9.85	2/21/2023	Trace	Trace	27	267	Flooding observed prior to DNAPL recovery
	3/28/2023	38.45	10.45	3/28/2023	Trace	Trace	50	317	No flooding oberved
	4/1/2023								Site Inaccessible due to demolition
	5/1/2023								Site Inaccessible due to demolition
	6/8/2023	38.60	10.3	3/28/2023	Trace	Trace	40	357	No flooding oberved
	7/6/2023	39.45	9.45	7/6/2023	Trace	Trace	40	397	No flooding oberved
	8/15/2023	38.85	10.05	8/15/2023	Trace	Trace	20	417	Flooding observed prior to DNAPL recovery
	9/19/2023	43.80	5.1	9/19/2023	Trace	Trace	25	442	Flooding observed prior to DNAPL recovery
	10/17/2023	45.35	3.55	10/17/2023	Trace	Trace	30	472	No flooding oberved
	11/21/2023	45.05	3.85	11/21/2023	Trace	Trace	40	512	No flooding oberved
	12/27/2023	45.00	3.9	12/27/2023	Trace	Trace	15	527	No flooding oberved
	1/30/2024	41.20	7.7	1/30/2024	Trace	Trace	35	562	No flooding oberved

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Recovery after Removal			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Total Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	(gallons)	
RW-02 **Total well depth = 58.35 ft.**	4/19/2022	39.00	19.35	4/19/22 10:30	42.0	16.35	31	31	45	Well cap damaged - needs to be replaced
	5/20/2022	39.75	18.60	5/20/22 11:00	50.41	10.66	68	99	133	Well cap damaged - needs to be replaced
	6/21/2022	43.17	15.18	6/21/2022	Trace	Trace	80	179	253	Well cap replaced wih a 6-inch J-Plug
	7/28/2022	51.75	6.60	7/28/2022	Trace	Trace	22	201	291	
	8/30/2022	49.9	8.45	8/30/2022	56.85	1.5	35	236	346	
	9/28/2022	46.82	11.53	9/28/2022	Trace	Trace	65	301	426	
	10/26/2022	47.20	11.15	10/26/2022	Trace	Trace	105	406	566	
	11/29/2022	49.20	9.15	11/29/2022	Trace	Trace	80	486	666	
	12/28/2022	50.53	7.82	12/28/2022	Trace	Trace	55	541	756	
	1/31/2023	52.60	5.75	1/31/2023	Trace	Trace	70	611	851	
	2/21/2023	52.67	5.68	2/21/2023	57.5	0.85	82	693	960	
	3/28/2023	52.53	5.82	3/28/2023	Trace	Trace	50	743	1060	
										Site Inaccessible due to demolition
										Site Inaccessible due to demolition
	6/8/2023	45.40	12.95	6/8/2023	56.5	1.85	140	883	1240	
	7/6/2023	48.25	10.10	7/6/2023	57	1.35	110	993	1390	
	8/15/2023	49.50	8.85	8/15/2023	Trace	Trace	130	1123	1540	
	9/19/2023	51.81	6.54	9/19/2023	Trace	Trace	110	1233	1675	
	10/17/2023	54.70	3.65	10/17/2023	Trace	Trace	40	1273	1745	
	11/21/2023	53.65	4.70	11/21/2023	Trace	Trace	50	1323	1835	
	12/27/2023	55.50	2.85	12/27/2023	Trace	Trace	10	1333	1860	
	1/30/2024	52.90	5.45	1/30/2024	Trace	Trace	50	1383	1945	

May 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

ATTACHMENT A

DISPOSAL MANIFEST

MILLER ENVIRONMENTAL GROUP

24-Hour Emergency
800-394-8606

Please print or type

BILL OF LADING

1. Document No. METRO 2875

2. Page 1 of 1

3. Offeror Name and Mailing Address: National Grid
175 East Old Country Rd
Hicksville, NY, 11801

4. Offeror Phone (347) 213-8874

Site Address: National Grid
450 Union St
Brooklyn, NY, 11231

5. Transporter 1 Company Name: MILLER ENVIRONMENTAL GROUP, INC

6. EPA ID #: NYD986908085

A. State Transporter's ID

B. Transporter 1 Phone: 800-394-8606

7. Transporter 2 Company Name

8. EPA ID #

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
Water Works
77 Stewart Ave
HM Newburgh, NY, 12550

10. EPA ID #: NYR000236349

E. State Facility's ID

F. Facility's Phone

GENERATOR

	11. Shipping Name	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a.	NON RCRA, NON DOT Regulated (Solid debri PPE)	1	Dm	20	P
b.					
c.					
d.					

G. Additional Descriptions for Materials Listed Above

Document # 2875 Job #: 02240222 PO# _____

1) Approval # _____ 2) Container Type: Dm 3) Truck# 8806

15. Special Handling Instructions and Additional Information

16. OFFEROR CERTIFICATION: I hereby certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulation of the Department of Transportation. The materials described on this document are not subject to federal uniform hazardous waste manifest requirements.

Printed/Typed Name	Signature	Date (Month / Day / Year)
AS Agent For National Grid	dm	1 / 30 / 24

TRANSPORTER

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Date (Month / Day / Year)
Jose Ucedo	Jose Ucedo	1 / 30 / 24

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Date (Month / Day / Year)

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the materials covered by this bill of lading except as noted in item 19.

Printed/Typed Name	Signature	Date (Month / Day / Year)
SI		1 / 31 / 24

BILL OF LADING

90833825 BOLMETRO2877 3920204

BOL

ER ENVIRONMENTAL GROUP

8492 B240

24-Hour Emergency
800-394-8606

Please print or type

BILL OF LADING

1. Document No. METRO 2877

2. Page 1 of 2

3. Offeror Name and Mailing Address National Grid
175 East Old Country Rd.
Hicksville, NY, 11801

4. Offeror Phone (347) 213-8874

Site Address National Grid
450 Union St,
Brooklyn, NY, 11231

5. Transporter 1 Company Name MILLER ENVIRONMENTAL GROUP, INC

6. EPA ID # NYD986908085

A. State Transporter's ID 800-394-8606

B. Transporter 1 Phone

C. State Transporter's ID

7. Transporter 2 Company Name Tradebe Transportation

8. EPA ID # CTR000181688 9

D. Transporter 2 Phone

9. Designated Facility Name and Site Address Norlite Corp
628 South Saratoga St
Cohoes, NY 12047
HM 518-235-0401

10. EPA ID # see below
NYD080469935

E. State Facility's ID

F. Facility's Phone

GENERATOR

	11. Shipping Name	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a.	NON RCRA, NON DOT Regulated Liquids (DNAPL)	2	DM	85	GAL
b.	~~NON RCRA, NON DOT Regulated~~ (DNAPL)	~~1~~	~~DM~~	~~20~~	~~P~~
c.					
d.					

G. Additional Descriptions for Materials Listed Above

H 3920204

Document # 2877 Job #: 02240222 PO# _____

1) Approval # 1GC0360816 2) Container Type: DM 3) Truck# 8806

15. Special Handling Instructions and Additional Information

Re Routed to alternate facility

16. OFFEROR CERTIFICATION: I hereby certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulation of the Department of Transportation. The materials described on this document are not subject to federal uniform hazardous waste manifest requirements.

Printed/Typed Name: AS Agent for national Grid

Signature: [signature]

Date: Month 1 Day 30 Year 24

TRANSPORTER

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name: Jose Uceda

Signature: Jose Uceda

Date: Month 1 Day 30 Year 24

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name: CRAIG Pearce

Signature: Craig Pearce

Date: Month 1 Day 31 Year 24

FACILITY

19. Discrepancy Indication Space Transp #2 ABS#1 Andro 2-2-24

Tradebe T+R
4343 Kennedy Ave
Eastchicago IN 46312 219-397-3951 IND000646943

20. Facility Owner or Operator; Certification of receipt of the materials covered by this bill of lading except as noted in item 19.

