

Atlantic Richfield Company

Paul G. Johnson
Operations Project Manager

Remediation Management
150 W Warrenville Road
MC 200 1E
Naperville, IL 60563
Phone: (331) 236-1415
Mobile: (630) 731-4463
Fax: (630) 420-3738
E-Mail: paul.johnson4@bp.com

June 9, 2020

Jessica LaClair
Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, New York 12233-7016

RE: Monthly Progress Report, May 2020
Former Anaconda Plant (a.k.a. Harbor at Hastings Site) Site No. 3-60-022
Hastings-On-Hudson, New York

Dear Ms. LaClair:

Enclosed is the May 2020 Monthly Progress Report for the Former Anaconda Plant (a.k.a. Harbor at Hastings Site), New York State Department of Environmental Conservation (NYSDEC) Site No. 3-60-022, Hastings-on-Hudson, New York. This progress report has been prepared in accordance with Section XI of the AMENDED ORDER ON CONSENT and ADMINISTRATIVE SETTLEMENT between Atlantic Richfield Company and NYSDEC, dated November 6, 2013. The time period covered is May 1, 2020 through May 31, 2020.

If you have any questions or comments on this submittal, please feel free to contact me at 630-731-4463.

Sincerely,



Paul G. Johnson
Operations Project Manager

Enclosure

cc: Village Manager Mary Beth Murphy, Hastings-On-Hudson
Mark Chertok, Hastings-On-Hudson
Karl Coplan, Pace/Riverkeeper
File

ecc: Jacquelyn Nealon, New York State Department of Health
Maureen Schuck, New York State Department of Health
Susan Edwards, New York State Department of Environmental Conservation
Benjamin Conlon, Esq. NYSDEC, Office of General Counsel
Mayor Nicola Armacost, Hastings-On-Hudson
Trustee Morgan Fleisig, Hastings-On-Hudson
Village Manager Mary Beth Murphy, Hastings-On-Hudson
Jim Lucari, BP
Michael Daneker, Arnold & Porter
Martha Gopal, Sovereign Consulting Inc.

**FORMER ANACONDA WIRE AND CABLE PLANT SITE
(a.k.a. HARBOR AT HASTINGS SITE) OU1
NYSDEC SITE 360022
MONTHLY PROGRESS REPORT 180**

PREPARED BY: Atlantic Richfield Company
Paul Johnson

REPORTING PERIOD: May 1, 2020 through May 31, 2020

1. PROGRESS MADE THIS REPORTING PERIOD:

- DNAPL gauging and recovery and LNAPL IRM activities were not performed in May 2020 due to COVID-19 restrictions. AR notified NYSDEC in discussions and via electronic mail March 16th, 2020.
- Progress continued on these on-going design-related activities:
 - Reviewed Draft Construction Sequencing Details to Support Fish Window Evaluation on conference call with NYSDEC; preparing follow up memo.
 - Submitted Draft Summary of Post-Remediation PCB Residuals to NYSDEC, evaluating potential separation layers for discussion with NYSDEC.
 - Wetland design progressed; June 23rd, 2020 call scheduled with NYSDEC.
 - Draft Beneficial Use Preliminary Submittal.
 - Old Marina / Kinnally Cove Backfill Options – Design team evaluating.
 - Draft Evaluation of shoreline options presented at December 3rd, 2019 meeting. Village’s consultant requested drawings and other information from AR. AR provided responses; call scheduled for June 11th, 2020.
 - Old Marina / Kinnally Cove addition to OU-2 pending (NYSDEC).

2. UNANTICIPATED PROBLEM AREAS AND RECOMMENDED SOLUTIONS

- None this reporting period.

3. PROBLEMS RESOLVED

- None this reporting period.

