



**450 UNION STREET
NAPL GAUGING AND RECOVERY
MONTHLY REPORT AUGUST 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 August 15, 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	8/15/23	9.65	38.85	10.05	20	Trace	Trace
RW-02	8/15/23	9.70	49.50	8.85	130	Trace	Trace

- The area around each well was covered with polyethylene sheeting prior to performance of gauging and recovery activities.
- Approximately 150 gallons of DNAPL/water mixture was recovered from the two wells during the August 15, 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 is attached.

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

Attachment A: Disposal Manifest



September 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
Qualified Environmental Professional

9/18/2023
Date

James J. Clark
Signature



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

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

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	



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

ATTACHMENT A
DISPOSAL MANIFEST

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number N/A	2. Page 1 of	3. Emergency Response Phone 1-800-213-8874	4. Waste Tracking Number 1	
5. Generator's Name and Mailing Address NATIONAL GRID 175 East Old Country Road Hicksville, NY 11801 Generator's Phone: 212-213-8874			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 NYD088908085			
7. Transporter 2 Company Name			U.S. EPA ID Number 800-394-8806			
8. Designated Facility Name and Site Address WATERWORKS 77 STEWART AVENUE NEW BURG, NY 12550 Facility's Phone:			U.S. EPA ID Number 845-590-0408			
GENERATOR	9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
			No.	Type		
	1. NON RCRA, NON DOT REGULATED SOLIDS		1	DM	30	P
	2.					
	3.					
4.						
13. Special Handling Instructions and Additional Information Document # D40553 Job #: NY02230742 PO# 1) Approval #: 00D0158 2) Container Size: 55 gal drum 3) Truck #:						
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/Officer's Printed/Typed Name Ass Agente for National Grid - Joel Crisp			Signature 		Month 0	Day 11
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.			Port of entry/exit:		Year 03	
Transporter Signature (for exports only):			Date leaving U.S.:			
TRANSPORTER	16. Transporter Acknowledgment of Receipt of Materials					
	Transporter 1 Printed/Typed Name Joel Crisp			Signature 		Month 8
Transporter 2 Printed/Typed Name			Signature		Year 03	
DESIGNATED FACILITY	17. Discrepancy					
	17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> 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 8	Day 28
					Year 03	
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name SI			Signature SI		Month 8	Day 28
					Year 03	

NON-HAZARDOUS
WASTE MANIFEST

1. Generator ID Number

N/A

2. Page 1 of

3. Emergency Response Phone

4. Waste Tracking Number

METRO2138

1

5. Generator's Name and Mailing Address

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

NATIONAL GRID
175 East Old Country Road
Hicksville, NY 11801

Generator's Phone:

347-213-8874

NATIONAL GRID
450 UNION ST
BROOKLYN, NY 11231

6. Transporter 1 Company Name

U.S. EPA ID Number

MILLER ENVIRONMENTAL GROUP, INC

NYD986908085

800-394-8606

7. Transporter 2 Company Name

U.S. EPA ID Number

Tradebe Transportation LLC

CTD021816889

8. Designated Facility Name and Site Address

U.S. EPA ID Number

NORLITE, LLC
628 S. SARATOGA ST.
COHOES, NY 12047

Facility's Phone:

NYD080469935

518-235-0401

9. Waste Shipping Name and Description

10. Containers

11. Total

12. Unit

No.

Type

Quantity

Wt./Vol.

1. NON-RCRA, NON-DOT REGULATED LIQUIDS N.O.S.(DNAPLE)

* 3

DM 150

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G

2.

3.

4.

13. Special Handling Instructions and Additional Information

Document # D40554 Job #: NY02230742 PO#

1) APPROVAL#

2) Container Size: 55 gal drums 3) Truck#

1000362816 TB Ref 3742769

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/Officer's Printed/Typed Name

Signature

Month Day Year

Ass Agents for National Grid
Joel C. Resp

[Signature]

8 15 22

15. International Shipments

☐ Import to U.S.☐ Export from U.S.

Port of entry/exit:

Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

Joel C. Resp

[Signature]

8 15 22

Transporter 2 Printed/Typed Name

Signature

Month Day Year

Marquis Allen

[Signature]

15 22

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

Robert McEllen

[Signature]

08 30 23

GENERATOR

INTL

TRANSPORTER

DESIGNATED FACILITY



GZA GeoEnvironmental of New York