Printed/Typed Name: N. Rivera

Signature: [signature]

Date: Month 2 Day 17 Year 24

BILL OF LADING

GZA GeoEnvironmental of New York

May 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

450 UNION STREET
NAPL GAUGING AND RECOVERY
MONTHLY REPORT FEBRUARY 2024

BCP Site No. C224219

This report serves to document Dense Non-Aqueous Phase Liquid (DNAPL) gauging and recovery performed by GZA GeoEnvironmental, Inc. (GZA), on behalf of National Grid, at the 450 Union Street property in Brooklyn, New York (Site). Consistent with the October 2020 Remedial Action Work Plan (RAWP) prepared by Langan on behalf of 450 Union LLC and 450 Union Developer LLC, DNAPL gauging, and recovery was performed at two wells (RW-01 and RW-02) which are located on the eastern portion of the Site.

Summary of Field Activities:

- On February 27, 2024, GZA performed DNAPL gauging and recovery at RW-01 and RW-02. The table below provides a summary of this event, and the attached **Table 1** summarizes gauging and recovery data collected by GZA to date.

Pre-Recovery						Post Recovery	
Well ID	Date	Depth to Water (ft)	Depth to NAPL (ft)	DNAPL Thickness (ft)	DNAPL Volume Removed (gal)	Depth to NAPL (ft)	DNAPL Thickness (ft)
RW-01	2/27/24	9.14	40.50	8.40	15	Trace	Trace
RW-02	2/27/24	9.21	53.60	4.75	--	--	--

- The area around each well was covered with polyethylene sheeting prior to performance of gauging and recovery activities.

- Approximately 15 gallons of DNAPL/water mixture was recovered from RW-01 during the February 27, 2024, recovery event with a submersible pump and the Pulse Pump ® Model LP1301, however was unable to recover from RW-02 due to equipment issues.

- The recovered DNAPL/water and polyethylene sheeting/PPE were containerized in 55-gallon drums. Prior to leaving the Site, these drums were transported off-Site for disposal by Miller Environmental Group at the Waterworks, facility in Newburgh, New York (PPE) and Tradabe facility in East Chicago, Indiana (DNAPL). A copy of the disposal manifests are attached.

Attachments: Table 1: Summary of NAPL Gauging and Recovery Activities

Attachment A: Disposal Manifest

May 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

Certification

I, James J. Clark, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this field report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

James J. Clark, P.E., LEP	5/30/2024	
Qualified Environmental Professional	Date	Signature

TABLE 1

SUMMARY OF NAPL GAUGING ACTIVITIES

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Post DNAPL Recovery			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	
RW-01 **Total well depth = 48.90 ft.**	4/19/2022	38.2	10.7	4/19/22 8:30	Trace	Trace	14	14	Flooding oberved prior to DNAPL recovery
	5/20/2022	40	8.90	5/20/22 8:55	Trace	Trace	20	34	Some flooding observed prior to DNAPL recovery
	6/21/2022	39.17	9.73	6/21/2022	Trace	Trace	40	74	No flooding oberved
	7/28/2022	39.34	9.56	7/28/2022	Trace	Trace	16	90	Flooding oberved prior to DNAPL recovery
	8/30/2022	39.15	9.75	8/30/2022	Trace	Trace	20	110	No flooding oberved
	9/28/2022	39.19	9.71	9/28/2022	Trace	Trace	15	125	No flooding oberved
	10/26/2022	38.65	10.25	10/26/2022	Trace	Trace	35	160	Some flooding oberved prior to DNAPL recovery
	11/29/2022	45.30	3.6	11/29/2022	Trace	Trace	20	180	No flooding oberved
	12/28/2022	39.51	9.39	12/28/2022	Trace	Trace	35	215	No flooding oberved
	1/31/2023	39.10	9.8	1/31/2023	Trace	Trace	25	240	Flooding observed prior to DNAPL recovery
	2/21/2023	39.05	9.85	2/21/2023	Trace	Trace	27	267	Flooding observed prior to DNAPL recovery
	3/28/2023	38.45	10.45	3/28/2023	Trace	Trace	50	317	No flooding oberved
	4/1/2023								Site Inaccessible due to demolition
	5/1/2023								Site Inaccessible due to demolition
	6/8/2023	38.60	10.3	3/28/2023	Trace	Trace	40	357	No flooding oberved
	7/6/2023	39.45	9.45	7/6/2023	Trace	Trace	40	397	No flooding oberved
	8/15/2023	38.85	10.05	8/15/2023	Trace	Trace	20	417	Flooding observed prior to DNAPL recovery
	9/19/2023	43.80	5.1	9/19/2023	Trace	Trace	25	442	Flooding observed prior to DNAPL recovery
	10/17/2023	45.35	3.55	10/17/2023	Trace	Trace	30	472	No flooding oberved
	11/21/2023	45.05	3.85	11/21/2023	Trace	Trace	40	512	No flooding oberved
	12/27/2023	45.00	3.9	12/27/2023	Trace	Trace	15	527	No flooding oberved
	1/30/2024	41.20	7.7	1/30/2024	Trace	Trace	35	562	No flooding oberved
	2/27/2024	40.50	8.4	2/27/2024	Trace	Trace	15	577	No flooding oberved

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Recovery after Removal			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Total Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	(gallons)	
RW-02 **Total well depth = 58.35 ft.**	4/19/2022	39.00	19.35	4/19/22 10:30	42.0	16.35	31	31	45	Well cap damaged - needs to be replaced
	5/20/2022	39.75	18.60	5/20/22 11:00	50.41	10.66	68	99	133	Well cap damaged - needs to be replaced
	6/21/2022	43.17	15.18	6/21/2022	Trace	Trace	80	179	253	Well cap replaced wih a 6-inch J-Plug
	7/28/2022	51.75	6.60	7/28/2022	Trace	Trace	22	201	291	
	8/30/2022	49.9	8.45	8/30/2022	56.85	1.5	35	236	346	
	9/28/2022	46.82	11.53	9/28/2022	Trace	Trace	65	301	426	
	10/26/2022	47.20	11.15	10/26/2022	Trace	Trace	105	406	566	
	11/29/2022	49.20	9.15	11/29/2022	Trace	Trace	80	486	666	
	12/28/2022	50.53	7.82	12/28/2022	Trace	Trace	55	541	756	
	1/31/2023	52.60	5.75	1/31/2023	Trace	Trace	70	611	851	
	2/21/2023	52.67	5.68	2/21/2023	57.5	0.85	82	693	960	
	3/28/2023	52.53	5.82	3/28/2023	Trace	Trace	50	743	1060	
										Site Inaccessible due to demolition
										Site Inaccessible due to demolition
	6/8/2023	45.40	12.95	6/8/2023	56.5	1.85	140	883	1240	
	7/6/2023	48.25	10.10	7/6/2023	57	1.35	110	993	1390	
	8/15/2023	49.50	8.85	8/15/2023	Trace	Trace	130	1123	1540	
	9/19/2023	51.81	6.54	9/19/2023	Trace	Trace	110	1233	1675	
	10/17/2023	54.70	3.65	10/17/2023	Trace	Trace	40	1273	1745	
	11/21/2023	53.65	4.70	11/21/2023	Trace	Trace	50	1323	1835	
	12/27/2023	55.50	2.85	12/27/2023	Trace	Trace	10	1333	1860	
	1/30/2024	52.90	5.45	1/30/2024	Trace	Trace	50	1383	1945	
	2/27/2024	53.60	4.75	2/27/2024	53.6	4.75	0	1383	1960	No recovery due to equipment issue

May 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

ATTACHMENT A

DISPOSAL MANIFEST

MILLER ENVIRONMENTAL GROUP

24-Hour Emergency
800-394-8606

Please print or type

BILL OF LADING

NA

1. Document No.	2. Page 1 of 1
METRO3114	

3. Offeror Name and Mailing Address
NATIONAL GRID
~~300 ERIE BOULEVARD~~
~~SYRACUSE, NY 13202~~
175 E Old Country Rd Hicksville, NY 11801

4. Offeror Phone (315) 3472135874

Site Address
National Grid
450 Union St
Brooklyn, NY 11231

5. Transporter 1 Company Name
Miller Environmental

6. EPA ID #
NYD986908085

A. State Transporter's ID

B. Transporter 1 Phone

7. Transporter 2 Company Name

8. EPA ID #

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
NORLITE, LLC
~~628 S. SARATOGA ST.~~
COHOES, NY 12047

10. EPA ID #
NYD980469935

E. State Facility's ID

F. Facility's Phone 518-235-0401

HM	11. US DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
	a. Non RCRA Non DOT Regulated Liquids (DNAPL)	1	DM	15	G
	b.				
	c.				
	d.				