4. DELIVERABLES SUBMITTED / RECEIVED

- May 7, 2020, Atlantic Richfield to NYSDEC: *Hastings April 2020 Monthly Progress Report.*

5. UPCOMING EVENTS / ACTIVITIES PLANNED

- The DNAPL gauging and recovery event and the LNAPL IRM activities scheduled for June 1st has been postponed due to the COVID-19 pandemic and staged re-opening of the Site, per discussions with and notification to NYSDEC. Scheduling of subsequent events will be dependent on the developing COVID-19 situation and AR will continue to communicate with NYSDEC regarding schedule. The tentative schedule is as follows:
- The next DNAPL gauging and recovery event may occur in June 2020, with the date to be determined. The subsequent three events are tentatively scheduled to occur the weeks of July 6th, August 3rd, and September 7th, 2020.
- Continue the Water Tower LNAPL IRM activities, as allowable, in accordance with the IRM Work Plan (Fluor Daniel GTI, December 1997), Fluor Daniel GTI correspondence to the NYSDEC dated May 18, 1998 and Atlantic Richfield correspondence with the NYSDEC on September 2, 2010. The next LNAPL IRM event may occur in June 2020, with the date to be determined. The subsequent LNAPL IRM events are tentatively scheduled to occur the week of July 6th, 2020 and the week of August 3rd, 2020 in accordance with the schedule modification request, from monthly to quarterly, sent by Atlantic Richfield to NYSDEC on June 4, 2012, and the approval letter received from NYSDEC dated April 2, 2013.

6. KEY STAFFING

- Sovereign Consulting Inc.
- Parsons Environment and Infrastructure Group, Inc. (OM&M)
- Parsons Environment and Infrastructure Group, Inc. (Security)

7. PERCENTAGE COMPLETE

- DNAPL gauging and recovery – ongoing
- LNAPL IRM – ongoing

8. DATA

- Final data not generated during this reporting period.

9. CITIZEN PARTICIPATION ACTIVITIES

- None this reporting period.

LIST OF ACRONYMS

| <i>Acronym</i> | <i>Description</i> |
|----------------|---|
| NYSDEC | New York State Department of Environmental Conservation |
| LNAPL | Light Non-Aqueous Phase Liquid |
| DNAPL | Dense Non-Aqueous Phase Liquid |
| OU | Operable Unit |
| IRM | Interim Remedial Measure |
| O&M | Operations and Maintenance |

LIST OF REFERENCES

FLUOR Daniel GTI, 1997. *Draft Interim Remedial Measure Work Plan – Separate Phase Liquid Recovery*. December.

