



**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
Qualified Environmental Professional

10/18/2023

Date

A handwritten signature in blue ink that reads "James J. Clark". The signature is written in a cursive, flowing style.

Signature



October 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 (gallons)	Cumulative Volume of DNAPL Removed (gallons)	Comments	
	Date	Depth to DNAPL (ft.)	DNAPL Thickness (ft)	Date/Time	Depth to DNAPL (ft.)	DNAPL Thickness (ft)				
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	

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 with 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
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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 347-213-8874	4. Waste Tracking Number METRO 2385
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5. Generator's Name and Mailing Address NATIONAL GRID 175 East Old Country Road Hicksville, NY 11801	Generator's Site Address (if different than mailing address) NATIONAL GRID 450 UNION ST BROOKLYN, NY 11231
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6. Transporter 1 Company Name MILLER ENVIRONMENTAL GROUP, INC	U.S. EPA ID Number NYD988908085
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7. Transporter 2 Company Name Tradebe Transportation LLC	U.S. EPA ID Number CTD021816889
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8. Designated Facility Name and Site Address TRADEBE TREATMENT AND RECYCLING 50 GROSS STREET BRIDGEPORT, CT 06610	U.S. EPA ID Number CTD002593887
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Generator's Phone: **888-276-0887** **638 South Saratoga St Cohoes NY 12047 518-235-0401** **HYD050469935**

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
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 #: 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/Officer's Printed/Typed Name AS AGENT FOR NAT GRID F-santos	Signature <i>Felipe Santos</i>	Month 9	Day 19	Year 23
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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 <i>Felipe Santos</i>	Month 9	Day 19	Year 23
Transporter 2 Printed/Typed Name <i>Maria Szymon</i>	Signature <i>[Signature]</i>	Month 9	Day 22	Year 23

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 Duskey	Signature <i>[Signature]</i>	Month 9	Day 25	Year 23
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GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number <i>N/A</i>	2. Page 1 of <i>1</i>	3. Emergency Response Phone <i>347-213-8874</i>	4. Waste Tracking Number <i>METRO 2389</i>	
5. Generator's Name and Mailing Address NATIONAL GRID 300 ERIE BOULEVARD SYRACUSE, NY 13202 Generator's Phone: <i>347-213-8874</i>		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 <i>NYD988908085</i>			
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: <i>845-590-0408</i>		U.S. EPA ID Number <i>NYR000236349</i>			
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	<i>1</i>	<i>DM</i>	<i>35</i>	<i>P</i>
	2.				
	3.				
13. Special Handling Instructions and Additional Information Document # <i>D41261</i> Job#: <i>NY02231774</i> PO#: <i></i> 1) Approval #: <i>23D0158</i> 2) Container Size: <i>METAL DRUMS</i> 3) Truck #: <i>8807</i>					
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/Offoror's Printed/Typed Name: <i>NATIONAL GRID</i> Signature: <i>F. Santos</i> Month: <i>9</i> Day: <i>19</i> Year: <i>23</i>					
TRANSPORTER	15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> 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: <i>F. Santos</i> Signature: <i>Felipe Santos</i> Month: <i>9</i> Day: <i>19</i> Year: <i>23</i> Transporter 2 Printed/Typed Name: _____ Signature: _____ Month: _____ Day: _____ Year: _____				
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) Facility's Phone: _____		U.S. EPA ID Number: _____		
	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: <i>Steven</i> Signature: <i>[Signature]</i> Month: <i>9</i> Day: <i>19</i> Year: <i>23</i>				



GZA GeoEnvironmental of New York