GENERATOR

G. Additional Descriptions for Materials Listed Above — Document # D43988 Job #: NY02240373 PO# 33489

1) Approval #: Q10003628L6
2) Container Size: 55-gal drums
3) Truck #: 8807

#3972615

Ref#3972615 Re-Routed to alternate facility

15. Special Handling Instructions and Additional Information

passbys 3.26.24

16. OFFEROR CERTIFICATION: I hereby certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulation of the Department of Transportation. The materials described on this document are not subject to federal uniform hazardous waste manifest requirements.

Printed/Typed Name	Signature	Date (Month / Day / Year)
AS PER AGENT NAT GRID CRAIG PEARCE	Craig Pearce	2 / 27 / 24

TRANSPORTER

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Date (Month / Day / Year)
Nicholas Dumont	ND	2 / 27 / 24

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Date (Month / Day / Year)

FACILITY

19. Discrepancy Indication Space
Tradebe TTR 4343 Kennedy ave East Chicago IN 46312 IND000646943

20. Facility Owner or Operator: Certification of receipt of the materials covered by this bill of lading except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month / Day / Year)

BILL OF LADING

MILLER ENVIRONMENTAL GROUP

24-Hour Emergency
800-394-8606

Please print or type

BILL OF LADING

N/A

1. Document No.	2. Page 1 of 1
METRO3115	

3. Offeror Name and Mailing Address
NATIONAL GRID
~~300 ERIE BOULEVARD~~
~~SYRACUSE, NY 13202~~
175 E Old Country Rd
Hicksville, NY 11801

4. Offeror Phone (3472138874

Site Address
National Grid
450 Union St
Brooklyn, NY 11231

5. Transporter 1 Company Name
MILLER ENVIRONMENTAL GROUP, INC

6. EPA ID #
NYD986606085

A. State Transporter's ID

B. Transporter 1 Phone 800-394-8606

7. Transporter 2 Company Name

8. EPA ID #

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
WATERWORKS
77 STEWART AVENUE
NEWBURGH, NY 12550
HM

10. EPA ID #
NYR000236349

E. State Facility's ID

F. Facility's Phone 845-561-4111

GENERATOR

	11. Shipping Name	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a.	Non RCRA Non DOT Regulated Solids (Oily Debris)	1	DM	25	P
b.					
c.					
d.				220	

G. Additional Descriptions for Materials Listed Above — Document # D43989 Job #: NY02240373 PO#

1) Approval #: 1100 1400
2) Container Size: 55-gal drums 1100 1400
3) Truck #: 8807

15. Special Handling Instructions and Additional Information

16. OFFEROR CERTIFICATION: I hereby certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulation of the Department of Transportation. The materials described on this document are not subject to federal uniform hazardous waste manifest requirements.

AS PER AGENT FOR NATGRID

Printed/Typed Name	Signature	Date (Month Day Year)
Craig Pearce	Craig Pearce	2 27 24

TRANSPORTER

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
Nicholas Dumont	ND	2 27 24

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the materials covered by this bill of lading except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month Day Year)
Steven I Solano		3 14 24

BILL OF LADING

GZA GeoEnvironmental of New York

May 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

450 UNION STREET
NAPL GAUGING AND RECOVERY
MONTHLY REPORT MARCH 2024

BCP Site No. C224219

This report serves to document Dense Non-Aqueous Phase Liquid (DNAPL) gauging and recovery performed by GZA GeoEnvironmental, Inc. (GZA), on behalf of National Grid, at the 450 Union Street property in Brooklyn, New York (Site). Consistent with the October 2020 Remedial Action Work Plan (RAWP) prepared by Langan on behalf of 450 Union LLC and 450 Union Developer LLC, DNAPL gauging, and recovery was performed at two wells (RW-01 and RW-02) which are located on the eastern portion of the Site.

Summary of Field Activities:

- On March 7, 2024, GZA performed DNAPL gauging and recovery at RW-01 and RW-02. The table below provides a summary of this event, and the attached **Table 1** summarizes gauging and recovery data collected by GZA to date.

Pre-Recovery						Post Recovery	
Well ID	Date	Depth to Water (ft)	Depth to NAPL (ft)	DNAPL Thickness (ft)	DNAPL Volume Removed (gal)	Depth to NAPL (ft)	DNAPL Thickness (ft)
RW-01	3/7/24	9.64	48.50	.40	--	--	--
RW-02	3/7/24	9.65	53.60	5.00	25	Trace	Trace

- The area around each well was covered with polyethylene sheeting prior to performance of gauging and recovery activities.

- Approximately 25 gallons of DNAPL/water mixture was recovered from RW-02 during the March 7, 2024, recovery event with a submersible pump and the Pulse Pump ® Model LP1301, however insufficient volume was observed in RW-01.

- The recovered DNAPL/water and polyethylene sheeting/PPE were containerized in 55-gallon drums. Prior to leaving the Site, these drums were transported off-Site for disposal by Miller Environmental Group at the Waterworks, facility in Newburgh, New York (PPE) and Tradabe facility in East Chicago, Indiana (DNAPL). A copy of the disposal manifests are attached.

Attachments: Table 1: Summary of NAPL Gauging and Recovery Activities

Attachment A: Disposal Manifest

May 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

Certification

I, James J. Clark, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this field report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

James J. Clark, P.E., LEP	5/30/2024	
Qualified Environmental Professional	Date	Signature

TABLE 1

SUMMARY OF NAPL GAUGING ACTIVITIES

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Post DNAPL Recovery			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	
RW-01 **Total well depth = 48.90 ft.**	4/19/2022	38.2	10.7	4/19/22 8:30	Trace	Trace	14	14	Flooding observed prior to DNAPL recovery
	5/20/2022	40	8.90	5/20/22 8:55	Trace	Trace	20	34	Some flooding observed prior to DNAPL recovery
	6/21/2022	39.17	9.73	6/21/2022	Trace	Trace	40	74	No flooding observed
	7/28/2022	39.34	9.56	7/28/2022	Trace	Trace	16	90	Flooding observed prior to DNAPL recovery
	8/30/2022	39.15	9.75	8/30/2022	Trace	Trace	20	110	No flooding observed
	9/28/2022	39.19	9.71	9/28/2022	Trace	Trace	15	125	No flooding observed
	10/26/2022	38.65	10.25	10/26/2022	Trace	Trace	35	160	Some flooding observed prior to DNAPL recovery
	11/29/2022	45.30	3.6	11/29/2022	Trace	Trace	20	180	No flooding observed
	12/28/2022	39.51	9.39	12/28/2022	Trace	Trace	35	215	No flooding observed
	1/31/2023	39.10	9.8	1/31/2023	Trace	Trace	25	240	Flooding observed prior to DNAPL recovery
	2/21/2023	39.05	9.85	2/21/2023	Trace	Trace	27	267	Flooding observed prior to DNAPL recovery
	3/28/2023	38.45	10.45	3/28/2023	Trace	Trace	50	317	No flooding observed
	4/1/2023								Site Inaccessible due to demolition
	5/1/2023								Site Inaccessible due to demolition
	6/8/2023	38.60	10.3	3/28/2023	Trace	Trace	40	357	No flooding observed
	7/6/2023	39.45	9.45	7/6/2023	Trace	Trace	40	397	No flooding observed
	8/15/2023	38.85	10.05	8/15/2023	Trace	Trace	20	417	Flooding observed prior to DNAPL recovery
	9/19/2023	43.80	5.1	9/19/2023	Trace	Trace	25	442	Flooding observed prior to DNAPL recovery
	10/17/2023	45.35	3.55	10/17/2023	Trace	Trace	30	472	No flooding observed
	11/21/2023	45.05	3.85	11/21/2023	Trace	Trace	40	512	No flooding observed
	12/27/2023	45.00	3.9	12/27/2023	Trace	Trace	15	527	No flooding observed
	1/30/2024	41.20	7.7	1/30/2024	Trace	Trace	35	562	No flooding observed
	2/27/2024	40.50	8.4	2/28/2024	Trace	Trace	15	577	No flooding observed
	3/7/2024	48.50	0.4	3/7/2024	0.4	0.4	0	577	No flooding observed