| | Date | Depth to Product (ft) | Product Apparent Height - Pre-pumping (ft) | Product Apparent Height - Post-pumping (ft) | Approximate Volume of Product Recovered (gallons) ³ | Days Elapsed Between Measurement Readings | Measurement Tool Used | Recovery Procedure Used |
|-----------------|---|--|--|---|--|---|-----------------------|-------------------------|
| MW-12 | Cumulative 10/9/2006 - 7/29/2010 | - | - | - | 5.0 | - | - | - |
| | TOTAL VOLUME RECOVERED TO DATE FROM MW-12 (GALLONS) | | | | 5.0 | | | |
| | | | | | | | | |
| HAOW-12A | Cumulative 3/2/2009 - 12/10/2018 | - | - | - | 49.7 | - | DMT ⁴ | - |
| | 1/14/2019 | 42.9 | 0.7 | - | - | 35 | DMT ⁴ | - |
| | 2/4/2019 | 42.3 | 1.3 | - | - | 21 | DMT ⁴ | - |
| | 3/11/2019 | 42.4 | 1.2 | - | - | 35 | DMT ⁴ | - |
| | 4/1/2019 | 42.6 | 1.0 | - | - | 21 | DMT ⁴ | - |
| | 5/6/2019 | 42.5 | 1.1 | - | - | 35 | DMT ⁴ | - |
| | 6/3/2019 | 42.4 | 1.2 | - | - | 28 | DMT ⁴ | - |
| | 8/5/2019 | 42.5 | 1.1 | - | - | 63 | DMT ⁴ | - |
| | 9/9/2019 | 42.4 | 1.2 | - | - | 35 | DMT ⁴ | - |
| | 10/7/2019 | 42.6 | 1.0 | - | - | 28 | DMT ⁴ | - |
| | 11/4/2019 | 42.4 | 1.2 | - | - | 28 | DMT ⁴ | - |
| | 12/2/2019 | DNAPL pumping not required to be completed | | | | | - | - |
| | 1/13/2020 | 42.6 | 1.0 | - | - | 70 | DMT ⁴ | - |
| | 2/3/2020 | 42.4 | 1.2 | - | - | 21 | DMT ⁴ | - |
| | 3/2/2020 | 42.9 | 0.7 | - | - | 28 | DMT ⁴ | - |
| | 4/6/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | 5/4/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | TOTAL VOLUME RECOVERED TO DATE FROM HAOW-12A (GALLONS) | | | | 49.7 | | | |
| | | | | | | | | |
| HARW-1 | Cumulative 9/29/2010 - 12/10/2018 | - | - | - | 0.0 | - | - | - |
| | 1/14/2019 | No product detected | 0.0 | - | - | 35 | DMT ⁴ | - |
| | 2/4/2019 | No product detected | 0.0 | - | - | 21 | DMT ⁴ | - |
| | 3/11/2019 | No product detected | 0.0 | - | - | 35 | DMT ⁴ | - |
| | 4/1/2019 | No product detected | 0.0 | - | - | 21 | DMT ⁴ | - |
| | 5/6/2019 | No product detected | 0.0 | - | - | 35 | DMT ⁴ | - |
| | 6/3/2019 | No product detected | 0.0 | - | - | 28 | DMT ⁴ | - |
| | 8/5/2019 | No product detected | 0.0 | - | - | 63 | DMT ⁴ | - |
| | 9/9/2019 | No product detected | 0.0 | - | - | 35 | DMT ⁴ | - |
| | 10/7/2019 | No product detected | 0.0 | - | - | 28 | DMT ⁴ | - |
| | 11/4/2019 | No product detected | 0.0 | - | - | 28 | DMT ⁴ | - |
| | 12/2/2019 | DNAPL pumping not required to be completed | | | | | - | - |
| | 1/13/2020 | No product detected | 0.0 | - | - | 70 | DMT ⁴ | - |
| | 2/3/2020 | No product detected | 0.0 | - | - | 21 | DMT ⁴ | - |
| | 3/2/2020 | No product detected | 0.0 | - | - | 28 | DMT ⁴ | - |
| | 4/6/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | 5/4/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | TOTAL VOLUME RECOVERED TO DATE FROM HARW-1 (GALLONS) | | | | 0.0 | | | |
| | | | | | | | | |

