Atlantic Richfield Company

Paul G. Johnson

Liability Manager

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March 5, 2021

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, February 2021 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 February 2021 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 February 1, 2021 through February 28, 2021.

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

Sincerely,

IM. JL

Paul G. Johnson Liability Manager

Enclosure



- Page 2
- 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 Andrew Guglielmi, 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 Michael Facelle, P.E. Westchester County 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 189

PREPARED BY: Atlantic Richfield Company Paul Johnson

REPORTING PERIOD: February 1, 2021 through February 28, 2021

1. PROGRESS MADE THIS REPORTING PERIOD:

- DNAPL gauging and recovery activities were not performed in February 2021 due to heavy snow and freezing conditions throughout the month.
- Progress continued on these on-going design-related activities:
 - *Basis of Design Report for Compensatory Wetland Construction* submitted December 22nd, 2020.
 - Basis of Design Report for Old Marina and Kinnally Cove Dredging and Restoration submitted December 22nd, 2020.
 - o Draft Wetland Monitoring, Maintenance and Adaptive Management Plan.
 - Draft SPDES Permit Equivalent Application.
 - AR provided modeling files to Village on Teams site January 8, 2021 and followed up in February.
 - Village and AR to discuss Old Marina and Kinnally Cove backfill concept presented in 2020 Basis of Design Report.

2. UNANTICIPATED PROBLEM AREAS AND RECOMMENDED SOLUTIONS

• None this reporting period.

3. PROBLEMS RESOLVED

• None this reporting period.

4. DELIVERABLES SUBMITTED / RECEIVED

• February 8th, 2021, Atlantic Richfield to NYSDEC: *Hastings January 2021 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 as follows:
 - The next three DNAPL gauging and recovery events are tentatively scheduled to occur the weeks of March 1st, April 5th, and May 3rd, 2021.
- 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 upcoming LNAPL IRM events are tentatively scheduled to occur the week of April 5th, 2021 and the week of August 5th, 2021 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. <u>DATA</u>

• 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</u> <u>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) 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 RE	COVERED TO DATE FR	OM MW-12 (GALLONS)	5.0			
		1			10.7		DMT ⁴	
AOW-12A	Cumulative 3/2/2009 - 12/10/2018	- 42.9	- 0.7	-	49.7	-	DMT ⁴	-
-	1/14/2019	42.9		-	-	35	DMT ⁴	-
-	2/4/2019 3/11/2019	42.3	<u>1.3</u> 1.2	-	-	21 35	DMT ⁴	-
ŀ	4/1/2019	42.4	1.2	-	-	21	DMT ⁴	-
ŀ	5/6/2019	42.6	1.0	-	-	35	DMT ⁴	-
ŀ	6/3/2019	42.3	1.1		-	28	DMT ⁴	-
ŀ	8/5/2019	42.4	1.2		-	63	DMT ⁴	-
-	9/9/2019	42.3	1.2		-	35	DMT ⁴	
-	10/7/2019	42.4	1.0		-	28	DMT ⁴	-
ŀ	11/4/2019	42.0	1.0	-	-	28	DMT ⁴	-
-	12/2/2019	42.4		- NAPL pumping not requir	- od to be completed	20	-	-
·	1/13/2020	42.6	1.0	-		70	DMT ⁴	
ŀ	2/3/2020	42.4	1.2	-		21	DMT ⁴	
-	3/2/2020	42.9	0.7	-		28	DMT ⁴	
·	4/6/2020	42.5			e to COVID-19 restrictions	20		
ŀ	5/4/2020				le to COVID-19 restrictions		-	-
·	6/1/2020				le to COVID-19 restrictions			-
ŀ	7/6/2020	42.8	0.8	umping not completed du		126	DMT ⁴	-
-	8/3/2020	42.8	1.0	-	-	28	DMT ⁴	-
-	9/8/2020	42.6	1.0		-	36	DMT ⁴	-
-		42.6		-	-	36 27	DMT ⁴	-
-	10/5/2020		1.0	-	-		DMT ⁴	-
	11/2/2020	42.5	1.1	-	-	28	DMT ⁴	-
-	12/7/2020	42.7	0.9	-	-	35		-
	1/4/2021	42.7	0.9	-	-	28	DMT ⁴	-
-	2/1/2021		DNAPL pur	ping not completed due t	o adverse weather conditions		-	-
	T			HAOW-12A (GALLONS)	40.7			
	T	OTAL VOLUME RECOV	ERED TO DATE FROM	HAOW-12A (GALLONS)	49.7			