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Recovery after Removal			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Total Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	(gallons)	
RW-02 **Total well depth = 58.35 ft.**	4/19/2022	39.00	19.35	4/19/22 10:30	42.0	16.35	31	31	45	Well cap damaged - needs to be replaced
	5/20/2022	39.75	18.60	5/20/22 11:00	50.41	10.66	68	99	133	Well cap damaged - needs to be replaced
	6/21/2022	43.17	15.18	6/21/2022	Trace	Trace	80	179	253	Well cap replaced wih a 6-inch J-Plug
	7/28/2022	51.75	6.60	7/28/2022	Trace	Trace	22	201	291	
	8/30/2022	49.9	8.45	8/30/2022	56.85	1.5	35	236	346	
	9/28/2022	46.82	11.53	9/28/2022	Trace	Trace	65	301	426	
	10/26/2022	47.20	11.15	10/26/2022	Trace	Trace	105	406	566	
	11/29/2022	49.20	9.15	11/29/2022	Trace	Trace	80	486	666	
	12/28/2022	50.53	7.82	12/28/2022	Trace	Trace	55	541	756	
	1/31/2023	52.60	5.75	1/31/2023	Trace	Trace	70	611	851	
	2/21/2023	52.67	5.68	2/21/2023	57.5	0.85	82	693	960	
	3/28/2023	52.53	5.82	3/28/2023	Trace	Trace	50	743	1060	
										Site Inaccessible due to demolition
										Site Inaccessible due to demolition
	6/8/2023	45.40	12.95	6/8/2023	56.5	1.85	140	883	1240	
	7/6/2023	48.25	10.10	7/6/2023	57	1.35	110	993	1390	
	8/15/2023	49.50	8.85	8/15/2023	Trace	Trace	130	1123	1540	
	9/19/2023	51.81	6.54	9/19/2023	Trace	Trace	110	1233	1675	
	10/17/2023	54.70	3.65	10/17/2023	Trace	Trace	40	1273	1745	
	11/21/2023	53.65	4.70	11/21/2023	Trace	Trace	50	1323	1835	
	12/27/2023	55.50	2.85	12/27/2023	Trace	Trace	10	1333	1860	
	1/30/2024	52.90	5.45	1/30/2024	Trace	Trace	50	1383	1945	
	2/28/2024	53.60	4.75	2/27/2024	53.6	4.75	0	1383	1960	No recovery due to equipment issue
	3/7/2024	53.35	5.00	3/7/2024	Trace	Trace	25	1408	1985	

May 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

ATTACHMENT A

DISPOSAL MANIFEST

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	1		0006425

GENERATOR

5. Generator's Name and Mailing Address: National Grid, 175 E Old Country Rd, Hicksville NY 11801
Generator's Phone:

Generator's Site Address (if different than mailing address): 450 Union St, Brooklyn NY 11201

6. Transporter 1 Company Name: MILLER ENVIRONMENTAL GROUP, INC — NYD986909085 — U.S. EPA ID Number: 800-394-8606

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: Water Works, 77 Stewart Ave, Newburgh NY 12550
Facility's Phone: — U.S. EPA ID Number: NYR000236349

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non-RCRA, non-DOT Regulated Solids (PPE) (Debris)	1	DM	40	P	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

Document #: _____ Job #: NY02240373 PO#: _____

1) Approval #: 2000158 2) Container Type: DM 3) Truck#: _____

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: As Agent: Matthew Neves — Signature: [signature] — Month: 3 Day: 7 Year: 24

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: _____
Transporter Signature (for exports only): Date leaving U.S.: _____

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jack Lucari — Signature: [signature] — Month: 3 Day: 7 Year: 24

Transporter 2 Printed/Typed Name — Signature — Month: Day: Year:

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Stephen Fiorito — Signature: [signature] — Month: 3 Day: 13 Year: 24

MILLER ENVIRONMENTAL GROUP

24-Hour Emergency
800-394-8606

Please print or type

BILL OF LADING

1. Document No.

2. Page 1 of 1

3. Offeror Name and Mailing Address: National Grid
175 E Old Country Rd
Hicksville NY 11801

4. Offeror Phone ( )

Site Address: 450 Union St
Brooklyn NY 11201

5. Transporter 1 Company Name: Miller Environmental Group Inc.

6. EPA ID #: NYD986908085

A. State Transporter's ID

B. Transporter 1 Phone

7. Transporter 2 Company Name

8. EPA ID #

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address: ~~Norlite LLC Tradebe T+R~~
~~628 South Saratoga St~~ NYD080469935
HM ~~Cohoes~~ NY 12047

10. EPA ID #

E. State Facility's ID

F. Facility's Phone

GENERATOR

	11. Shipping Name	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a.	NON-RCRA, NON-DOT Regulated liquids (DNAPL)	1	DM	25	G
b.					
c.					
d.					

G. Additional Descriptions for Materials Listed Above

3972615

Re Routed to a Hazardous facility

15. Special Handling Instructions and Additional Information

Approval # 1000362816 PO 33459

Job # NY02240373 Ref 3972615

16. OFFEROR CERTIFICATION: I hereby certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulation of the Department of Transportation. The materials described on this document are not subject to federal uniform hazardous waste manifest requirements.

Printed/Typed Name	Signature	Date: Month	Day	Year
As Agent: Matthew Neves	Matthew Neves	3	7	24

TRANSPORTER

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Date: Month	Day	Year
Jack Lucci	Jack Lucci	3	7	24

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Date: Month	Day	Year

FACILITY

19. Discrepancy Indication Space: Tradebe T+R 4343 Kennedy Ave, East Chicago IN 46312 IND000646943

20. Facility Owner or Operator; Certification of receipt of the materials covered by this bill of lading except as noted in Item 19.

Printed/Typed Name	Signature	Date: Month	Day	Year

BILL OF LADING

GZA GeoEnvironmental of New York

May 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

450 UNION STREET
NAPL GAUGING AND RECOVERY
MONTHLY REPORT APRIL 2024

BCP Site No. C224219

This report serves to document Dense Non-Aqueous Phase Liquid (DNAPL) gauging and recovery performed by GZA GeoEnvironmental, Inc. (GZA), on behalf of National Grid, at the 450 Union Street property in Brooklyn, New York (Site). Consistent with the October 2020 Remedial Action Work Plan (RAWP) prepared by Langan on behalf of 450 Union LLC and 450 Union Developer LLC, DNAPL gauging, and recovery was performed at two wells (RW-01 and RW-02) which are located on the eastern portion of the Site.

Summary of Field Activities:

- On April 25, 2024, GZA performed DNAPL gauging and recovery at RW-01 and RW-02. The table below provides a summary of this event, and the attached **Table 1** summarizes gauging and recovery data collected by GZA to date.