TABLE II
SUMMARY OF DNAPL MEASUREMENTS
NYSDEC #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

| | Date | Depth to Product (ft) | Product Apparent Height - Pre-pumping (ft) | Product Apparent Height - Post-pumping (ft) | Approximate Volume of Product Recovered (gallons) ³ | Days Elapsed Between Measurement Readings | Measurement Tool Used | Recovery Procedure Used |
|---------------|---|--|--|---|--|---|-----------------------|-------------------------|
| HARW-2 | Cumulative 9/29/2010 - 12/10/2018 | - | - | - | 812.3 | - | - | - |
| | 1/14/2019 | 38.8 | 1.3 | - | - | 35 | DMT ⁴ | - |
| | 2/4/2019 | 38.0 | 2.0 | 0.08 | 5 | 21 | DMT ⁴ | double diaphragm pump |
| | 3/11/2019 | 38.8 | 1.2 | - | - | 35 | DMT ⁴ | - |
| | 4/1/2019 | 38.5 | 1.5 | - | - | 21 | DMT ⁴ | - |
| | 5/6/2019 | 36.8 | 3.2 | 0.25 | 7.6 | 35 | DMT ⁴ | double diaphragm pump |
| | 6/3/2019 | 38.8 | 1.3 | - | - | 28 | DMT ⁴ | - |
| | 8/5/2019 | 36.8 | 3.2 | 0.25 | 7.6 | 63 | DMT ⁴ | double diaphragm pump |
| | 9/9/2019 | 38.5 | 1.5 | - | - | 35 | DMT ⁴ | - |
| | 10/7/2019 | 37.8 | 2.3 | 0.08 | 5.7 | 28 | DMT ⁴ | double diaphragm pump |
| | 11/4/2019 | 39.8 | 0.2 | -- | -- | 28 | DMT ⁴ | - |
| | 12/2/2019 | DNAPL pumping not required to be completed | | | | | - | - |
| | 1/13/2020 | 38.6 | 1.4 | -- | -- | 70 | DMT ⁴ | - |
| | 2/3/2020 | 37.0 | 3.0 | 0.67 | 6.1 | 21 | DMT ⁴ | - |
| | 3/2/2020 | 38.6 | 1.4 | -- | -- | 28 | DMT ⁴ | - |
| | 4/6/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | 5/4/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | TOTAL VOLUME RECOVERED TO DATE FROM HARW-2 (GALLONS) | | | | 844.3 | | | |
| HARW-3 | Cumulative 10/14/2010 - 12/10/2018 | - | - | - | 28.6 | - | - | - |
| | 1/14/2019 | 38.7 | 0.3 | - | - | 35 | DMT ⁴ | - |
| | 2/4/2019 | 38.7 | 0.3 | - | - | 21 | DMT ⁴ | - |
| | 3/11/2019 | 38.6 | 0.4 | - | - | 35 | DMT ⁴ | - |
| | 4/1/2019 | 38.8 | 0.3 | - | - | 21 | DMT ⁴ | - |
| | 5/6/2019 | 38.8 | 0.3 | - | - | 35 | DMT ⁴ | - |
| | 6/3/2019 | 38.6 | 0.4 | - | - | 28 | DMT ⁴ | - |
| | 8/5/2019 | 38.5 | 0.5 | - | - | 63 | DMT ⁴ | - |
| | 9/9/2019 | 38.3 | 0.7 | - | - | 35 | DMT ⁴ | - |
| | 10/7/2019 | 38.5 | 0.5 | - | - | 28 | DMT ⁴ | - |
| | 11/4/2019 | 38.5 | 0.5 | - | - | 28 | DMT ⁴ | - |
| | 12/2/2019 | DNAPL pumping not required to be completed | | | | | - | - |
| | 1/13/2020 | 38.5 | 0.5 | - | - | 70 | DMT ⁴ | - |
| | 2/3/2020 | 38.3 | 0.7 | - | - | 21 | DMT ⁴ | - |
| | 3/2/2020 | 38.5 | 0.5 | -- | -- | 28 | DMT ⁴ | - |
| | 4/6/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | 5/4/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | TOTAL VOLUME RECOVERED TO DATE FROM HARW-3 (GALLONS) | | | | 28.6 | | | |

