# **Atlantic Richfield Company**

Paul G. Johnson

Operations Project Manager



MAR 18 2019

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Fax: (630) 420-3738 E-Mail: paul.johnson4@bp.com

March 5, 2019

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 2019 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 2019 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, 2019 through February 28, 2019.

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



#### • Page 2

cc: Maureen Schuck, New York State Department of Health

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

Martha Gopal, Sovereign Consulting Inc.

File

ecc: Jacquelyn Nealon, New York State Department of Health

Kevin Farrar, New York State Department of Environmental Conservation

Benjamin Conlon, Esq. New York State Department of Environmental Conservation,

Office of General Counsel

Jim Lucari, BP

Michael Daneker, Arnold & Porter

# FORMER ANACONDA WIRE AND CABLE PLANT SITE (a.k.a. HARBOR AT HASTINGS SITE) OU1 NYSDEC SITE 360022 MONTHLY PROGRESS REPORT 165

PREPARED BY:

**Atlantic Richfield Company** 

Paul Johnson

REPORTING PERIOD:

February 1, 2019 through February 28, 2019

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

DNAPL gauging and recovery was performed on February 4<sup>th</sup> and February 5<sup>th</sup>, 2019.
 HARW-2 and HARW-5 were gauged and pumped as required by the August 2011
 Design Basis Memorandum.

### 2. UNANTICIPATED PROBLEM AREAS AND RECOMMENDED SOLUTIONS

• None this reporting period.

#### 3. PROBLEMS RESOLVED

None this reporting period.

#### 4. DELIVERABLES SUBMITTED / RECEIVED

- February 4, 2019, Atlantic Richfield to NYSDEC, Hastings January 2019 Monthly Progress Report.
- February 8, 2019, Atlantic Richfield to NYSDEC, 2018 LNAPL Interim Remedial Measures (IRM) Annual Status Report.
- February 8, 2019, Atlantic Richfield to NYSDEC: Appendix B of the Preliminary Design Report Groundwater Model.
- February 22, 2019, Atlantic Richfield to NYSDEC: Supplement to the Pre-Design Investigation Data Summary Report Amendment.
- February 28, 2019, Atlantic Richfield to NYSDEC: 2018 Hazardous Waste Annual Report.

#### 5. UPCOMING EVENTS / ACTIVITIES PLANNED

- The next three DNAPL gauging and recovery events are tentatively scheduled to occur the weeks of March 11<sup>th</sup>, April 1<sup>st</sup>, and May 6<sup>th</sup>, 2019.
- 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 1st, 2019, and the week of July 8th, 2019 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**

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**

<u>FLUOR Daniel GTI, 1997. Draft Interim Remedial Measure Work Plan – Separate Phase Liquid Recovery. December.</u>

TABLE I
FEBRUARY DNAPL PUMPING SUMMARY (WEEK OF 2/04/2019)
ATLANTIC RICHFIELD
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

Well ID	Date Gauged/ Pumped	Installation Angle (deg)	Pre-Pumping Uncorrected Apparent Height (inches)	Pre-Pumping Corrected Apparent Height (inches)	Post-Pumping Uncorrected Apparent Height (inches)	Post-Pumping Corrected Apparent Height (inches)	Total Fluids Removed (gallons) <sup>4</sup>	Total DN Remov (gallon:
HARW-1	2/4/2019 1	0	0	0	NA**	NA**	NA**	NA**
HARW-2	2/4/2019 2	0	24.0	24.0	TO SERVICE AND A		105.0	5.0
HAKW-Z	2/5/2019 3				1.0	NA**	105.0	
HARW-3	2/4/2019 2	16.5	4.0	3.8			NA**	NA**
HARVV-3	NA** 3	10.5			NA**	NA**	NA	
HARW-4	2/4/2019 <sup>2</sup>	24.5	7.0	6.4			NA**	NA**
TIAKW-4	NA** 3	24.5	<b>克斯克格克莱马</b>	Difference Land	NA**	NA**	IVA	
	2/4/2019 2		26.0	23.8				5.4
HARW-5	2/4/2019 <sup>3</sup>	23.5			1.0	0.9	84.0	
HARW-6	2/4/2019 <sup>2</sup>	14.0	8.0	7.8			NA**	NA**
TIARW 0	NA** 3	14.0			NA**	NA**	143	
HARW-7	2/4/2019 2	0	14.0	14.0			NA**	NA**
TARVV-7	NA** 3	0		15.1	NA**	NA**	IVA	NA
HARW-8	2/4/2019 2	0	18.0	18.0			NA**	NA**
TIMIN VV-O	NA** 3	0			NA**	NA**	NA *	INA
HAOW-12A	2/4/2019 2	0	16.0	16.0			NA**	NA**
TIAO W-12A	NA** 3	Ü			NA**	NA**	NA.	110