Pre-Recovery						Post Recovery	
Well ID	Date	Depth to Water (ft)	Depth to NAPL (ft)	DNAPL Thickness (ft)	DNAPL Volume Removed (gal)	Depth to NAPL (ft)	DNAPL Thickness (ft)
RW-01	4/25/24	9.98	39.20	9.70	20	Trace	Trace
RW-02	4/25/24	10.20	54.70	3.65	35	Trace	Trace

- The area around each well was covered with polyethylene sheeting prior to performance of gauging and recovery activities.

- Approximately 55 gallons of DNAPL/water mixture were recovered from RW-01 and RW-02 during the April 25, 2024, recovery event with a submersible pump and the Pulse Pump ® Model LP1301.

- The recovered DNAPL/water and polyethylene sheeting/PPE were containerized in 55-gallon drums. Prior to leaving the Site, these drums were transported off-Site for disposal by Miller Environmental Group at the Waterworks, facility in Newburgh, New York (PPE) and Tradabe facility in East Chicago, Indiana (DNAPL). A copy of the disposal manifests are attached.

Attachments: Table 1: Summary of NAPL Gauging and Recovery Activities

Attachment A: Disposal Manifests

May 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

Certification

I, James J. Clark, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this field report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

James J. Clark, P.E., LEP	5/30/2024	
Qualified Environmental Professional	Date	Signature

TABLE 1

SUMMARY OF NAPL GAUGING ACTIVITIES

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Post DNAPL Recovery			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	
RW-01 **Total well depth = 48.90 ft.**	4/19/2022	38.2	10.7	4/19/22 8:30	Trace	Trace	14	14	Flooding oberved prior to DNAPL recovery
	5/20/2022	40	8.90	5/20/22 8:55	Trace	Trace	20	34	Some flooding oberved prior to DNAPL recovery
	6/21/2022	39.17	9.73	6/21/2022	Trace	Trace	40	74	No flooding oberved
	7/28/2022	39.34	9.56	7/28/2022	Trace	Trace	16	90	Flooding oberved prior to DNAPL recovery
	8/30/2022	39.15	9.75	8/30/2022	Trace	Trace	20	110	No flooding oberved
	9/28/2022	39.19	9.71	9/28/2022	Trace	Trace	15	125	No flooding oberved
	10/26/2022	38.65	10.25	10/26/2022	Trace	Trace	35	160	Some flooding oberved prior to DNAPL recovery
	11/29/2022	45.30	3.6	11/29/2022	Trace	Trace	20	180	No flooding oberved
	12/28/2022	39.51	9.39	12/28/2022	Trace	Trace	35	215	No flooding oberved
	1/31/2023	39.10	9.8	1/31/2023	Trace	Trace	25	240	Flooding observed prior to DNAPL recovery
	2/21/2023	39.05	9.85	2/21/2023	Trace	Trace	27	267	Flooding observed prior to DNAPL recovery
	3/28/2023	38.45	10.45	3/28/2023	Trace	Trace	50	317	No flooding oberved
	4/1/2023								Site Inaccessible due to demolition
	5/1/2023								Site Inaccessible due to demolition
	6/8/2023	38.60	10.3	3/28/2023	Trace	Trace	40	357	No flooding oberved
	7/6/2023	39.45	9.45	7/6/2023	Trace	Trace	40	397	No flooding oberved
	8/15/2023	38.85	10.05	8/15/2023	Trace	Trace	20	417	Flooding observed prior to DNAPL recovery
	9/19/2023	43.80	5.1	9/19/2023	Trace	Trace	25	442	Flooding observed prior to DNAPL recovery
	10/17/2023	45.35	3.55	10/17/2023	Trace	Trace	30	472	No flooding oberved
	11/21/2023	45.05	3.85	11/21/2023	Trace	Trace	40	512	No flooding oberved
	12/27/2023	45.00	3.9	12/27/2023	Trace	Trace	15	527	No flooding oberved
	1/30/2024	41.20	7.7	1/30/2024	Trace	Trace	35	562	No flooding oberved
	2/27/2024	40.50	8.4	2/28/2024	Trace	Trace	15	577	No flooding oberved
	3/7/2024	48.50	0.4	3/7/2024	0.4	0.4	0	577	No flooding oberved
	4/25/2024	39.20	9.7	4/25/2024	Trace	Trace	20	597	No flooding oberved

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Recovery after Removal			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Total Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	(gallons)	
RW-02 **Total well depth = 58.35 ft.**	4/19/2022	39.00	19.35	4/19/22 10:30	42.0	16.35	31	31	45	Well cap damaged - needs to be replaced
	5/20/2022	39.75	18.60	5/20/22 11:00	50.41	10.66	68	99	133	Well cap damaged - needs to be replaced
	6/21/2022	43.17	15.18	6/21/2022	Trace	Trace	80	179	253	Well cap replaced wih a 6-inch J-Plug
	7/28/2022	51.75	6.60	7/28/2022	Trace	Trace	22	201	291	
	8/30/2022	49.9	8.45	8/30/2022	56.85	1.5	35	236	346	
	9/28/2022	46.82	11.53	9/28/2022	Trace	Trace	65	301	426	
	10/26/2022	47.20	11.15	10/26/2022	Trace	Trace	105	406	566	
	11/29/2022	49.20	9.15	11/29/2022	Trace	Trace	80	486	666	
	12/28/2022	50.53	7.82	12/28/2022	Trace	Trace	55	541	756	
	1/31/2023	52.60	5.75	1/31/2023	Trace	Trace	70	611	851	
	2/21/2023	52.67	5.68	2/21/2023	57.5	0.85	82	693	960	
	3/28/2023	52.53	5.82	3/28/2023	Trace	Trace	50	743	1060	
										Site Inaccessible due to demolition
										Site Inaccessible due to demolition
	6/8/2023	45.40	12.95	6/8/2023	56.5	1.85	140	883	1240	
	7/6/2023	48.25	10.10	7/6/2023	57	1.35	110	993	1390	
	8/15/2023	49.50	8.85	8/15/2023	Trace	Trace	130	1123	1540	
	9/19/2023	51.81	6.54	9/19/2023	Trace	Trace	110	1233	1675	
	10/17/2023	54.70	3.65	10/17/2023	Trace	Trace	40	1273	1745	
	11/21/2023	53.65	4.70	11/21/2023	Trace	Trace	50	1323	1835	
	12/27/2023	55.50	2.85	12/27/2023	Trace	Trace	10	1333	1860	
	1/30/2024	52.90	5.45	1/30/2024	Trace	Trace	50	1383	1945	
	2/28/2024	53.60	4.75	2/27/2024	53.6	4.75	0	1383	1960	No recovery due to equipment issue
	3/7/2024	53.35	5.00	3/7/2024	Trace	Trace	25	1408	1985	
	4/25/2024	54.70	3.65	4/25/2024	Trace	Trace	35	1443	2040	

May 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

ATTACHMENT A

DISPOSAL MANIFEST

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
N/A	1	8003948608	METRO3430

GENERATOR

5. Generator's Name and Mailing Address

NATIONAL GRID
300 ERIE BOULEVARD
SYRACUSE, NY 13202
Generator's Phone: 3472138674

Generator's Site Address (if different than mailing address)

National Grid
450 Union St.
Brooklyn, NY 11231

6. Transporter 1 Company Name: Miller Environmental Group — U.S. EPA ID Number: NYD986908085

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: TradeBe Treatment and Recycling LLC
4343 Kennedy Avenue
East Chicago, IN 46312
219-397-3951
Facility's Phone:

U.S. EPA ID Number: IND000646943

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. Non RCRA Non DOT Regulated Liquids (DNAPL)	1	DM	55	G
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information

Document #: D45073 Job#: NY02240575 PO#: 35028

1) Approval #: 1000362816
2) Container Size: 55-gal drums
3) Truck #: 8806

Passbys 4-30-24

001) ERG 1000362816 SO: 4015131 REF# 4015131

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: As Agent for Nat Grid Nicholas Dumont — Signature: ND — Month: 4 Day: 25 Year: 24

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Nicholas Dumont — Signature: ND — Month: 4 Day: 25 Year: 24

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month — Day — Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY TO GENERATOR

N/A | 1 | 8003948605 | METRO3429

5. Generator's Name and Mailing Address

NATIONAL GRID
300 ERIE BOULEVARD
SYRACUSE, NY 13202
Generator's Phone: 3472138874

Generator's Site Address (if different than mailing address)

National Grid
450 Union St.
Brooklyn, NY 11231

6. Transporter 1 Company Name | U.S. EPA ID Number

MILLER ENVIRONMENTAL GROUP, INC | NYD986905085

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address | U.S. EPA ID Number

WATERWORKS
77 STEWART AVENUE
NEWBURGH, NY 12550
Facility's Phone: 845-561-4111

NYR000236349

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non RCRA Non DOT Regulated Solids (Oily Debris) (PPE)	1	DM	20	P	
2.						
3.						
4.						