TABLE II
SUMMARY OF DNAPL MEASUREMENTS
NYSDEC #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

| | Date | Depth to Product (ft) | Product Apparent Height - Pre-pumping (ft) | Product Apparent Height - Post-pumping (ft) | Approximate Volume of Product Recovered (gallons) ³ | Days Elapsed Between Measurement Readings | Measurement Tool Used | Recovery Procedure Used |
|---------------|---|--|--|---|--|---|-----------------------|-------------------------|
| HARW-4 | Cumulative 10/14/2010 - 12/10/2018 | - | - | - | 213.8 | - | - | - |
| | 1/14/2019 | 40.4 | 0.6 | -- | -- | 35 | DMT ⁴ | - |
| | 2/4/2019 | 40.4 | 0.6 | -- | -- | 21 | DMT ⁴ | - |
| | 3/11/2019 | 40.3 | 0.8 | -- | -- | 35 | DMT ⁴ | - |
| | 4/1/2019 | 39.8 | 1.2 | -- | -- | 21 | DMT ⁴ | - |
| | 5/6/2019 | 40.0 | 1.0 | -- | -- | 35 | DMT ⁴ | - |
| | 6/3/2019 | 40.0 | 1.0 | -- | -- | 28 | DMT ⁴ | - |
| | 8/5/2019 | 39.8 | 1.2 | -- | -- | 63 | DMT ⁴ | - |
| | 9/9/2019 | 39.8 | 1.3 | -- | -- | 35 | DMT ⁴ | - |
| | 10/7/2019 | 39.6 | 1.4 | -- | -- | 28 | DMT ⁴ | - |
| | 11/4/2019 | 39.4 | 1.6 | -- | -- | 28 | DMT ⁴ | - |
| | 12/2/2019 | DNAPL pumping not required to be completed | | | | | - | - |
| | 1/13/2020 | 39.7 | 1.3 | -- | -- | 70 | DMT ⁴ | - |
| | 2/3/2020 | 39.7 | 1.3 | -- | -- | 21 | DMT ⁴ | - |
| | 3/2/2020 | 40.3 | 0.7 | -- | -- | 28 | DMT ⁴ | - |
| | 4/6/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | 5/4/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | TOTAL VOLUME RECOVERED TO DATE FROM HARW-4 (GALLONS) | | | | 213.8 | | | |
| HARW-5 | Cumulative 7/18/2011 - 12/11/2018 | - | - | - | 1036.4 | - | - | - |
| | 1/14/2019 | 36.6 | 3.7 | 0.1 | 9.4 | 34 | DMT ⁴ | double diaphragm pump |
| | 2/4/2019 | 38.1 | 2.2 | 0.1 | 5.4 | 21 | DMT ⁴ | double diaphragm pump |
| | 3/11/2019 | 36.6 | 3.7 | 0.1 | 9.4 | 35 | DMT ⁴ | double diaphragm pump |
| | 4/2/2019 | 38.3 | 2.0 | 0.1 | 5.0 | 22 | DMT ⁴ | double diaphragm pump |
| | 5/7/2019 | 36.7 | 3.6 | 0.1 | 9.1 | 35 | DMT ⁴ | double diaphragm pump |
| | 6/4/2019 | 37.3 | 3.0 | 0.1 | 7.6 | 28 | DMT ⁴ | double diaphragm pump |
| | 8/6/2019 | 35.1 | 5.3 | 0.1 | 13.5 | 63 | DMT ⁴ | double diaphragm pump |
| | 9/10/2019 | 36.6 | 3.7 | 0.0 | 9.6 | 35 | DMT ⁴ | double diaphragm pump |
| | 10/7/2019 | 37.5 | 2.8 | 0.1 | 7.2 | 27 | DMT ⁴ | double diaphragm pump |
| | 11/4/2019 | 37.5 | 2.8 | 0.2 | 7.0 | 28 | DMT ⁴ | double diaphragm pump |
| | 12/2/2019 | DNAPL pumping not required to be completed | | | | | - | - |
| | 1/13/2020 | 35.0 | 5.3 | 0.1 | 13.7 | 70 | DMT ⁴ | double diaphragm pump |
| | 2/3/2020 | 38.3 | 2.0 | 0.5 | 3.9 | 21 | DMT ⁴ | double diaphragm pump |
| | 3/2/2020 | 37.5 | 2.8 | 0.00 | 7.4 | 28 | DMT ⁴ | - |
| | 4/6/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | 5/4/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | TOTAL VOLUME RECOVERED TO DATE FROM HARW-5 (GALLONS) | | | | 1144.6 | | | |