Total Gallons of DNAPL Removed:

Notes:

 $^{1}\mbox{DNAPL}$  not present, pumping not completed in this well

Apparent Height: refers to the distance between the DNAPL surface and the bottom of the well sump which includes all fluids (groundwater and DNAPL) in the matrix. NA: Not Applicable

10.4

<sup>&</sup>lt;sup>2</sup>Pre-pumping gauge date

<sup>&</sup>lt;sup>3</sup>Post-pumping gauge date.

 $<sup>^4</sup>$ Total gallons of fluid (DNAPL and groundwater) removed from well based on measurement in container.

 $<sup>^{5}</sup>$ Represents the distance of the post-purging DNAPL material interface from the top of the MS/Fill interface.

<sup>&</sup>lt;sup>6</sup>Unless otherwise noted, this column refers to the total volume of DNAPL removed based calculation of volume based on well diameter and height of DNAPL in the well.

<sup>\*</sup>DNAPL is present but is under 6-inches and discontinuous.

<sup>\*\*</sup>Volume in the well is less than threshold required to perform DNAPL pumping procedures.

			Product Apparent Height -	Product Apparent Height -	Approximate Volume of	Days Elapsed Between	Measurement Tool	
	Date	Depth to Product (ft)	Pre-pumping (ft)	Post-pumping (ft)	Product Recovered (gallons) <sup>a</sup>	Measurement Readings	Used	Recovery Procedure Us
MW-12	Cumulative 10/9/2006 - 7/29/2010	1012 CO.			5.0		100 A 2 A 2	Allow 4 or or production • State County
		TOTAL VOLUME RE	COVERED TO DATE FE	ROM MW-12 (GALLONS)	5.0			
IAOW-12A	Cumulative 3/2/2009 - 12/10/2016				49.7		DMT <sup>4</sup>	
	1/16/2017	42.0	1.6	-	4	37	DMT 4	
_	2/20/2017			or pumping not completed	due to adverse weather conditions		4	
_	3/6/2017	42.3	1.3		-	49	DMT 4	
	4/3/2017	42.2	1.4		-	28	DMT <sup>4</sup>	
_	5/1/2017 6/5/2017	42.1 42.3	1.5	-	-	28 35	DMT <sup>4</sup>	
	7/10/2017	42.3	1.3			35	DMT <sup>4</sup>	
	8/7/2017	42.3	1.3		-	28	DMT <sup>4</sup>	
	9/11/2017	42.5	1.1			35	DMT <sup>4</sup>	
	10/9/2017	42.3	1.3	-	-	28	DMT <sup>4</sup>	-
	11/6/2017	42.3	1.3	-	-	28	DMT <sup>4</sup>	
	12/4/2017		DNAPL pumpir	ng not required to be comp	eleted (10 event requirement met)			-
_	1/8/2018			or pumping not completed	due to adverse weather conditions			-
_	2/5/2018	42.2	1.4		-	91	DMT <sup>4</sup>	
	3/5/2018	42.3	1.3		-	28	DMT <sup>4</sup>	
	4/2/2018 5/7/2018	42.0 41.9	1.6	-		28 35	DMT <sup>4</sup>	
	6/5/2018	42.5	1.1			29	DMT <sup>4</sup>	
	7/9/2018	42.2	1.4	-		34	DMT 4	-
	8/6/2018	42.3	1.3			28	DMT <sup>4</sup>	
	9/10/2018	42.3	1.3		-	35	DMT <sup>4</sup>	
	10/1/2018	41.9	1.7	-	-	21	DMT <sup>4</sup>	-
	11/5/2018	42.9	0.8		-	35	DMT <sup>4</sup>	
	12/10/2018	42.2	1.4	-		35	DMT <sup>4</sup>	
	1/14/2019	42.9	0.7		-	35	DMT <sup>4</sup>	
_	2/4/2019	42.3	1.3	-	-	21	DMT <sup>4</sup>	-
	T	OTAL VOLUME RECOV	FRED TO DATE FROM	HAOW-12A (GALLONS)	49.7			
