# **Atlantic Richfield Company**

### **Nick Peterson**

Liability Manager

Remediation Management 201 Helios Way Houston, TX 77079 Phone: (832) 664-2372 Mobile: (281) 886-4350 E-Mail: nickpeterson@bp.com

August 4, 2023

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

RE: Monthly Progress Report, July 2023 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 July 2023 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 July 1, 2023, through July 31, 2023.

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

Sincerely,

Nick Peterson Liability Manager

Mick Peterson

**Enclosure** 



cc: Village Manager Mary Beth Murphy, Hastings-On-Hudson

Mark Chertok, Hastings-On-Hudson Karl Coplan, Pace/Riverkeeper

File

ecc: David Tromp, Section Chief, Bureau D, Section A, NYSDEC DER

David Harrington, Director, Bureau D, NYSDEC DER Melissa Doroski, New York State Department of Health Jacquelyn Nealon, New York State Department of Health Phoebe Gittlelson, 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

Nat Federici, P.E., Westchester County Department of Environmental Facilities

Rachel Noe, Westchester County

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 218

PREPARED BY: Atlantic Richfield Company

**Paul Johnson** 

REPORTING PERIOD: July 1, 2023 through July 31, 2023

#### 1. PROGRESS MADE THIS REPORTING PERIOD:

- As agreed with NYSDEC, DNAPL gauging and recovery were not performed in July 2023 due to expected excessive heat throughout the month, as shown in attached Table II. Table I is not provided since there was no gauging or recovery this period.
- Progress continued on these on-going design-related activities:
  - o Development of shoreline concepts; draft of Open Space options provided to NYSDEC for review June 13,2023. NYSDEC responded June 22, 2023.
  - o Old Marina / Kinnally Cove stability evaluation for dredging.
  - o OU-1 and OU-2 material handling evaluation.
  - o Northwest Extension Area (NEA) bulkhead design.
  - o Design team has engaged West Chester County Department of Environmental Facilities regarding underground utilities.
  - o SPDES Permit Equivalent Application.
  - o Other design elements.
  - o Biological Assessment / Not Likely to Adversely Affect Documentation and Essential Fish Habitat Reports (NMFS).
  - Nationwide Permit 38 Pre-Construction Notification.
  - Joint Permit Application.
  - Draft Permit Matrix Comments received from NYSDEC December 12, 2022, final revision in progress, under internal review.
  - o Water Quality Monitoring Plan Incorporated Karen Woodfield's comments in preparation for call with Manoara Begum; under internal review.
  - TSCA Risk-Based Disposal Action Application Revisions to application in progress. Call with USEPA TSCA held June 28, 2023.

#### 2. UNANTICIPATED PROBLEM AREAS AND RECOMMENDED SOLUTIONS

None this reporting period.

#### 3. PROBLEMS RESOLVED

• None this reporting period.

#### 4. DELIVERABLES SUBMITTED / RECEIVED

• July 6, 2023, Atlantic Richfield to NYSDEC: Hastings June 2023 Monthly Progress Report.

#### 5. UPCOMING EVENTS / ACTIVITIES PLANNED

- Scheduling of subsequent gauging and recovery events will be dependent on the developing COVID-19 situation and AR will continue to communicate with NYSDEC regarding schedule. The tentative schedule is outlined below.
- The next three DNAPL gauging and recovery events are tentatively scheduled to occur the weeks of August 7, 2023, September 5, 2023, and October 2, 2023. As has been the case in past years, there will be no DNAPL event in July due to excessive heat and related health and safety concerns.
- 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 is tentatively scheduled to occur the week of August 7, 2023, in accordance with the schedule modification request, from monthly to quarterly, sent by Atlantic Richfield to NYSDEC on June 4, 2012; the approval letter received from NYSDEC dated April 2, 2013; and the approval letter received from NYSDEC dated May 23, 2023.

#### 6. KEY STAFFING

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

Acronym	Description

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. <u>Draft Interim Remedial Measure Work Plan – Separate Phase Liquid Recovery.</u> December.