	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-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		D	NAPL pumping not requir	ed 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				e to COVID-19 restrictions		-	-
	5/4/2020				e to COVID-19 restrictions		-	-
	6/1/2020			umping not completed du	e to COVID-19 restrictions		-	-
	7/6/2020	No product detected	0.0	-	-	126	DMT ⁴	-
	8/3/2020	No product detected	0.0	-	-	28	DMT ⁴	-
	9/8/2020	No product detected	0.0	-	-	36	DMT ⁴	-
	10/5/2020	No product detected	0.0	-	-	27	DMT ⁴	-
	11/2/2020	No product detected	0.0	-	-	28	DMT ⁴	-
	12/7/2020	No product detected	0.0	-	-	35	DMT ⁴	-
	1/4/2021	No product detected	0.0	-	-	28	DMT ⁴	-
	2/1/2021		DNAPL pur	ping not completed due t	o adverse weather conditions		-	-
		TOTAL VOLUME REC	OVERED TO DATE FRO	M HARW-1 (GALLONS)	0.0			

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

	Dute	Dopth to Draduat (ft)	Product Apparent Height -	Product Apparent Height -	Approximate Volume of Product Recovered (gallons) ³	Days Elapsed Between	Measurement Tool	Recovery Procedure Use
	Date	Depth to Product (ft)	Pre-pumping (ft)	Post-pumping (ft)		Measurement Readings	Used	Recovery Procedure Use
4 <i>RW-</i> 2	Cumulative 9/29/2010 - 12/10/2018	-	-	-	812.3	-	- DMT ⁴	
	1/14/2019	38.8	1.3	-	-	35	DMT ⁴	
	2/4/2019 3/11/2019	38.0 38.8	2.0	0.08	5	21 35	DMT ⁴	double diaphragm pump
	4/1/2019	38.5	1.2	-	-	21	DMT ⁴	
				-			DMT ⁴	
	5/6/2019	36.8	3.2	0.25	7.6	35	DMT ⁴	double diaphragm pump
	6/3/2019 8/5/2019	38.8 36.8	1.3 3.2	- 0.25	- 7.6	28 63	DMT ⁴	-
	9/9/2019	38.5	<u> </u>	-	7.6	35	DMT ⁴	double diaphragm pump
	10/7/2019	37.8	2.3	0.08	5.7	28	DMT ⁴	double diaphragm pump
	11/4/2019	39.8	0.2	0.08		28	DMT ⁴	
	12/2/2019	39.0		NAPL pumping not requir		20	-	
	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	00.0			le to COVID-19 restrictions	20	-	-
	5/4/2020				le to COVID-19 restrictions			-
	6/1/2020				e to COVID-19 restrictions		-	-
	7/6/2020	35.2	4.8	0.08	12.4	126	DMT ⁴	double diaphragm pump
	8/3/2020	39.0	1.0			28	DMT ⁴	-
	9/8/2020	38.4	1.6			36	DMT ⁴	-
	10/5/2020	37.8	2.3	0.00	5.9	27	DMT ⁴	double diaphragm pump
	11/2/2020	39.5	0.5			28	DMT ⁴	-
	12/7/2020	39.1	0.9			35	DMT ⁴	-
	1/4/2021	38.0	2.0	0.08	5	28	DMT ⁴	double diaphragm pump
	2/1/2021		DNAPL pun	nping not completed due t	o adverse weather conditions		-	
		TOTAL VOLUME REC	OVERED TO DATE FRO	M HARW-2 (GALLONS)	867.6			
RW-3	Cumulative 10/14/2010 - 12/10/2018	-	-	-	28.6	_		
RW-3	Cumulative 10/14/2010 - 12/10/2018 1/14/2019	- 38.7	-	-	28.6	-	- DMT ⁴	-
ARW-3	1/14/2019	- 38.7 38.7	- 0.3	-	-	- 35 21	- DMT ⁴ DMT ⁴	-
ARW-3	1/14/2019 2/4/2019	38.7	0.3	-		21	DMT ⁴	-
RW-3	1/14/2019 2/4/2019 3/11/2019	38.7 38.6	0.3 0.4	-	- - - -	21 35	DMT ⁴ DMT ⁴	-
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019	38.7 38.6 38.8	0.3 0.4 0.3		- - - -	21 35 21	DMT ⁴ DMT ⁴ DMT ⁴	-
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 5/6/2019	38.7 38.6 38.8 38.8 38.8	0.3 0.4 0.3 0.3	- - -	- - - - -	21 35 21 35	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 5/6/2019 6/3/2019	38.7 38.6 38.8 38.8 38.8 38.6	0.3 0.4 0.3 0.3 0.4	- - - -	- - - - - -	21 35 21 35 28	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	- - - - -
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 5/6/2019 6/3/2019 8/5/2019	38.7 38.6 38.8 38.8 38.8 38.6 38.6 38.5	0.3 0.4 0.3 0.3 0.4 0.5	- - - - - -	- - - - - - - - - -	21 35 21 35 28 63	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	- - - - - -
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 5/6/2019 6/3/2019 8/5/2019 9/9/2019	38.7 38.6 38.8 38.8 38.6 38.6 38.5 38.5 38.3	0.3 0.4 0.3 0.3 0.4 0.5 0.7	- - - - - - - -	- - - - - -	21 35 21 35 28 63 35	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	- - - - - - - -