HARW-1	Cumulative 9/29/2010 - 12/10/2016				0.0			
	1/16/2017	No product detected	0.0	-	-	37	DMT <sup>4</sup>	
	2/20/2017			or pumping not completed	due to adverse weather conditions			
_	3/6/2017	No product detected	0.0		•	49	DMT <sup>4</sup>	
	4/3/2017	No product detected	0.0		-	28	DMT <sup>4</sup>	
	5/1/2017 6/5/2017	No product detected  No product detected	0.0	-	-	28 35	DMT <sup>4</sup>	
2005283 PROCESS				-	*		DMT	
							DMT <sup>4</sup>	
	7/10/2017	No product detected	0.0	•	•	35	DMT <sup>4</sup>	-
	7/10/2017 8/7/2017	No product detected No product detected	0.0		-	28	DMT <sup>4</sup>	
	7/10/2017	No product detected No product detected No product detected		-	-			<u>.</u>
	7/10/2017 8/7/2017 9/11/2017	No product detected No product detected No product detected No product detected	0.0	-	-	28 35	DMT <sup>4</sup>	-
E	7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 12/4/2017	No product detected No product detected No product detected	0.0 0.0 0.0 0.0 0.0 DNAPL pumpir	- - - - ng not required to be comp		28 35 28	DMT <sup>4</sup> DMT <sup>4</sup>	- - - - - -
	7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 12/4/2017 1/8/2018	No product detected No product detected No product detected No product detected No product detected	0.0 0.0 0.0 0.0 DNAPL pumpir DNAPL gauging	- - - - ng not required to be comp or pumping not completed	eleted (10 event requirement met) due to adverse weather conditions	28 35 28 28	DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup>	-
	7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 12/4/2017 1/8/2018 2/5/2018	No product detected	0.0 0.0 0.0 0.0 DNAPL pumpin DNAPL gauging 0.0	ng not required to be completed		28 35 28 28	DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup> - DMT <sup>4</sup>	
	7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 12/4/2017 18/2018 2/5/2018 3/5/2018	No product detected	0.0 0.0 0.0 0.0 DNAPL pumpir DNAPL gauging 0.0	ng not required to be completed	eleted (10 event requirement met) due to adverse weather conditions	28 35 28 28 91 28	DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup> - DMT <sup>4</sup> DMT <sup>4</sup>	
	7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 12/4/2017 1/8/2018 2/5/2018 3/5/2018 4/2/2018	No product detected	0.0 0.0 0.0 0.0 DNAPL pumpir DNAPL gauging 0.0 0.0	g not required to be compor pumping not completed	leted (10 event requirement met) due to adverse weather conditions	28 35 28 28 28	DMT <sup>4</sup>	
	7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 12/4/2017 18/2018 2/5/2018 3/5/2018 4/2/2018 5/7/2018	No product detected	0.0 0.0 0.0 0.0 DNAPL pumpir DNAPL gauging 0.0 0.0	ng not required to be completed	bleted (10 event requirement met) due to adverse weather conditions	28 35 28 28 91 28 28 28	DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup>	