| | Date | Depth to Product (ft) | Product Apparent Height - Pre-pumping (ft) | Product Apparent Height - Post-pumping (ft) | Approximate Volume of Product Recovered (gallons) ³ | Days Elapsed Between Measurement Readings | Measurement Tool Used | Recovery Procedure Used |
|---------------|---|--|--|---|--|---|-----------------------|-------------------------|
| HARW-6 | Cumulative 7/19/2011 - 12/10/2018 | - | - | - | 0.0 | - | - | - |
| | 1/14/2019 | 40.1 | 0.7 | - | - | 35 | DMT ⁴ | - |
| | 2/4/2019 | 40.1 | 0.7 | - | - | 21 | DMT ⁴ | - |
| | 3/11/2019 | 40.4 | 0.4 | - | - | 35 | DMT ⁴ | - |
| | 4/1/2019 | 40.3 | 0.5 | - | - | 21 | DMT ⁴ | - |
| | 5/6/2019 | 40.3 | 0.5 | - | - | 35 | DMT ⁴ | - |
| | 6/3/2019 | 40.3 | 0.5 | - | - | 28 | DMT ⁴ | - |
| | 8/5/2019 | 40.3 | 0.5 | - | - | 63 | DMT ⁴ | - |
| | 9/9/2019 | 40.0 | 0.8 | - | - | 35 | DMT ⁴ | - |
| | 10/7/2019 | 40.2 | 0.6 | - | - | 28 | DMT ⁴ | - |
| | 11/4/2019 | 40.1 | 0.7 | - | - | 28 | DMT ⁴ | - |
| | 12/2/2019 | DNAPL pumping not required to be completed | | | | | - | - |
| | 1/13/2020 | 40.0 | 0.8 | - | - | 70 | DMT ⁴ | - |
| | 2/3/2020 | 39.8 | 1.0 | - | - | 21 | DMT ⁴ | - |
| | 3/2/2020 | 40.1 | 0.8 | - | - | 28 | DMT ⁴ | - |
| | 4/6/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | 5/4/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | TOTAL VOLUME RECOVERED TO DATE FROM HARW-6 (GALLONS) | | | | 0.0 | | | |
| | | | | | | | | |
| HARW-7 | Cumulative 7/18/2011 - 12/11/2018 | - | - | - | 550.2 | - | - | - |
| | 1/14/2019 | 41.1 | 0.9 | - | - | 34 | DMT ⁴ | - |
| | 2/4/2019 | 40.8 | 1.2 | - | - | 21 | DMT ⁴ | - |
| | 3/11/2019 | 40.3 | 1.7 | - | - | 35 | DMT ⁴ | - |
| | 4/1/2019 | 39.5 | 2.5 | 0.1 | 6.3 | 21 | DMT ⁴ | double diaphragm pump |
| | 5/6/2019 | 41.1 | 0.9 | - | - | 35 | DMT ⁴ | - |
| | 6/3/2019 | 41.3 | 0.8 | - | - | 28 | DMT ⁴ | - |
| | 8/5/2019 | 40.3 | 1.7 | - | - | 63 | DMT ⁴ | - |
| | 9/10/2019 | 40.0 | 2.0 | 0.3 | 4.6 | 36 | DMT ⁴ | double diaphragm pump |
| | 10/7/2019 | 40.9 | 1.1 | - | - | 27 | DMT ⁴ | - |
| | 11/4/2019 | 40.5 | 1.5 | - | - | 28 | DMT ⁴ | - |
| | 12/2/2019 | DNAPL pumping not required to be completed | | | | | - | - |
| | 1/14/2020 | 39.0 | 3.0 | 0.1 | 7.6 | 71 | DMT ⁴ | - |
| | 2/3/2020 | 41.5 | 0.5 | - | - | 20 | DMT ⁴ | - |
| | 3/2/2020 | 41.0 | 1.0 | - | - | 28 | DMT ⁴ | - |
| | 4/6/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | 5/4/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | TOTAL VOLUME RECOVERED TO DATE FROM HARW-7 (GALLONS) | | | | 568.7 | | | |
| | | | | | | | | |