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 5/6/2019 6/3/2019 8/5/2019 9/9/2019 10/7/2019	38.7 38.6 38.8 38.8 38.6 38.5 38.5 38.3 38.5	0.3 0.4 0.3 0.3 0.4 0.5 0.7 0.5	- - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -	21 35 21 35 28 63 35 28 28	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	- - - - - - - - - - - -
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 5/6/2019 6/3/2019 8/5/2019 9/9/2019 10/7/2019 11/4/2019	38.7 38.6 38.8 38.8 38.6 38.6 38.5 38.5 38.3	0.3 0.4 0.3 0.3 0.4 0.5 0.7 0.5 0.5 0.5	- - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -	21 35 21 35 28 63 35	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	- - - - - - - - - - - - - - -
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 6/3/2019 8/5/2019 9/9/2019 10/7/2019 11/4/2019 12/2/2019	38.7 38.6 38.8 38.8 38.6 38.5 38.5 38.3 38.5 38.5	0.3 0.4 0.3 0.3 0.4 0.5 0.7 0.5 0.5 0.5 D	- - - - - - - - NAPL pumping not requir		21 35 21 35 28 63 35 28 28 28 28	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	- - - - - - - - - - - - - - - - -
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 6/3/2019 8/5/2019 9/9/2019 10/7/2019 11/4/2019 12/2/2019 1/13/2020	38.7 38.6 38.8 38.8 38.6 38.5 38.5 38.5 38.5 38.5 38.5	0.3 0.4 0.3 0.4 0.5 0.7 0.5 0.5 D	- - - - - - - - - - - - - - - - - - -		21 35 21 35 28 63 35 28 28 28 28 28 70	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	- - - - - - - - - - - - - - - - - - -
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 6/3/2019 8/5/2019 9/9/2019 10/7/2019 10/7/2019 11/4/2019 12/2/2019 1/13/2020 2/3/2020	38.7 38.6 38.8 38.8 38.6 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5	0.3 0.4 0.3 0.3 0.4 0.5 0.7 0.5 0.5 0.5 0.7	- - - - - - - - NAPL pumping not requir - -		21 35 21 35 28 63 35 28 28 28 28 28 28 28 28 28 28 28 28 28	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	- - - - - - - - - - - - - - - - - - -
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 6/3/2019 8/5/2019 9/9/2019 10/7/2019 11/4/2019 12/2/2019 1/13/2020 2/3/2/2020	38.7 38.6 38.8 38.8 38.6 38.5 38.5 38.5 38.5 38.5 38.5	0.3 0.4 0.3 0.4 0.5 0.7 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	- - - - - - - - - - - - - - - - - - -		21 35 21 35 28 63 35 28 28 28 28 28 70	DMT ⁴ DMT ⁴	- - - - - - - - - - - - - - - - - - -
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 5/6/2019 6/3/2019 8/5/2019 9/9/2019 10/7/2019 11/4/2019 12/2/2019 1/13/2020 2/3/2020 3/2/2/2020 4/6/2020	38.7 38.6 38.8 38.8 38.6 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5	0.3 0.4 0.3 0.3 0.4 0.5 0.7 0.5 0.5 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	- - - - - - - NAPL pumping not requir - - - - - - - - - - - - - - - - - - -		21 35 21 35 28 63 35 28 28 28 28 28 28 28 28 28 28 28 28 28	DMT ⁴ DMT ⁴	
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 6/3/2019 8/5/2019 9/9/2019 10/7/2019 11/4/2019 2/3/2020 3/2/2020 4/6/2020 5/4/2020	38.7 38.6 38.8 38.8 38.6 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5	0.3 0.4 0.3 0.4 0.5 0.7 0.5 0.5 0.5 0.7 0.5 0.5 0.7 0.5 DNAPL p	- - - - - - - - - - - - - - - - - - -		21 35 21 35 28 63 35 28 28 28 28 28 28 28 28 28 28 28 28 28	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ - - - - - - - - - - - - - - - - - - -	
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 5/6/2019 6/3/2019 8/5/2019 10/7/2019 11/4/2019 12/2/2019 2/3/2020 3/2/2020 4/6/2020 5/4/2020 6/1/2020	38.7 38.6 38.8 38.8 38.6 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5	0.3 0.4 0.3 0.4 0.5 0.7 0.5 0.5 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 DNAPL p DNAPL p	- - - - - - - NAPL pumping not requir - - - - - - - - - - - - - - - - - - -		21 35 21 35 28 63 35 28 28 28 70 21 28	DMT ⁴ DMT ⁴	
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 5/6/2019 6/3/2019 9/9/2019 10/7/2019 11/4/2019 12/2/2019 1/3/2020 2/3/2020 3/2/2020 5/4/2020 6/1/2020 7/4/2020	38.7 38.6 38.8 38.8 38.6 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5	0.3 0.4 0.3 0.4 0.5 0.7 0.5 0.5 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.5 0.5 0.7 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	- - - - - - - - - - - - - - - - - - -		21 35 21 35 28 63 35 28 28 28 70 21 28 	DMT ⁴ DMT ⁴	