GENERATOR

13. Special Handling Instructions and Additional Information

Document # D45072 Job#: NY02240575 PO#:

1) Approval #: 2010155
2) Container Size: 55-gal drums
3) Truck #: 8806

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: AS Agent for Nat Grid Nicholas Dumont | Signature | Month: 4 | Day: 25 | Year: 24

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Nicholas Dumont | Signature | Month: 4 | Day: 25 | Year: 24

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) | Month | Day | Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Steven Sessoms | Signature | Month: 4 | Day: 26 | Year: 24

DESIGNATED FACILITY'S COPY

GZA GeoEnvironmental of New York

July 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

450 UNION STREET
NAPL GAUGING AND RECOVERY
MONTHLY REPORT MAY 2024

BCP Site No. C224219

This report serves to document Dense Non-Aqueous Phase Liquid (DNAPL) gauging and recovery performed by GZA GeoEnvironmental, Inc. (GZA), on behalf of National Grid, at the 450 Union Street property in Brooklyn, New York (Site). Consistent with the October 2020 Remedial Action Work Plan (RAWP) prepared by Langan on behalf of 450 Union LLC and 450 Union Developer LLC, DNAPL gauging, and recovery was performed at two wells (RW-01 and RW-02) which are located on the eastern portion of the Site.

Summary of Field Activities:

- On May 29, 2024, GZA performed DNAPL gauging and recovery at RW-01 and RW-02. The table below provides a summary of this event, and the attached **Table 1** summarizes gauging and recovery data collected by GZA to date.

Pre-Recovery						Post Recovery	
Well ID	Date	Depth to Water (ft)	Depth to NAPL (ft)	DNAPL Thickness (ft)	DNAPL Volume Removed (gal)	Depth to NAPL (ft)	DNAPL Thickness (ft)
RW-01	5/29/24	10.39	39.40	9.50	40	Trace	Trace
RW-02	5/29/24	10.56	54.12	4.23	30	Trace	Trace

- The area around each well was covered with polyethylene sheeting prior to performance of gauging and recovery activities.

- Approximately 70 gallons of DNAPL/water mixture were recovered from RW-01 and RW-02 during the May 29, 2024, recovery event with a submersible pump and the Pulse Pump ® Model LP1301.

- The recovered DNAPL/water and polyethylene sheeting/PPE were containerized in 55-gallon drums. Prior to leaving the Site, these drums were transported off-Site for disposal by Miller Environmental Group at the Waterworks, facility in Newburgh, New York (PPE) and Tradabe facility in East Chicago Indiana (DNAPL). A copy of the disposal manifests are attached**.**

Attachments: Table 1: Summary of NAPL Gauging and Recovery Activities

Attachment A: Disposal Manifest

July 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

Certification

I, James J. Clark, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this field report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

James J. Clark, P.E., LEP	7/10/2024	
Qualified Environmental Professional	Date	Signature

TABLE 1

SUMMARY OF NAPL GAUGING ACTIVITIES

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Post DNAPL Recovery			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	
RW-01 **Total well depth = 48.90 ft.**	4/19/2022	38.2	10.7	4/19/22 8:30	Trace	Trace	14	14	Flooding oberved prior to DNAPL recovery
	5/20/2022	40	8.90	5/20/22 8:55	Trace	Trace	20	34	Some flooding oberved prior to DNAPL recovery
	6/21/2022	39.17	9.73	6/21/2022	Trace	Trace	40	74	No flooding oberved
	7/28/2022	39.34	9.56	7/28/2022	Trace	Trace	16	90	Flooding oberved prior to DNAPL recovery
	8/30/2022	39.15	9.75	8/30/2022	Trace	Trace	20	110	No flooding oberved
	9/28/2022	39.19	9.71	9/28/2022	Trace	Trace	15	125	No flooding oberved
	10/26/2022	38.65	10.25	10/26/2022	Trace	Trace	35	160	Some flooding oberved prior to DNAPL recovery
	11/29/2022	45.30	3.6	11/29/2022	Trace	Trace	20	180	No flooding oberved
	12/28/2022	39.51	9.39	12/28/2022	Trace	Trace	35	215	No flooding oberved
	1/31/2023	39.10	9.8	1/31/2023	Trace	Trace	25	240	Flooding observed prior to DNAPL recovery
	2/21/2023	39.05	9.85	2/21/2023	Trace	Trace	27	267	Flooding observed prior to DNAPL recovery
	3/28/2023	38.45	10.45	3/28/2023	Trace	Trace	50	317	No flooding oberved
	4/1/2023								Site Inaccessible due to demolition
	5/1/2023								Site Inaccessible due to demolition
	6/8/2023	38.60	10.3	3/28/2023	Trace	Trace	40	357	No flooding oberved
	7/6/2023	39.45	9.45	7/6/2023	Trace	Trace	40	397	No flooding oberved
	8/15/2023	38.85	10.05	8/15/2023	Trace	Trace	20	417	Flooding observed prior to DNAPL recovery
	9/19/2023	43.80	5.1	9/19/2023	Trace	Trace	25	442	Flooding observed prior to DNAPL recovery
	10/17/2023	45.35	3.55	10/17/2023	Trace	Trace	30	472	No flooding oberved
	11/21/2023	45.05	3.85	11/21/2023	Trace	Trace	40	512	No flooding oberved
	12/27/2023	45.00	3.9	12/27/2023	Trace	Trace	15	527	No flooding oberved
	1/30/2024	41.20	7.7	1/30/2024	Trace	Trace	35	562	No flooding oberved
	2/27/2024	40.50	8.4	2/28/2024	Trace	Trace	15	577	No flooding oberved
	3/7/2024	48.50	0.4	3/7/2024	0.4	0.4	0	577	No flooding oberved
	4/25/2024	39.20	9.7	4/25/2024	Trace	Trace	20	597	No flooding oberved
	5/29/2024	39.40	9.5	5/29/2024	Trace	Trace	40	637	No flooding oberved