	Date	Depth to Product (ft)	Product Apparent Height - Pre-pumping (ft)	Product Apparent Height - Post-pumping (ft)	Approximate Volume of Product Recovered (gallons) <sup>3</sup>	Days Elapsed Between Measurement Readings	Measurement Tool Used	Recovery Procedure Used
MW-12	Cumulative 10/9/2006 - 7/29/2010	-	-	-	5.0	-	-	-
		TOTAL VOLUME RE	COVERED TO DATE F	ROM MW-12 (GALLONS	5.0			
HAOW-12A	0 1 1 0 0 0 0 0 0 10 0 0 0 1						DMT <sup>4</sup>	
HAUW-12A	Cumulative 3/2/2009 - 12/6/2021	-	- DNADL -	-	49.7	-	DMT	-
ŀ	1/3/2022	40.0		umping not completed a	ue to COVID-19 restrictions	25	- DMT <sup>4</sup>	-
ŀ	2/7/2022 3/7/2022	43.0 43.2	0.6	-	-	35 28	DMT <sup>4</sup>	<u> </u>
ŀ	4/4/2022	43.2	0.4	-	-	28	DMT <sup>4</sup>	-
ŀ	5/2/2022	43.1	0.4	-		28	DMT <sup>4</sup>	
ŀ	6/7/2022		0.4	•	-	36	DMT <sup>4</sup>	-
ŀ	7/4/2022	43.2		-	to adverse weather conditions	36	- DIVIT	-
ŀ	8/1/2022	43.1	0.5	-	to adverse weather conditions	55	DMT <sup>4</sup>	-
ŀ	9/6/2022	43.0	0.6	-	-	36	DMT <sup>4</sup>	<u> </u>
ŀ	10/3/2022	42.6	1.0	-		27	DMT <sup>4</sup>	-
ŀ	11/7/2022	43.3	0.3	-		35	DMT <sup>4</sup>	<u> </u>
ŀ	12/5/2022	43.4	0.3	-		28	DMT <sup>4</sup>	
ŀ	1/3/2023	43.4	0.3	•	-	29	DMT <sup>4</sup>	-
ŀ		43.4		-	-	34	DMT <sup>4</sup>	-
	2/6/2023		0.3	-	-		DMT <sup>4</sup>	<del>-</del>
	3/6/2023	43.3	0.3	-	-	28	DMT <sup>4</sup>	-
	4/3/2023	43.3	0.3	-	-	28	DMT <sup>4</sup>	-
	5/1/2023	43.3	0.3	-	-	28		<del>-</del>
	6/5/2023	43.3	0.3	-		35	DMT <sup>4</sup>	-
ŀ	7/3/2023		DIVAPL pull	I I I I I I I I I I I I I I I I I I I	to adverse weather conditions		-	<del>-</del>
		TOTAL VOLUME RECOV	/ERED TO DATE FROM	HAOW-12A (GALLONS	49.7			
HARW-1	Cumulative 9/29/2010 - 12/6/2021			1	0.0			
HARW-1	1/3/2022	-	- DNAPL r	umning not completed d	ue to COVID-19 restrictions	-	-	-
	2/7/2022	No product detected	0.0	-	-	35	DMT <sup>4</sup>	-
ŀ	3/7/2022	No product detected	0.0	_	_	28	DMT <sup>4</sup>	
	4/4/2022	No product detected	0.0	-	_	28	DMT <sup>4</sup>	
ľ	5/2/2022	No product detected	0.0	_	_	28	DMT <sup>4</sup>	_
ľ	6/7/2022	No product detected	0.0	_	-	36	DMT <sup>4</sup>	_
	7/4/2022			nping not completed due	to adverse weather conditions			-
	8/1/2022	No product detected	0.0	-	-	55	DMT <sup>4</sup>	-
	9/6/2022	No product detected	0.0	-	-	36	DMT <sup>4</sup>	-
	10/3/2022	No product detected	0.0	-	-	27	DMT ⁴	=
	11/7/2022	No product detected	0.0	-	-	35	DMT <sup>4</sup>	-
	12/5/2022	No product detected	0.0	-	-	28	DMT <sup>4</sup>	-
	1/3/2023	No product detected	0.0	-	-	29	DMT <sup>4</sup>	<del>-</del>
	2/6/2023	No product detected	0.0	-	-	34	DMT <sup>4</sup>	-
	3/6/2023	No product detected	0.0	-	-	28	DMT <sup>4</sup>	-
	4/3/2023	No product detected	0.0	-	-	28	DMT <sup>4</sup>	-
	5/1/2023	No product detected	0.0	-	-	28	DMT <sup>4</sup>	-
	6/5/2023	No product detected	0.0	ning not correlated 1	to adverse weather diti	35	DMT ⁴	-
	7/3/2023	<del>                                     </del>	DNAPL pun	nping not completed due	to adverse weather conditions		-	<del>-</del>

