



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



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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

7/10/2024
Date

James J. Clark
Signature



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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
	4/25/2024	39.20	9.7	4/25/2024	Trace	Trace	20	597	No flooding observed
	5/29/2024	39.40	9.5	5/29/2024	Trace	Trace	40	637	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	
	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	



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ATTACHMENT A
DISPOSAL MANIFEST

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 8003948606 METROS100	4. Waste Tracking Number 2919
5. Generator's Name and Mailing Address NATIONAL GRID 300 ERIE BOULEVARD SYRACUSE, NY 13202 Generator's Phone: 315-438-874			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 NY0000000095		
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			U.S. EPA ID Number NYR000236349		
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
		No.	Type		
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 #: 2000158 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/Officer's Printed/Typed Name As Agent for Nat Grid Nicholas Dumont			Signature 		Month Day Year 5 29 24
TRANSPORTER	15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.			Port of entry/exit: Date leaving U.S.:	
	16. Transporter Acknowledgment of Receipt of Materials				
DESIGNATED FACILITY	Transporter 1 Printed/Typed Name Nicholas Dumont			Signature 	
	Transporter 2 Printed/Typed Name			Signature	
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 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 X			Signature 		Month Day Year 6 6 24

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
5. Generator's Name and Mailing Address NATIONAL GRID 175 East Old Country Road Hicksville, NY 11801 Generator's Phone: 516-218-2877		Generator's Site Address (if different than mailing address) NATIONAL GRID 450 UNION ST BROOKLYN, NY 11201			
6. Transporter 1 Company Name ELLER ENVIRONMENTAL GROUP INC		U.S. EPA ID Number NYD000038008			
7. Transporter 2 Company Name		U.S. EPA ID Number			
8. Designated Facility Name and Site Address NOVOTEC INC 5200 SAKINOSKY ST CONVENT 1047 Facility's Phone: 516-238-4401		U.S. EPA ID Number NYD000400835			
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
1. Non RCRA Non DOT Regulated Liquids (DNAPL)		No.	Type		
		2	DM	70	P
2.					
3.					
4.					
13. Special Handling Instructions and Additional Information Document# D45829 Job#: NY02240708 PC# 1) Approval # 2) Container Size: 55-gal drum 3) Truck#: 6605 PL 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/Officer's Printed/Typed Name AS Agent for Nat Grid Nicholas Dumont		Signature <i>[Signature]</i>		Month 5	Day 29
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: Date leaving U.S.:		Year 24	
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name Nicholas Dumont		Signature <i>[Signature]</i>		Month 5	Day 29
Transporter 2 Printed/Typed Name Joel [Signature]		Signature <i>[Signature]</i>		Month 6	Day 27
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 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 Michael [Signature]		Signature <i>[Signature]</i>		Month 2	Day 13
				Year 24	



GZA GeoEnvironmental of New York