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 6/3/2019 8/5/2019 9/9/2019 10/7/2019 11/4/2019 11/4/2019 12/2/2019 1/13/2020 2/3/2/2020 3/2/2020 6/1/2020 6/1/2020 8/3/2020	38.7 38.6 38.8 38.8 38.6 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5	0.3 0.4 0.3 0.4 0.5 0.7 0.5 0.5 0.5 0.7 0.5 0.7 0.5 DNAPL p DNAPL p DNAPL p 0.5 0.5 0.5	- - - - - - - - - - - - - - - - - - -		21 35 21 35 28 63 35 28 28 70 21 28 70 21 28 126 28	DMT ⁴ DMT ⁴	
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 6/3/2019 8/5/2019 9/9/2019 10/7/2019 11/4/2019 2/3/2020 3/2/2020 3/2/2020 4/6/2020 5/4/2020 7/6/2020 8/3/2020 9/8/2020	38.7 38.6 38.8 38.8 38.6 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.3 38.5	0.3 0.4 0.3 0.4 0.5 0.7 0.5 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.5 0.7 0.5 0.5 0.7 0.5 0.5 0.7 0.5 0.5 0.5 0.7 0.5 0.5 0.7 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	- - - - - - - - - - - - - - - - - - -		21 35 21 35 28 63 35 28 28 28 70 21 28 126 28 36	DMT ⁴ DMT ⁴	
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 5/6/2019 6/3/2019 8/5/2019 9/9/2019 10/7/2019 11/4/2019 2/3/2020 3/2/2020 3/2/2020 5/4/2020 6/1/2020 7/6/2020 8/3/2020 9/8/2020 10/5/2020	38.7 38.6 38.8 38.8 38.6 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.4 38.5 38.4	0.3 0.4 0.3 0.4 0.5 0.7 0.5 0.5 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.6 0.6 0.6 0.5	NAPL pumping not requir		21 35 21 35 28 63 35 28 28 28 70 21 28 70 21 28 70 21 28 70 21 28 36 27	DMT ⁴ DMT ⁴	
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 5/6/2019 6/3/2019 8/5/2019 9/9/2019 10/7/2019 11/4/2019 2/3/2020 3/2/2020 3/2/2020 3/2/2020 3/2/2020 3/2/2020 9/8/2020 9/8/2020 9/8/2020 10/5/2020 11/2/2020	38.7 38.6 38.8 38.8 38.6 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.4 38.5	0.3 0.4 0.3 0.4 0.5 0.7 0.5 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.6 0.5 0.6 0.5	- - - - - - - - - - - - - - - - - - -		21 35 21 35 28 63 35 28 28 28 28 70 21 28 126 28 126 28 36 27 28	DMT ⁴ DMT ⁴	
RW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 5/6/2019 6/3/2019 8/5/2019 9/9/2019 10/7/2019 11/4/2019 2/3/2020 2/3/2020 3/2/2020 4/6/2020 6/3/2020 1/1/3/2020 2/3/2020 4/6/2020 6/1/2020 9/8/2020 10/5/2020 11/2/2020 11/2/2020 12/7/2020	38.7 38.6 38.8 38.8 38.6 38.5	0.3 0.4 0.3 0.4 0.5 0.7 0.5 0.5 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8	NAPL pumping not requir		21 35 21 35 28 63 35 28 28 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 35 28 28 28 28 28 28 28 28 28 28	DMT ⁴ DMT ⁴	
ŔW-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 6/3/2019 8/5/2019 9/9/2019 10/7/2019 11/4/2019 2/3/2020 2/3/2020 3/2/2020 3/2/2020 3/2/2020 3/2/2020 3/2/2020 3/2/2020 9/8/2020 9/8/2020 10/5/2020 11/2/2020 11/2/2020 11/2/2020 11/2/2020 11/2/2020 11/2/2020 11/2/2020 11/2/2020 11/2/2020 11/2/2020 11/2/2020 11/2/2020 12/7/2020 12/7/2020	38.7 38.6 38.8 38.8 38.6 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.5 38.4 38.5	0.3 0.4 0.3 0.4 0.5 0.7 0.5 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8			21 35 21 35 28 63 35 28 28 28 28 70 21 28 126 28 126 28 36 27 28	DMT ⁴ DMT ⁴ DM	
ŔŴ-3	1/14/2019 2/4/2019 3/11/2019 4/1/2019 5/6/2019 6/3/2019 8/5/2019 9/9/2019 10/7/2019 11/4/2019 2/3/2020 2/3/2020 3/2/2020 4/6/2020 6/3/2020 1/1/3/2020 2/3/2020 4/6/2020 6/1/2020 9/8/2020 10/5/2020 11/2/2020 11/2/2020 12/7/2020	38.7 38.6 38.8 38.8 38.6 38.5	0.3 0.4 0.3 0.4 0.5 0.7 0.5 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.7 0.5 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8			21 35 21 35 28 63 35 28 28 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 35 28 28 28 28 28 28 28 28 28 28	DMT ⁴ DMT ⁴	