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	Date	Depth to Product (ft)	Product Apparent Height - Pre-pumping (ft)	Product Apparent Height - Post-pumping (ft)	Approximate Volume of Product Recovered (gallons) <sup>3</sup>	Days Elapsed Between Measurement Readings	Measurement Tool Used	Recovery Procedure Used
HARW-2	Cumulative 9/29/2010 - 12/6/2021	-	-	-	880.0	-	-	-
	1/3/2022				ue to COVID-19 restrictions		- ,	-
	2/8/2022	37.8	2.3	0.33	5	36	DMT <sup>4</sup>	double diaphragm pump
	3/7/2022	39.0	1.0	-	-	27	DMT <sup>4</sup>	-
	4/4/2022	38.3	1.8	-	-	28	DMT <sup>4</sup>	-
	5/3/2022	38.0	2.0	0.08	5	29	DMT <sup>4</sup>	double diaphragm pump
	6/7/2022	39.3	8.0	-	-	35	DMT <sup>4</sup>	-
	7/4/2022	1			to adverse weather conditions		- ,	=
	8/1/2022	38.3	1.8	-	-	55	DMT <sup>4</sup>	-
	9/7/2022	37.8	2.2	0.08	5.4	37	DMT <sup>4</sup>	double diaphragm pump
	10/3/2022	39.8	0.3	-	-	26	DMT <sup>4</sup>	-
	11/7/2022	39.1	0.9	-	-	35	DMT <sup>4</sup>	-
	12/5/2022	38.8	1.2	-	-	28	DMT <sup>4</sup>	-
	1/3/2023	38.0	2.0	0.17	4.8	29	DMT <sup>4</sup>	double diaphragm pump
	2/6/2023	39.4	0.6	-	-	34	DMT <sup>4</sup>	-
	3/6/2023	38.8	1.2	-	-	28	DMT <sup>4</sup>	-
	4/3/2023	38.7	1.3	-	-	28	DMT <sup>4</sup>	-
	5/1/2023	38.0	2.0	0.00	5.2	28	DMT <sup>4</sup>	double diaphragm pump
	6/5/2023	39.2	0.8	-	-	35	DMT <sup>4</sup>	-
	7/3/2023 DNAPL pumping not completed due to adverse weather conditions							-
	TOTAL VOLUME RECOVERED TO DATE FROM HARW-2 (GALLONS) 905.4							
		TOTAL VOLUME REC	OVERED TO DATE PRO	I HARW-2 (GALLONS)	905.4			
HARW-3	Cumulative 10/14/2010 - 12/6/2021	-	-	-	28.6	-		-
	1/3/2022		DNAPL p	oumping not completed d	ue to COVID-19 restrictions		-	-
	2/7/2022	38.4	0.6	-	-	35	DMT ⁴	-
	3/7/2022	38.4	0.6	-	-	28	DMT <sup>4</sup>	-
	4/4/2022	38.5	0.5	-	-	28	DMT ⁴	-
	5/2/2022	38.8	0.2	-	-	28	DMT <sup>4</sup>	-
	6/7/2022	38.4	0.6	-	-	36	DMT <sup>4</sup>	-
	7/4/2022		DNAPL pun	nping not completed due	to adverse weather conditions		-	-
	8/1/2022	38.4	0.6	-	-	55	DMT <sup>4</sup>	-
	9/6/2022	38.5	0.5	-	-	36	DMT <sup>4</sup>	-
	10/3/2022	38.3	0.7	-	-	27	DMT <sup>4</sup>	=
	11/7/2022	38.4	0.6	-	-	35	DMT <sup>4</sup>	-
	12/5/2022	38.3	0.7	-	-	28	DMT <sup>4</sup>	=
	1/3/2023	38.5	0.5	-	-	29	DMT <sup>4</sup>	-
	2/6/2023	38.4	0.6	-	-	34	DMT <sup>4</sup>	-
	3/6/2023	38.3	0.7	-	-	28	DMT <sup>4</sup>	-
	4/3/2023	38.3	0.7	-	-	28	DMT <sup>4</sup>	-
	5/1/2023	38.5	0.5	-	-	28	DMT <sup>4</sup>	-
	6/5/2023	38.5	0.5	-	-	35	DMT <sup>4</sup>	-
	7/3/2023			nping not completed due	to adverse weather conditions	**		-
						•		
			COVERED TO DATE FRO		28.6			