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Recovery after Removal			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Total Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	(gallons)	
RW-02 **Total well depth = 58.35 ft.**	4/19/2022	39.00	19.35	4/19/22 10:30	42.0	16.35	31	31	45	Well cap damaged - needs to be replaced
	5/20/2022	39.75	18.60	5/20/22 11:00	50.41	10.66	68	99	133	Well cap damaged - needs to be replaced
	6/21/2022	43.17	15.18	6/21/2022	Trace	Trace	80	179	253	Well cap replaced wih a 6-inch J-Plug
	7/28/2022	51.75	6.60	7/28/2022	Trace	Trace	22	201	291	
	8/30/2022	49.9	8.45	8/30/2022	56.85	1.5	35	236	346	
	9/28/2022	46.82	11.53	9/28/2022	Trace	Trace	65	301	426	
	10/26/2022	47.20	11.15	10/26/2022	Trace	Trace	105	406	566	
	11/29/2022	49.20	9.15	11/29/2022	Trace	Trace	80	486	666	
	12/28/2022	50.53	7.82	12/28/2022	Trace	Trace	55	541	756	
	1/31/2023	52.60	5.75	1/31/2023	Trace	Trace	70	611	851	
	2/21/2023	52.67	5.68	2/21/2023	57.5	0.85	82	693	960	
	3/28/2023	52.53	5.82	3/28/2023	Trace	Trace	50	743	1060	
										Site Inaccessible due to demolition
										Site Inaccessible due to demolition
	6/8/2023	45.40	12.95	6/8/2023	56.5	1.85	140	883	1240	
	7/6/2023	48.25	10.10	7/6/2023	57	1.35	110	993	1390	
	8/15/2023	49.50	8.85	8/15/2023	Trace	Trace	130	1123	1540	
	9/19/2023	51.81	6.54	9/19/2023	Trace	Trace	110	1233	1675	
	10/17/2023	54.70	3.65	10/17/2023	Trace	Trace	40	1273	1745	
	11/21/2023	53.65	4.70	11/21/2023	Trace	Trace	50	1323	1835	
	12/27/2023	55.50	2.85	12/27/2023	Trace	Trace	10	1333	1860	
	1/30/2024	52.90	5.45	1/30/2024	Trace	Trace	50	1383	1945	
	2/28/2024	53.60	4.75	2/27/2024	53.6	4.75	0	1383	1960	No recovery due to equipment issue
	3/7/2024	53.35	5.00	3/7/2024	Trace	Trace	25	1408	1985	
	4/25/2024	54.70	3.65	4/25/2024	Trace	Trace	35	1443	2040	
	5/29/2024	54.12	4.23	5/29/2024	Trace	Trace	30	1473	2110	

July 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

ATTACHMENT A

DISPOSAL MANIFEST

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
N/A	1	8003948600 METRO3100	2919

GENERATOR

5. Generator's Name and Mailing Address

NATIONAL GRID
300 ERIE BOULEVARD
SYRACUSE, NY 13202
Generator's Phone: 3472138874

Generator's Site Address (if different than mailing address)

National Grid
450 Union St.
Brooklyn, NY 11231

6. Transporter 1 Company Name — U.S. EPA ID Number

MILLER ENVIRONMENTAL GROUP, INC — NYD986996095

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

WATERWORKS
77 STEWART AVENUE
NEWBURGH, NY 12550
Facility's Phone: 845-561-4111

NYR000236349

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non RCRA Non DOT Regulated Solids (Oily Debris) (PPE)	1	DM	10	P	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

Document # D45830 Job#: NY02240708 PO#:

1)Approval #: 20D0158
2)Container Size: 55-gal drum
3) Truck #: 6605

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: As Agent for Nat Grid Nicholas Dumont — Signature: ND — Month: 5 — Day: 29 — Year: 24

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Nicholas Dumont — Signature: ND — Month: 5 — Day: 29 — Year: 24

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month — Day — Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Steven J — Signature: SJ — Month: 6 — Day: 6 — Year: 24

DESIGNATED FACILITY'S COPY

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N/A

2. Page 1 of: 1

3. Emergency Response Phone: [illegible]

4. Waste Tracking Number: [illegible]

5. Generator's Name and Mailing Address:
NATIONAL GRID
175 East Old Country Road
Hicksville, NY 11801

Generator's Phone: [illegible]

Generator's Site Address (if different than mailing address):
NATIONAL GRID
450 UNION ST
BROOKLYN, NY 11231

6. Transporter 1 Company Name: MILLER ENVIRONMENTAL GROUP, INC

U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name:

U.S. EPA ID Number:

8. Designated Facility Name and Site Address: [illegible]

U.S. EPA ID Number: NYD080469935

Facility's Phone: [illegible]

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. Non RCRA Non DOT Regulated Liquids (DNAPL)	2	DM	70	P
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information
Document# D45829 Job#: NY02240708 PO#: #4056167
1) Approval #
2)Container Size: 55-gal drum
3) Truck #: 6605
PG 36591

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: As Agent for Nat Grid Nicholas Dumont
Signature: ND
Month: 5 Day: 29 Year: 24

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Nicholas Dumont
Signature: ND
Month: 5 Day: 29 Year: 24

Transporter 2 Printed/Typed Name: [illegible]
Signature: [illegible]
Month: [illegible] Day: [illegible] Year: [illegible]

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: [illegible]
Signature: [illegible]
Month Day Year

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

TRANSPORTER #1

GZA GeoEnvironmental of New York

July 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

450 UNION STREET
NAPL GAUGING AND RECOVERY
MONTHLY REPORT JUNE 2024

BCP Site No. C224219

This report serves to document Dense Non-Aqueous Phase Liquid (DNAPL) gauging and recovery performed by GZA GeoEnvironmental, Inc. (GZA), on behalf of National Grid, at the 450 Union Street property in Brooklyn, New York (Site). Consistent with the October 2020 Remedial Action Work Plan (RAWP) prepared by Langan on behalf of 450 Union LLC and 450 Union Developer LLC, DNAPL gauging, and recovery was performed at two wells (RW-01 and RW-02) which are located on the eastern portion of the Site.

Summary of Field Activities:

- On June 25, 2024, GZA performed DNAPL gauging and recovery at RW-01 and RW-02. The table below provides a summary of this event, and the attached **Table 1** summarizes gauging and recovery data collected by GZA to date.

Pre-Recovery						Post Recovery	
Well ID	Date	Depth to Water (ft)	Depth to NAPL (ft)	DNAPL Thickness (ft)	DNAPL Volume Removed (gal)	Depth to NAPL (ft)	DNAPL Thickness (ft)
RW-01	6/25/24	9.59	39.30	9.60	30	Trace	Trace
RW-02	6/25/24	10.00	55.65	2.70	40	Trace	Trace

- The area around each well was covered with polyethylene sheeting prior to performance of gauging and recovery activities.

- Approximately 70 gallons of DNAPL/water mixture were recovered from RW-01 and RW-02 during the June 25, 2024, recovery event with a submersible pump and the Pulse Pump ® Model LP1301.

- The recovered DNAPL/water and polyethylene sheeting/PPE were containerized in 55-gallon drums. Prior to leaving the Site, these drums were transported off-Site for disposal by Miller Environmental Group at the AB Environmental, facility in Bohemia, New York (PPE) and Tradabe facility in Meriden Connecticut (DNAPL). A copy of the disposal manifests are attached.

Attachments: Table 1: Summary of NAPL Gauging and Recovery Activities

Attachment A: Disposal Manifest

July 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

Certification

I, James J. Clark, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this field report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

James J. Clark, P.E., LEP	7/10/2024	
Qualified Environmental Professional	Date	Signature