	7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 12/4/2017 18/2018 2/5/2018 3/5/2018 5/7/2018 6/5/2018	No product detected	0.0 0.0 0.0 0.0 0.0 DNAPL pumpin DNAPL gauging 0.0 0.0 0.0 0.0	g not required to be compor pumping not completed	eleted (10 event requirement met) due to adverse weather conditions	28 35 28 28 28 91 28 28 35	DMT <sup>4</sup>	
	7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/9/2017 11/9/2017 11/9/2017 12/4/2017 1/8/2018 2/5/2018 3/5/2018 4/2/2018 5/7/2018 6/5/2018 7/9/2018	No product detected	0.0 0.0 0.0 0.0 DNAPL pumpin DNAPL gauging 0.0 0.0 0.0	g not required to be compor pumping not completed	eleted (10 event requirement met) due to adverse weather conditions	28 35 28 28 28 91 28 28 28 35 29	DMT 4	
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IARW-2	7/10/2017 8/7/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 12/4/2017 18/2018 2/5/2018 3/5/2018 4/2/2018 5/7/2018 6/5/2018 5/7/2018 8/6/2018 9/10/2018 11/1/2018 11/5/2018 11/1/2018 11/1/2019 2/4/2019	No product detected	0.0 0.0 0.0 0.0 0.0 DNAPL pumpin DNAPL gauging 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	or pumping not completed	due to adverse weather conditions	28 35 28 28 28 28 91 28 28 35 29 34 28 35 21 35 21	DMT 4	double diaphrage was
IARW-2	7/10/2017 8/7/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 12/4/2017 18/2018 2/5/2018 3/5/2018 4/2/2018 5/7/2018 6/5/2018 7/9/2018 8/6/2018 9/10/2018 10/1/2018 11/5/2018 11/5/2018 11/14/2019 2/4/2019	No product detected	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	or pumping not completed	due to adverse weather conditions	28 35 28 28 28 91 28 28 35 29 34 28 35 21 35 21 35 35	DMT 4	double diaphragm pun
IARW-2	7/10/2017 8/7/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 12/4/2017 18/2018 2/5/2018 3/5/2018 4/2/2018 5/7/2018 6/5/2018 5/7/2018 8/6/2018 9/10/2018 11/1/2018 11/5/2018 11/1/2018 11/1/2019 2/4/2019	No product detected	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	or pumping not completed	due to adverse weather conditions	28 35 28 28 28 28 91 28 28 35 29 34 28 35 21 35 21	DMT 4	
HARW-2	7/10/2017 8/7/2017 8/7/2017 9/11/2017 10/9/2017 11/9/2017 11/9/2017 11/9/2017 18/2018 2/5/2018 3/5/2018 4/2/2018 5/7/2018 6/5/2018 7/9/2018 8/6/2018 9/10/2018 10/1/2018 11/5/2018 12/10/2018 12/10/2018 11/1/2019 2/4/2019	No product detected	0.0 0.0 0.0 0.0 0.0 0.0 DNAPL pumpin DNAPL gauging 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	or pumping not completed	due to adverse weather conditions	28 35 28 28 28 91 28 28 35 29 34 28 35 21 35 21 35 21 35 35	DMT 4	double diaphragm pun