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	Date	Depth to Product (ft)	Product Apparent Height - Pre-pumping (ft)	Product Apparent Height - Post-pumping (ft)	Approximate Volume of Product Recovered (gallons) <sup>3</sup>	Days Elapsed Between Measurement Readings	Measurement Tool Used	Recovery Procedure Used			
HARW-4	Cumulative 10/14/2010 - 12/6/2021	-	-	-	219.0		-	-			
	1/3/2022			oumping not completed d	ue to COVID-19 restrictions		- ,	-			
	2/7/2022	38.2	0.8	-	-	35	DMT <sup>4</sup>	-			
	3/7/2022	37.6	1.4	-	-	28	DMT <sup>4</sup>	-			
	4/4/2022	37.5	1.5	-	-	28	DMT <sup>4</sup>	-			
	5/2/2022	37.8	1.3	-	-	28	DMT <sup>4</sup>	<u> </u>			
	6/7/2022	37.3	1.8	-	-	36	DMT <sup>4</sup>	<u> </u>			
	7/4/2022			ping not completed due	to adverse weather conditions			-			
	8/1/2022	37.4	1.6	-	-	55	DMT <sup>4</sup>	-			
	9/6/2022	37.2	1.8	-	-	36	DMT <sup>4</sup>	<u> </u>			
	10/3/2022	37.0	2.0	0.17	4.8	27	DMT <sup>4</sup>	double diaphragm pump			
	11/7/2022	38.0	1.0	-	-	35	DMT <sup>4</sup>	-			
	12/5/2022	38.0	1.0	-	-	28	DMT <sup>4</sup>	-			
	1/3/2023	38.2	0.8	-	-	29	DMT ⁴	-			
	2/6/2023	38.0	1.0	-	-	34	DMT ⁴	-			
	3/6/2023	38.6	0.4	-	-	28	DMT ⁴	-			
	4/3/2023	38.3	0.7	-	-	28	DMT <sup>4</sup>	-			
	5/1/2023	38.2	0.8	-	-	28	DMT ⁴	-			
	6/5/2023	38.2	0.8	-	-	35	DMT ⁴	-			
	7/3/2023		DNAPL pun	nping not completed due	to adverse weather conditions			-			
			•								
		TOTAL VOLUME REC	COVERED TO DATE FRO	OM HARW-4 (GALLONS)	223.8						
HARW-5	Cumulative 7/18/2011 - 12/6/2021	-	- DNIADL -	-	1257.1		-	-			
	1/3/2022	07.0			ue to COVID-19 restrictions		DMT <sup>4</sup>				
	2/8/2022	37.3	3.0	0.17	7.4	36		double diaphragm pump			
	3/7/2022	38.6	1.8	-	-	27	DMT <sup>4</sup>	double diaphragm pump			
	4/4/2022	36.8	3.5	0.08	8.9	28	DMT <sup>4</sup>	double diaphragm pump			
	5/2/2022	38.7	1.6	-	-	28	DMT <sup>4</sup>	-			
	6/7/2022	36.7	3.6	0.17	8.9	36	DMT <sup>4</sup>	double diaphragm pump			
	7/4/2022				to adverse weather conditions			-			
	8/1/2022	36.6	3.7	0.08	9.4	55	DMT <sup>4</sup>	double diaphragm pump			
	9/7/2022	38.2	2.1	0.08	5.2	37	DMT <sup>4</sup>	double diaphragm pump			
	10/3/2022	39.0	1.3	-	-	26	DMT <sup>4</sup>	-			
	11/8/2022	37.1	3.3	0.25	7.8	36	DMT <sup>4</sup>	double diaphragm pump			
	12/5/2022	37.5	2.8	0.08	7.2	27	DMT <sup>4</sup>	double diaphragm pump			
	1/4/2023	38.2	2.1	0.08	5.2	30	DMT <sup>4</sup>	double diaphragm pump			
	2/6/2023	38.3	2.0	0.08	5.0	33	DMT <sup>4</sup>	double diaphragm pump			
	3/6/2023	38.3	2.0	0.04	5.1	28	DMT <sup>4</sup>	double diaphragm pump			
	4/3/2023	38.3	2.0	0.00	5.2	28	DMT <sup>4</sup>	double diaphragm pump			
	5/1/2023	39.2	1.1	-	-	28	DMT <sup>4</sup>	-			
	6/5/2023	37.5	2.8	0.08	7.2	35	DMT ⁴	double diaphragm pump			
	7/3/2023		DNAPL pun	nping not completed due	7/3/2023 DNAPL pumping not completed due to adverse weather conditions						
		1	DNAPL pun	nping not completed due	to adverse weather conditions		-	-			