TABLE 1

SUMMARY OF NAPL GAUGING ACTIVITIES

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Post DNAPL Recovery			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	
RW-01 **Total well depth = 48.90 ft.**	4/19/2022	38.2	10.7	4/19/22 8:30	Trace	Trace	14	14	Flooding oberved prior to DNAPL recovery
	5/20/2022	40	8.90	5/20/22 8:55	Trace	Trace	20	34	Some flooding oberved prior to DNAPL recovery
	6/21/2022	39.17	9.73	6/21/2022	Trace	Trace	40	74	No flooding oberved
	7/28/2022	39.34	9.56	7/28/2022	Trace	Trace	16	90	Flooding oberved prior to DNAPL recovery
	8/30/2022	39.15	9.75	8/30/2022	Trace	Trace	20	110	No flooding oberved
	9/28/2022	39.19	9.71	9/28/2022	Trace	Trace	15	125	No flooding oberved
	10/26/2022	38.65	10.25	10/26/2022	Trace	Trace	35	160	Some flooding oberved prior to DNAPL recovery
	11/29/2022	45.30	3.6	11/29/2022	Trace	Trace	20	180	No flooding oberved
	12/28/2022	39.51	9.39	12/28/2022	Trace	Trace	35	215	No flooding oberved
	1/31/2023	39.10	9.8	1/31/2023	Trace	Trace	25	240	Flooding observed prior to DNAPL recovery
	2/21/2023	39.05	9.85	2/21/2023	Trace	Trace	27	267	Flooding observed prior to DNAPL recovery
	3/28/2023	38.45	10.45	3/28/2023	Trace	Trace	50	317	No flooding oberved
	4/1/2023								Site Inaccessible due to demolition
	5/1/2023								Site Inaccessible due to demolition
	6/8/2023	38.60	10.3	3/28/2023	Trace	Trace	40	357	No flooding oberved
	7/6/2023	39.45	9.45	7/6/2023	Trace	Trace	40	397	No flooding oberved
	8/15/2023	38.85	10.05	8/15/2023	Trace	Trace	20	417	Flooding observed prior to DNAPL recovery
	9/19/2023	43.80	5.1	9/19/2023	Trace	Trace	25	442	Flooding observed prior to DNAPL recovery
	10/17/2023	45.35	3.55	10/17/2023	Trace	Trace	30	472	No flooding oberved
	11/21/2023	45.05	3.85	11/21/2023	Trace	Trace	40	512	No flooding oberved
	12/27/2023	45.00	3.9	12/27/2023	Trace	Trace	15	527	No flooding oberved
	1/30/2024	41.20	7.7	1/30/2024	Trace	Trace	35	562	No flooding oberved
	2/27/2024	40.50	8.4	2/28/2024	Trace	Trace	15	577	No flooding oberved
	3/7/2024	48.50	0.4	3/7/2024	0.4	0.4	0	577	No flooding oberved
	4/25/2024	39.20	9.7	4/25/2024	Trace	Trace	20	597	No flooding oberved
	5/29/2024	39.40	9.5	5/29/2024	Trace	Trace	40	637	No flooding oberved
	6/25/2024	39.30	9.6	6/25/2024	Trace	Trace	30	667	No flooding oberved

TABLE 1
Summary of NAPL Gauging and Recovery Activities
450 Union Street
Brooklyn, NY

Location	Prior to DNAPL Recovery			Recovery after Removal			Volume of DNAPL Removed	Cumulative Volume of DNAPL Removed	Total Cumulative Volume of DNAPL Removed	Comments
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	(gallons)	(gallons)	(gallons)	
RW-02 **Total well depth = 58.35 ft.**	4/19/2022	39.00	19.35	4/19/22 10:30	42.0	16.35	31	31	45	Well cap damaged - needs to be replaced
	5/20/2022	39.75	18.60	5/20/22 11:00	50.41	10.66	68	99	133	Well cap damaged - needs to be replaced
	6/21/2022	43.17	15.18	6/21/2022	Trace	Trace	80	179	253	Well cap replaced wih a 6-inch J-Plug
	7/28/2022	51.75	6.60	7/28/2022	Trace	Trace	22	201	291	
	8/30/2022	49.9	8.45	8/30/2022	56.85	1.5	35	236	346	
	9/28/2022	46.82	11.53	9/28/2022	Trace	Trace	65	301	426	
	10/26/2022	47.20	11.15	10/26/2022	Trace	Trace	105	406	566	
	11/29/2022	49.20	9.15	11/29/2022	Trace	Trace	80	486	666	
	12/28/2022	50.53	7.82	12/28/2022	Trace	Trace	55	541	756	
	1/31/2023	52.60	5.75	1/31/2023	Trace	Trace	70	611	851	
	2/21/2023	52.67	5.68	2/21/2023	57.5	0.85	82	693	960	
	3/28/2023	52.53	5.82	3/28/2023	Trace	Trace	50	743	1060	
										Site Inaccessible due to demolition
										Site Inaccessible due to demolition
	6/8/2023	45.40	12.95	6/8/2023	56.5	1.85	140	883	1240	
	7/6/2023	48.25	10.10	7/6/2023	57	1.35	110	993	1390	
	8/15/2023	49.50	8.85	8/15/2023	Trace	Trace	130	1123	1540	
	9/19/2023	51.81	6.54	9/19/2023	Trace	Trace	110	1233	1675	
	10/17/2023	54.70	3.65	10/17/2023	Trace	Trace	40	1273	1745	
	11/21/2023	53.65	4.70	11/21/2023	Trace	Trace	50	1323	1835	
	12/27/2023	55.50	2.85	12/27/2023	Trace	Trace	10	1333	1860	
	1/30/2024	52.90	5.45	1/30/2024	Trace	Trace	50	1383	1945	
	2/28/2024	53.60	4.75	2/27/2024	53.6	4.75	0	1383	1960	No recovery due to equipment issue
	3/7/2024	53.35	5.00	3/7/2024	Trace	Trace	25	1408	1985	
	4/25/2024	54.70	3.65	4/25/2024	Trace	Trace	35	1443	2040	
	5/29/2024	54.12	4.23	5/29/2024	Trace	Trace	30	1473	2110	
	6/25/2024	55.65	2.70	6/25/2024	Trace	Trace	40	1513	2180	

July 2024
450 Union Street
Brooklyn, New York
File No. 03.0034060.10

ATTACHMENT A

DISPOSAL MANIFEST

WASTE MANIFEST	N/A	1	8003948606	METRO3435

5. Generator's Name and Mailing Address

NATIONAL GRID
300 ERIE BOULEVARD
SYRACUSE, NY 13202
Generator's Phone: 3472136874

Generator's Site Address (if different than mailing address)

National Grid
450 Union St.
Brooklyn, NY 11231

6. Transporter 1 Company Name: MILLER ENVIRONMENTAL GROUP, INC — U.S. EPA ID Number: NYD986906085

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address

~~WATERWORKS~~
~~77 STEWART AVENUE~~
~~NEWBURGH, NY 12550~~
Facility's Phone: ~~845-561-4111~~

AB/Miller Environmental
1599 Ocean Ave
Bohemia, NY 11716
631-567-6545

U.S. EPA ID Number: ~~NYR000236349~~ NYD987023371

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non RCRA Non DOT Regulated Solids (Oily Debris)	1	DM	25	P	
2.						
3.						
4.						

GENERATOR

13. Special Handling Instructions and Additional Information: Document # D46340 Job#: NY02240843 PO#:

1) Approval #:
2) Container Size: 55-gal drums
3) Truck #: 6621

AS AGENT FOR NATGRID

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: KELWIN JESSUP — Signature — Month 6 Day 25 Year 24

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: KELWIN JESSUP — Signature — Month 6 Day 25 Year 24

Transporter 2 Printed/Typed Name: David Surid — Signature — Month 7 Day 2 Year 24

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Anthony L. Caligiuri Agent — Signature — Month 7 Day 2 Year 24

DESIGNATED FACILITY TO GENERATOR

WASTE MANIFEST | N/A | 1 | 8003948805 | METRO3436

5. Generator's Name and Mailing Address
NATIONAL GRID
175 East Old Country Road
Hicksville, NY 11801
Generator's Phone: 347-213-8374

Generator's Site Address (if different than mailing address)
NATIONAL GRID
450 UNION ST
BROOKLYN, NY 11231

6. Transporter 1 Company Name
MILLER ENVIRONMENTAL GROUP, INC
U.S. EPA ID Number
NYD988908085

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
TRADEBE TREATMENT AND RECYCLING
136 GRACEY AVENUE
MERIDEN, CT 06451
Facility's Phone: 203-238-6745
U.S. EPA ID Number
CTD021816889

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non RCRA Non DOT Regulated Liquids (DNAPL)	2	DM	70 TBO	GAL P	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
Document# D46341 Job#: NY02240943 PO#:
1) Approval #: I
2) Container Size: 55-gal drums
3) Truck #:
AS AGENT FOR NAT GRID

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: KELVIN JESSUP | Signature | Month: 6 | Day: 25 | Year: 24

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: KELVIN JESSUP | Signature | Month: 6 | Day: 25 | Year: 24
Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

17b. Alternate Facility (or Generator) | U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) | Month | Day | Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a
Printed/Typed Name | Signature | Month: 6 | Day: 26 | Year: 24

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

GZA GeoEnvironmental of New York