



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



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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

5/30/2024
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 |

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 | |



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ATTACHMENT A
DISPOSAL MANIFEST

| | | | | | |
|--|--|------------------------|---|-----------------------------|--|
| NON-HAZARDOUS WASTE MANIFEST | | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone | 4. Waste Tracking Number 0006425 |
| 5. Generator's Name and Mailing Address National Grid 175 E Old Country Rd Hicksville NY 11801 | | | Generator's Site Address (if different than mailing address) 450 Union St Brooklyn NY 11201 | | |
| Generator's Phone: | | | | | |
| 6. Transporter 1 Company Name MILLER ENVIRONMENTAL GROUP, INC | | | U.S. EPA ID Number NYD986908085 | | 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 | | | U.S. EPA ID Number NYR000236349 | | |
| Facility's Phone: | | | | | |
| 9. Waste Shipping Name and Description | | | 10. Containers | | 11. Total Quantity |
| | | | No. | Type | |
| 1. NON-RCRA, NON-DOT Regulated Solids (PPE) (Debris) | | | 1 | Dm | 40 |
| 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/Offor's Printed/Typed Name As Agent: Matthew Neve | | | Signature <i>Matthew Neve</i> | | Month Day Year 3 7 24 |
| 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 | | | | | |
| Transporter 1 Printed/Typed Name Jack Luceri | | | Signature <i>Jack Luceri</i> | | Month Day Year 3 7 24 |
| Transporter 2 Printed/Typed Name | | | Signature | | Month Day Year |
| 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 J. Sotelo | | | Signature <i>Steven J. Sotelo</i> | | Month Day Year 3 13 24 |

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 | | | Site Address 450 Union St Brooklyn NY 11201 | | |
| 4. Offeror Phone () | | | | | |
| 5. Transporter 1 Company Name Miller Environmental Group Inc. | | 6. EPA ID # NYD986908085 | | A. State Transporter's ID | |
| 7. Transporter 2 Company Name | | 8. EPA ID # | | B. Transporter 1 Phone | |
| 9. Designated Facility Name and Site Address Norlite LLC Tradebbs TTR 628 South Saratoga St Cohoes NY 12047 | | 10. EPA ID # NYD080469935 | | C. State Transporter's ID | |
| HM | | | | D. Transporter 2 Phone | |
| | | | | E. State Facility's ID | |
| | | | | F. Facility's Phone | |
| 11. Shipping Name | | 12. Containers No. | | 13. Total Quantity | |
| a. non-RCRA, non-DOT Regulated liquids (DNAPL) | | 1 | | 25 | |
| b. | | | | | |
| c. | | | | | |
| d. | | | | | |
| 14. Unit Wt./Vol. 6 | | | | | |
| G. Additional Descriptions for Materials Listed Above # 3972615 | | | | | |
| Re Routed to Homebase facility | | | | | |
| 15. Special Handling Instructions and Additional Information Approval # 1000362816 PO 33489 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 As Agent: Matthew Neves | | Signature <i>Matthew Neves</i> | | Date Month 3 Day 7 Year 24 | |
| 17. Transporter 1 Acknowledgment of Receipt of Materials | | | | Date | |
| Printed/Typed Name Jack Lyceri | | Signature <i>Jack Lyceri</i> | | Month 3 Day 7 Year 24 | |
| 18. Transporter 2 Acknowledgment of Receipt of Materials | | | | Date | |
| Printed/Typed Name | | Signature | | Month Day Year | |
| 19. Discrepancy Indication Space Tradebbs TTR 4343 Kennedy Ave, East Chicago IN 46312 IN0000646943 | | | | | |
| 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 | |

GENERATOR

TRANSPORTER

FACILITY



GZA GeoEnvironmental of New York