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	Date	Depth to Product (ft)	Height - Pre-pumping (ft)	Height - Post-pumping (ft)	Approximate Volume of Product Recovered (gallons) <sup>3</sup>	Days Elapsed Between Measurement Readings	Measurement Tool Used	Recovery Procedure Used
ARW-6	Cumulative 7/19/2011 - 12/6/2021	-	-	-	0.0	-	-	-
	1/3/2022		DNAPL p	oumping not completed di	ue to COVID-19 restrictions		-	i
	2/7/2022	40.2	0.6	-	-	35	DMT <sup>4</sup>	-
	3/7/2022	40.2	0.6	-	-	28	DMT <sup>4</sup>	-
	4/4/2022	40.1	0.7	-	-	28	DMT <sup>4</sup>	-
	5/2/2022	40.1	0.7	-	-	28	DMT <sup>4</sup>	-
	6/7/2022	40.6	0.3	-	-	36	DMT ⁴	1
	7/4/2022		DNAPL pun	nping not completed due	to adverse weather conditions		-	-
	8/1/2022	40.6	0.3	-	-	55	DMT <sup>4</sup>	-
_	9/6/2022	40.1	0.7	-	-	36	DMT <sup>4</sup>	-
	10/3/2022	40.0	0.8	-	-	27	DMT <sup>4</sup>	-
	11/7/2022	40.2	0.6	-	-	35	DMT ⁴	-
	12/5/2022	40.7	0.1	-	-	28	DMT ⁴	ı
	1/3/2023	40.6	0.2	-	-	29	DMT ⁴	-
	2/6/2023	40.6	0.2	-	-	34	DMT <sup>4</sup>	-
	3/6/2023	40.5	0.3	-	-	28	DMT <sup>4</sup>	-
	4/3/2023	40.4	0.4	-	-	28	DMT ⁴	-
	5/1/2023	40.4	0.4	-	-	28	DMT ⁴	-
	6/5/2023	40.2	0.6	-	-	35	DMT ⁴	-
	7/3/2023		DNAPL pun	nping not completed due	to adverse weather conditions		-	_
								i
	TOTAL VOLUME RECOVERED TO DATE FROM HARW-6 (GALLONS) 0.0							
ARW-7	Cumulative 7/18/2011 - 12/6/2021	-	-	-	593.3	-	-	-
-	1/3/2022			oumping not completed di	ue to COVID-19 restrictions		-	-
-	2/7/2022	40.2	1.8	-	-	35	DMT <sup>4</sup>	<del></del>
-	3/7/2022	39.6	2.4	0.1	6.1	28	DMT <sup>4</sup>	double diaphragm pump
-	4/4/2022	41.7	0.3	-	-	28	DMT <sup>4</sup>	-
-	5/2/2022	41.4	0.6	-	-	28	DMT <sup>4</sup>	-
-	6/7/2022	40.9	1.1		-	36	DMT <sup>4</sup>	-
-	7/4/2022				to adverse weather conditions		1	-
-	8/1/2022	40.0	2.0	0.0	5.2	55	DMT <sup>4</sup>	double diaphragm pump
-	9/6/2022	41.8	0.3	-	-	36	DMT <sup>4</sup>	-
L	10/3/2022	41.3	0.8	-	-	27	DMT <sup>4</sup>	<u>-</u>
	11/7/2022	41.1	0.9	-	-	35	DMT <sup>4</sup>	-
	12/5/2022	40.9	1.1	-	-	28	DMT <sup>4</sup>	-
	1/4/2023	40.0	2.0	0.3	4.4	30	DMT <sup>4</sup>	double diaphragm pump
	2/6/2023	41.5	0.5	-	-	33	DMT <sup>4</sup>	-
	3/6/2023	41.1	0.9	-	-	28	DMT <sup>4</sup>	-
	4/3/2023	41.0	1.0	-	-	28	DMT⁴	-
	5/1/2023	40.7	1.3	-	-	28	DMT <sup>4</sup>	-
	6/5/2023	40.6	1.4	-	-	35	DMT <sup>4</sup>	-
	7/3/2023		DNAPL pun	nping not completed due	to adverse weather conditions	-	-	-
				OM HARW-7 (GALLONS)	609.0			1