| | Date | Depth to Product (ft) | Product Apparent Height - Pre-pumping (ft) | Product Apparent Height - Post-pumping (ft) | Approximate Volume of Product Recovered (gallons) ³ | Days Elapsed Between Measurement Readings | Measurement Tool Used | Recovery Procedure Used |
|---------------|---|--|--|---|--|---|-----------------------|-------------------------|
| HARW-8 | Cumulative 7/19/2011 - 12/10/2018 | - | - | - | 26.9 | - | - | - |
| | 1/14/2019 | 41.5 | 1.5 | - | - | 35 | DMT ⁴ | - |
| | 2/4/2019 | 41.5 | 1.5 | - | - | 21 | DMT ⁴ | - |
| | 3/11/2019 | 41.3 | 1.7 | - | - | 35 | DMT ⁴ | - |
| | 4/2/2019 | 41.0 | 2.0 | 0.3 | 4.6 | 22 | DMT ⁴ | double diaphragm pump |
| | 5/6/2019 | 42.3 | 0.7 | - | - | 34 | DMT ⁴ | - |
| | 6/3/2019 | 42.2 | 0.8 | - | - | 28 | DMT ⁴ | - |
| | 8/5/2019 | 41.8 | 1.3 | - | - | 63 | DMT ⁴ | - |
| | 9/9/2019 | 41.9 | 1.1 | - | - | 35 | DMT ⁴ | - |
| | 10/7/2019 | 41.6 | 1.4 | - | - | 28 | DMT ⁴ | - |
| | 11/4/2019 | 41.5 | 1.5 | - | - | 28 | DMT ⁴ | - |
| | 12/2/2019 | DNAPL pumping not required to be completed | | | | | - | - |
| | 1/13/2020 | 41.7 | 1.3 | - | - | 70 | DMT ⁴ | - |
| | 2/3/2020 | 42.0 | 1.0 | - | - | 21 | DMT ⁴ | - |
| | 3/2/2020 | 41.6 | 1.4 | - | - | 28 | DMT ⁴ | - |
| | 4/6/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | 5/4/2020 | DNAPL pumping not completed due to COVID-19 restrictions | | | | | - | - |
| | | | | | | | | |
| | TOTAL VOLUME RECOVERED TO DATE FROM HARW-8 (GALLONS) | | | | 31.5 | | | |

TOTAL VOLUME RECOVERED TO DATE FROM ALL WELLS (GALLONS)

2886.2

Notes:

MW-12

Depth to Top of Screen: 33 ft
Depth to Bottom: 36 ft

HARW-1

Depth to Top of Screen: 24 ft
Depth to Bottom: 42 ft

HARW-5

Angle from Vertical: 23.5°
Vertical Depth to Top of Screen: 27 ft
Vertical Depth to Bottom: 40.3 ft

HAOW-12A

Depth to Top of Screen: 28.6 ft
Depth to Bottom: 43.6 ft

HARW-2

Depth to Top of Screen: 26 ft
Depth to Bottom: 40 ft

HARW-6

Angle from Vertical: 14°
Vertical Depth to Top of Screen: 26.7 ft
Vertical Depth to Bottom: 40.8 ft

HARW-3

Angle from Vertical: 16.5°
Vertical Depth to Top of Screen: 25.4 ft
Vertical Depth to Bottom: 39 ft

HARW-7

Depth to Top of Screen: 27.5 ft
Depth to Bottom: 42 ft

HARW-4

Angle from Vertical: 24.5°
Vertical Depth to Top of Screen: 28.7 ft
Vertical Depth to Bottom: 41 ft

HARW-8

Depth to Top of Screen: 28.5 ft
Depth to Bottom: 43 ft

For historical reference to past DNAPL measurement events prior to January 2017, please refer to the January 2018 monthly report submitted to NYSDEC on 5 February 2018.

DMT = DNAPL Measurement Tool, consisting of a copper tubing handle, a spacer section to prevent the probe from contacting the sides of the well riser, and an all-thread rod probe to extend into the DNAPL.

¹ Reserved

² Reserved

³ Volume of product recovered by downwell pump is estimated by approximating the volume discharged to the drum and additional product in tubing and on pump.

Volume of product recovered by bailer is estimated using the bailer volume and number of times bailed.

Volume of product recovered by double diaphragm and positive displacement piston pumps are estimated by approximating the volume discharged to the drum or by using the pre- and post-pumping apparent height of product and the well dimensions (8" diameter well).

⁴ All depth and thickness values for HARW-3, HARW-4 HARW-5 and HARW-6 are provided as vertical equivalents of the field measurements based on the angle of the installed well.