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

	Data	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
	Date	Depth to Product (It)	Fre-pullipling (it)	Post-pullipling (II)		Measurement Readings	Useu	Recovery Procedure Osed
HARW-4	Cumulative 10/14/2010 - 12/10/2018	-	-	-	213.8	-	- DMT ⁴	-
	1/14/2019	40.4	0.6			35	DMT DMT ⁴	-
	2/4/2019	40.4	0.6			21	DMT ⁴	-
	3/11/2019 4/1/2019	40.3 39.8	0.8			35 21	DMT DMT ⁴	
		39.8 40.0				35	DMT ⁴	-
	5/6/2019	40.0	<u>1.0</u> 1.0			28	DMT ⁴	-
	6/3/2019 8/5/2019	40.0 39.8	1.0			63	DMT ⁴	-
						35	DMT ⁴	
	<u>9/9/2019</u> 10/7/2019	39.8 39.6	<u>1.3</u> 1.4			28	DMT ⁴	
		39.6				28	DMT ⁴	-
	<u>11/4/2019</u> 12/2/2019	39.4	1.6	 NAPL pumping not requir		28	-	
	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	40.5			le to COVID-19 restrictions	20	-	
	5/4/2020				le to COVID-19 restrictions		-	-
	6/1/2020				e to COVID-19 restrictions		-	-
	7/6/2020	39.8	1.3			126	DMT ⁴	-
	8/3/2020	37.5	1.5			28	DMT ⁴	-
	9/8/2020	37.5	1.5			36	DMT ⁴	-
	10/5/2020	37.3	1.8			27	DMT ⁴	-
	11/2/2020	37.3	1.8			28	DMT ⁴	-
	12/7/2020	37.0	2.0	0.00	5.2	35	DMT ⁴	double diaphragm pump
	1/4/2021	38.1	0.9			28	DMT ⁴	
	2/1/2021			ping not completed due t	o adverse weather conditions		-	-
		TOTAL VOLUME REC	OVERED TO DATE FRO	M HARW-4 (GALLONS)	219.0			
HARW-5	Cumulative 7/18/2011 - 12/11/2018	TOTAL VOLUME REC	OVERED TO DATE FRO	M HARW-4 (GALLONS)	219.0 1036.4	-	-	-
HARW-5	Cumulative 7/18/2011 - 12/11/2018 1/14/2019			· · · · · · · · · · · · · · · · · · ·	+	- 34	- DMT ⁴	- double diaphragm pump
HARW-5		- 36.6 38.1	- 3.7 2.2	- 0.1 0.1	1036.4 9.4 5.4	34 21	DMT ⁴	
IARW-5	1/14/2019	- 36.6 38.1 36.6	- 3.7	- 0.1	1036.4 9.4 5.4 9.4	34 21 35	DMT ⁴ DMT ⁴	double diaphragm pump
IARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019	- 36.6 38.1 36.6 38.3	3.7 2.2 3.7 2.0	- 0.1 0.1 0.1 0.1 0.1	1036.4 9.4 5.4 9.4 5.0	34 21 35 22	DMT ⁴ DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump
HARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019	- 36.6 38.1 36.6 38.3 36.7	3.7 2.2 3.7 2.0 3.6	- 0.1 0.1 0.1	1036.4 9.4 5.4 9.4 5.0 9.1	34 21 35 22 35	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump double diaphragm pump
HARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019	36.6 38.1 36.6 38.3 36.7 37.3	3.7 2.2 3.7 2.0 3.6 3.0	0.1 0.1 0.1 0.1 0.1 0.1 0.1	1036.4 9.4 5.4 9.4 5.0 9.1 7.6	34 21 35 22 35 28	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump double diaphragm pump double diaphragm pump
HARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 8/6/2019	36.6 38.1 36.6 38.3 36.7 37.3 35.1	3.7 2.2 3.7 2.0 3.6 3.0 5.3	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5	34 21 35 22 35 28 63	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump double diaphragm pump double diaphragm pump double diaphragm pump
HARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 8/6/2019 9/10/2019	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6	3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6	34 21 35 22 35 28 63 35	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump double diaphragm pump double diaphragm pump double diaphragm pump double diaphragm pump
HARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 8/6/2019 9/10/2019 10/7/2019	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6 37.5	3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.1	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2	34 21 35 22 35 28 63 35 27	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump
HARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 8/6/2019 9/10/2019	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6	3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8 2.8	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.0	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2 7.0	34 21 35 22 35 28 63 35	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump
łARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 8/6/2019 9/10/2019 10/7/2019 11/4/2019 11/4/2019	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6 37.5 37.5	3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8 2.8 2.8 D	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.1 0.2 NAPL pumping not requir	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2 7.0 ed to be completed	34 21 35 22 35 28 63 35 28 63 35 27 28	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump
HARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 9/10/2019 10/7/2019 11/4/2019 11/4/2019 1/1/2/2019 1/1/2/2019 1/1/2/2019 1/1/2/2019 1/1/2/2019 1/13/2020	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6 37.5 37.5 37.5 35.0	3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8 2.8 2.8 D 5.3	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.1 0.2 NAPL pumping not requir 0.1	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2 7.0 ed to be completed 13.7	34 21 35 22 35 28 63 35 27 28 27 28 70 70	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump
HARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 8/6/2019 9/10/2019 10/7/2019 11/4/2019 12/2/2019 1/3/2020 2/3/2020	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.3 35.0 38.3	3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8 2.8 2.8 D 5.3 2.0	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2 7.0 ed to be completed 13.7 3.9	34 21 35 22 35 28 63 35 27 28 63 35 27 28 70 21	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump
HARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 9/10/2019 10/7/2019 11/4/2019 11/4/2019 1/1/2/2019 1/1/2/2019 1/1/2/2019 1/1/2/2019 1/1/2/2019 1/13/2020	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6 37.5 37.5 37.5 35.0	3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8 2.8 2.8 D 5.3 2.0 2.8	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.1 0.2 NAPL pumping not requir 0.1 0.5 0.00	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2 7.0 ed to be completed 13.7	34 21 35 22 35 28 63 35 27 28 27 28 70 70	DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump
HARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 8/6/2019 9/10/2019 10/7/2019 11/4/2019 12/2/2019 1/13/2020 2/3/2/2020 3/2/2020	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.3 35.0 38.3	- 3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8 2.8 D 5.3 2.0 2.8 DNAPL p DNAPL p	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2 7.0 ed to be completed 13.7 3.9 7.4 te to COVID-19 restrictions to COVID-19 restrictions	34 21 35 22 35 28 63 35 27 28 63 35 27 28 70 21	DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump
IARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 9/10/2019 10/7/2019 11/4/2019 1/1/2019 2/3/2020 3/2/2020 4/6/2020	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.3 35.0 38.3	- 3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8 2.8 D 5.3 2.0 2.8 DNAPL p DNAPL p	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2 7.0 ed to be completed 13.7 3.9 7.4 be COVID-19 restrictions	34 21 35 22 35 28 63 35 27 28 63 35 27 28 70 21	DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump
IARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 9/10/2019 10/7/2019 11/4/2019 2/3/2020 3/2/2020 4/6/2020 5/4/2020	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.5 37.3 35.0 38.3	- 3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8 2.8 D 5.3 2.0 2.8 DNAPL p DNAPL p	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2 7.0 ed to be completed 13.7 3.9 7.4 te to COVID-19 restrictions te to COVID-19 restrictions	34 21 35 22 35 28 63 35 27 28 63 35 27 28 70 21	DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump
IARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 9/10/2019 10/7/2019 11/4/2019 11/4/2019 2/3/2020 3/2/2020 4/6/2020 6/1/2020 6/1/2020 8/3/2020	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6 37.5 37.5 37.5 37.5 - 35.0 38.3 37.5 - - - - - - - - - - - - -	3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8 2.8 D 5.3 2.0 2.8 DNAPL p DNAPL p DNAPL p DNAPL p 5.3 2.0	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2 7.0 ed to be completed 13.7 3.9 7.4 9.6 13.7 3.9 7.4 0.0 VID-19 restrictions te to COVID-19 restrictions to COVID-19 restrictions 4.8	34 21 35 22 35 28 63 35 27 27 28 70 21 28 70 21 28	DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump
IARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 9/10/2019 10/7/2019 11/4/2019 12/2/2019 1/1/3/2020 2/3/2020 3/2/2020 6/4/2020 6/4/2019	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6 37.5 37.5 37.5 35.0 38.3 37.5 35.0 38.3 37.5	- 3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8 2.8 D 5.3 2.0 2.8 DNAPL p DNAPL p DNAPL p DNAPL p 5.3 2.0 3.3	- 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2 7.0 ed to be completed 13.7 3.9 7.4 to COVID-19 restrictions to COVID-19 restrictions 13.5 4.8 8.5	34 21 35 22 35 28 63 35 27 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 35 27 28 35 27 28 35 27 28 28 35 27 28 28 28 28 28 28 28 28 28 28	DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump
IARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 9/10/2019 10/7/2019 11/4/2019 11/4/2019 2/3/2020 3/2/2020 4/6/2020 6/1/2020 6/1/2020 8/3/2020	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6 37.5 37.5 37.5 37.5 - 35.0 38.3 37.5 - - - - - - - - - - - - -	3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8 2.8 D 5.3 2.0 2.8 DNAPL p DNAPL p DNAPL p DNAPL p 5.3 2.0	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2 7.0 ed to be completed 13.7 3.9 7.4 9.6 13.7 3.9 7.4 0.0 VID-19 restrictions te to COVID-19 restrictions to COVID-19 restrictions 4.8	34 21 35 22 35 28 63 35 27 27 28 70 21 28 70 21 28	DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump
IARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 9/10/2019 10/7/2019 11/4/2019 12/2/2019 1/1/2020 2/3/2020 3/2/2020 4/6/2020 5/4/2020 7/6/2020 8/3/2020 9/8/2020	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6 37.5 37.5 37.5 35.0 38.3 37.5 35.0 38.3 37.5	- 3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8 2.8 D 5.3 2.0 2.8 DNAPL p DNAPL p DNAPL p DNAPL p 5.3 2.0 3.3	- 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2 7.0 ed to be completed 13.7 3.9 7.4 to COVID-19 restrictions to COVID-19 restrictions 13.5 4.8 8.5	34 21 35 22 35 28 63 35 27 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 35 27 28 35 27 28 35 27 28 28 35 27 28 28 28 28 28 28 28 28 28 28	DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump
IARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 9/10/2019 10/7/2019 11/4/2019 11/4/2019 2/3/2020 3/2/2020 3/2/2020 5/4/2020 5/4/2020 7/6/2020 8/3/2020 9/8/2020 10/6/2020	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6 37.5 37.5 35.0 38.3 37.5 35.0 38.3 37.5 35.0 38.3 37.0 38.1	- 3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8 2.8 DNAPL p DNAPL p DNAPL p DNAPL p 5.3 2.0 3.3 2.0 3.3 2.0	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2 7.0 ed to be completed 13.7 3.9 7.4 to COVID-19 restrictions to COVID-19 restrictions to COVID-19 restrictions to COVID-19 restrictions 4.8 8.5 5.7	34 21 35 22 35 28 63 35 27 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 35 27 28 35 27 28 35 27 28 35 27 28 35 27 28 35 27 28 35 27 28 35 27 28 35 27 28 35 27 28 35 27 28 35 27 28 28 35 27 28 28 28 28 28 28 28 28 28 28	DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump
IARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 9/10/2019 10/7/2019 11/4/2019 2/3/2020 3/2/2020 3/2/2020 4/6/2020 6/1/2020 8/3/2020 9/8/2020 10/6/2020 11/2/2020	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6 37.5 37.5 37.5 35.0 38.3 37.5 - - - - - - - - - - - - -	- 3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8 2.8 D 5.3 2.0 2.8 DNAPL p DNAPL p DNAPL p DNAPL p 5.3 2.0 3.3 2.0 3.3 2.3 2.8	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2 7.0 ed to be completed 13.7 3.9 7.4 et to COVID-19 restrictions 6.5 7.7 7.2	34 21 35 22 35 28 63 35 27 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 27 28 28 27 28 27 28 28 28 28 28 27 28 28 28 28 28 28 28 28 28 28	DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump
IARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 9/10/2019 10/7/2019 10/7/2019 11/4/2019 12/2/2019 1/1/4/2019 2/3/2020 3/2/2020 3/2/2020 3/2/2020 3/2/2020 3/2/2020 3/2/2020 3/2/2020 3/3/2/202 10/6/2020 10/6/2020 11/2/2020 11/2/2020 12/3/2020 10/6/2020 11/2/2020	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6 37.5 37.5 35.0 38.3 37.5 - - - - - - - - - - - - -	- 3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8 2.8 DNAPL p DNAPL p DNAPL p DNAPL p DNAPL p DNAPL p 3.3 2.0 3.3 2.3 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8	- 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2 7.0 ed to be completed 13.7 3.9 7.4 et to COVID-19 restrictions et to COVID-19 restrictions et to COVID-19 restrictions 13.5 4.8 8.5 5.7 7.2 7.2 7.2	34 21 35 22 35 28 63 35 27 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 77 28 70 21 28 70 28 70 21 28 70 70 21 28 70 70 21 28 70 70 28 70 70 28 70 70 70 70 70 70 70 70 70 70	DMT ⁴ DMT ⁴ DM	double diaphragm pump double diaphragm pump
IARW-5	1/14/2019 2/4/2019 3/11/2019 4/2/2019 5/7/2019 6/4/2019 9/10/2019 10/7/2019 11/4/2019 11/4/2019 2/3/2020 3/2/2020 3/2/2020 4/6/2020 6/1/2020 9/8/2020 11/4/2019 1/13/2020 3/2/2020 3/2/2020 3/2/2020 11/1/2020 11/1/2/2020 11/1/2/2020 11/1/2/2020 11/1/2/2020 11/1/2/2020 11/1/2/2020 11/1/2/2020 11/1/2/2020 11/1/2/2020 11/1/2/2020 11/1/2/2020 11/1/2/2020 11/1/2/2020 11/1/2/2020 11/1/2/2020 11/1/2/2020	- 36.6 38.1 36.6 38.3 36.7 37.3 35.1 36.6 37.5 37.5 35.0 38.3 37.5 - - - - - - - - - - - - -	- 3.7 2.2 3.7 2.0 3.6 3.0 5.3 3.7 2.8 2.8 DNAPL p DNAPL p DNAPL p DNAPL p DNAPL p DNAPL p 3.3 2.0 3.3 2.3 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	1036.4 9.4 5.4 9.4 5.0 9.1 7.6 13.5 9.6 7.2 7.0 ed to be completed 13.7 3.9 7.4 e to COVID-19 restrictions e to COVID-19 restrictions 13.5 4.8 8.5 5.7 7.2 7.2 5.0	34 21 35 22 35 28 63 35 27 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 70 21 28 77 28 70 21 28 70 28 70 21 28 70 70 21 28 70 70 21 28 70 70 28 70 70 28 70 70 70 70 70 70 70 70 70 70	DMT ⁴ DMT ⁴	double diaphragm pump double diaphragm pump