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	Date	Depth to Product (ft)	Product Apparent Height - Pre-pumping (ft)	Product Apparent Height - Post-pumping (ft)	Approximate Volume of Product Recovered (gallons) <sup>3</sup>	Days Elapsed Between Measurement Readings	Measurement Tool Used	Recovery Procedure Used
HARW-8	Cumulative 7/19/2011 - 12/6/2021	-	-		41.3	-	-	
	1/3/2022		DNAPL p	umping not completed du	ie to COVID-19 restrictions		-	-
	2/7/2022	42.2	0.8	-	-	35	DMT <sup>4</sup>	-
	3/7/2022	41.9	1.1	-	-	28	DMT ⁴	-
	4/4/2022	41.8	1.3	-	-	28	DMT <sup>4</sup>	-
	5/2/2022	41.7	1.3	-	-	28	DMT <sup>4</sup>	-
	6/7/2022	41.7	1.3	-	-	36	DMT ⁴	-
	7/4/2022		DNAPL pun	ping not completed due t	o adverse weather conditions		-	-
	8/1/2022	41.5	1.5	-	-	55	DMT ⁴	-
	9/6/2022	41.4	1.6	-	-	36	DMT ⁴	-
	10/3/2022	41.3	1.8	-	-	27	DMT <sup>4</sup>	-
	11/8/2022	41.0	2.0	0.5	3.9	36	DMT ⁴	double diaphragm pump
	12/5/2022	42.4	0.6	-	-	27	DMT ⁴	-
	1/3/2023	42.8	0.3	-	-	29	DMT ⁴	-
	2/6/2023	42.3	0.8	-	-	34	DMT ⁴	-
	3/6/2023	42.2	0.8	-	-	28	DMT ⁴	-
	4/3/2023	42.1	0.9	-	-	28	DMT ⁴	-
	5/1/2023	42.1	0.9	-	-	28	DMT ⁴	-
	6/5/2023	42.0	1.0	-	-	35	DMT ⁴	-
	7/3/2023		DNAPL pun	ping not completed due t	o adverse weather conditions		-	-
			'					
		TOTAL VOLUME REC	COVERED TO DATE FRO	OM HARW-8 (GALLONS)	45.2	•		
	_			· ·	·	·	·	

#### TOTAL VOLUME RECOVERED TO DATE FROM ALL WELLS (GALLONS)

3206.3

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

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

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

Vertical Depth to Bottom: 39 ft

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

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.

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<sup>&</sup>lt;sup>1</sup> Reserved

<sup>&</sup>lt;sup>2</sup> Reserved

<sup>&</sup>lt;sup>3</sup> 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).

<sup>4</sup> 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.