	Dette	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	Date Cumulative 7/19/2011 - 12/10/2018	-	-	-	0.0	-	-	-
nann-o	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			NAPL pumping not requir			- ,	-
	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				e to COVID-19 restrictions		-	-
	5/4/2020 6/1/2020				e to COVID-19 restrictions e to COVID-19 restrictions		-	
	7/6/2020	40.6	0.3	-	-	126	_ DMT ⁴	
	8/3/2020	40.6	0.2	-		28	DMT ⁴	
	9/8/2020	40.4	0.4	-		36	DMT ⁴	
	10/5/2020	40.4	0.4	-	-	27	DMT ⁴	-
	11/2/2020	40.3	0.5	-	-	28	DMT ⁴	-
	12/7/2020	40.3	0.5	-	-	35	DMT ⁴	-
	1/4/2021	40.1	0.7	-	-	28	DMT ⁴	-
	2/1/2021			nping not completed due t	o adverse weather conditions			-
		TOTAL VOLUME REC	OVERED TO DATE FRO	M 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 DMT ⁴	
	3/11/2019 4/1/2019	40.3 39.5	1.7	- 0.1	- 6.3	35 21	DMT DMT ⁴	
	4/1/2019 5/6/2019	39.5 41.1	2.5	-	6.3 -	35	DMT ⁴	double diaphragm pump
	6/3/2019	41.1	0.9	-	-	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	40.0	1.1	-	-	27	DMT ⁴	
	11/4/2019	40.5	1.5			28	DMT ⁴	
	12/2/2019	40.5		NAPL pumping not requir		28	-	
	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			umping not completed du	e to COVID-19 restrictions		-	-
	5/4/2020		DNAPL p	umping not completed du	e to COVID-19 restrictions		-	-
	6/1/2020			umping not completed du	e to COVID-19 restrictions		-	-
	7/6/2020	38.7	3.3	0.2	8.3	126	DMT ⁴	double diaphragm pump
	8/3/2020	41.3	0.7			28	DMT ⁴	-
	9/8/2020	41.1	0.9			36	DMT ⁴	-
	10/5/2020	40.4	1.6			27	DMT ⁴	-
	11/2/2020	40.0	2.0	0.1	5.0	28	DMT ⁴	double diaphragm pump
	12/7/2020	41.8	0.2			35	DMT ⁴	-
	1/4/2021	40.8	1.2			28	DMT ⁴	-
	2/1/2021		DNAPL pun	ping not completed due t	o adverse weather conditions		-	-
				l				
		TOTAL VOLUME DEC	OVERED TO DATE FRO	M HADM/ 7/CALLONO	582.0			

	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			NAPL pumping not requir	ed 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			umping not completed du	e to COVID-19 restrictions	-	-	-
	5/4/2020		DNAPL p	umping not completed du	e to COVID-19 restrictions		-	-
	6/1/2020		DNAPL p	umping not completed du	e to COVID-19 restrictions		-	-
	7/6/2020	41.3	1.7	-	-	126	DMT ⁴	-
	8/3/2020	40.8	2.3	0.5	4.6	28	DMT ⁴	double diaphragm pump
	9/8/2020	42.1	0.9	-	-	36	DMT ⁴	
	10/5/2020	42.0	1.0	-	-	27	DMT ⁴	-
	11/2/2020	41.9	1.1	-	-	28	DMT ⁴	-
	12/7/2020	41.8	1.3	-	-	35	DMT ⁴	-
	1/4/2021	41.8	1.2	-	-	28	DMT ⁴	-
	2/1/2021		DNAPL pun	nping not completed due t	o adverse weather conditions		-	-
		TOTAL VOLUME REC	OVERED TO DATE FRO	M HARW-8 (GALLONS)	36.1			

TOTAL VOLUME RECOVERED TO DATE FROM ALL WELLS (GALLONS)

2984.5

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.

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.

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² Reserved