	Date	Depth to Product (ft)	Product Apparent Height - Pre-pumping (ft)	Product Apparent Height - Post-pumping (ft)	Approximate Volume of Product Recovered (gallons) *	Days Elapsed Between Measurement Readings	Measurement Tool Used	Recovery Procedure L
HARW-2	6/5/2017	36.0	4.0	0.17	10.0	35	DMT <sup>4</sup>	double diaphragm pu
Continued	7/10/2017	38.2	1.8	-	-	35	DMT <sup>4</sup>	- addic diaphragin pa
	8/8/2017	35.3	4.7	0	12.2	29	DMT <sup>4</sup>	double diaphragm pu
	9/11/2017	39.5	0.5		-	34	DMT <sup>4</sup>	-
	10/9/2017	36.9	3.1	0.2	7.6	28	DMT <sup>4</sup>	double diaphragm pu
	11/6/2017	39.0	1.0	-	-	28	DMT 4	
	12/4/2017			g not required to be comp	pleted (10 event requirement met)		-	
	1/8/2018				due to adverse weather conditions		-	
	2/5/2018	34.3	5.7	0.08	14.6	91	DMT <sup>4</sup>	double diaphragm pu
	3/5/2018	38.8	1.3	•		28	DMT 4	
	4/3/2018	36.9	3.1	0	8.1	29	DMT <sup>4</sup>	double diaphragm pu
	5/7/2018	38.2	1.8	-	-	34	DMT 4	-
	6/5/2018	36.6	3.4	0.17	8.5	29	DMT 4	double diaphragm pu
	7/9/2018	38.5	1.5		-	34	DMT <sup>4</sup>	
	8/6/2018	37.5	2.5	0.3	5.7	28	DMT 4	double diaphragm pur
	9/10/2018	38.4	1.6		-	35	DMT 4	-
	10/1/2018	37.5	2.5	0.08	6.3	21	DMT <sup>4</sup>	double diaphragm pur
	11/5/2018	40.0	0.0		-	35	DMT <sup>4</sup>	
	12/10/2018	38.0	2.0	0.08	5	35	DMT 4	double diaphragm pur
	1/14/2019	38.8	1.3		-	35	DMT <sup>4</sup>	
	2/4/2019	38.0	2.0	0.08	5	21	DMT 4	double diaphragm pur
	。 《安徽·阿安·莱特·特尔·特尔·特尔·特尔·特尔·	TOTAL VOLUME REC	OVERED TO DATE FRO	M HARW-2 (GALLONS)	817.3			
MADIMA	O	Name and the second sec			25.2	budden in restorman promote out the transport of the transport	ACCIDENTAL PROPERTY OF THE PRO	PROPERTY AND ADDRESS OF THE PARTY AND ADDRESS
HARW-3	Cumulative 10/14/2010 - 12/10/2016 1/16/2017	37.4	1.6	SEASON MORE BONG STATE OF	25.3	37	DMT <sup>4</sup>	TO A SECURIT OF THE PARTY OF TH
	2/20/2017	37.4		or numning not completed	due to adverse weather conditions	37	DMT	-
	3/6/2017	37.9	1.1	- pumping not completed		49	DMT <sup>4</sup>	
	4/3/2017	37.6	1.4			28	DMT <sup>4</sup>	
	5/1/2017	37.7	1.3			28	DMT <sup>4</sup>	
	6/5/2017	37.7	1.3			35	DMT <sup>4</sup>	
	7/10/2017	37.3	1.7			35	DMT <sup>4</sup>	
	8/7/2017	37.6	1.4			28	DMT <sup>4</sup>	
	9/11/2017	37.2	1.8		_	35	DMT 4	
	10/9/2017	37.6	1.4			28	DMT <sup>4</sup>	
	11/6/2017	37.7	1.3		-	28	DMT <sup>4</sup>	
	12/4/2017	37.1		g not required to be comp	pleted (10 event requirement met)	Lo	-	
	1/8/2018				due to adverse weather conditions			
	2/5/2018	37.5	1.5	-	-	91	DMT <sup>4</sup>	
	3/5/2018	37.2	1.8			28	DMT <sup>4</sup>	
	4/2/2018	37.5	1.5	0.3	3.3	28	DMT.4	double diaphragm pur
	5/7/2018	38.6	0.4		-	35	DMT <sup>4</sup>	
	6/5/2018	38.7	0.3	-		29	DMT <sup>4</sup>	*
	7/9/2018	38.7	0.3		-	34	DMT <sup>4</sup>	
	8/6/2018	38.6	0.4	-	-:	28	DMT <sup>4</sup>	
	9/10/2018	38.6	0.4			35	DMT <sup>4</sup>	
	10/1/2018	38.6	0.4		_	21	DMT <sup>4</sup>	
	11/5/2018	38.8	0.2	-	-	35	DMT <sup>4</sup>	
	12/10/2018	38.8	0.3	-	-	35	DMT <sup>4</sup>	
	1/14/2019	38.7	0.3		-	35	DMT <sup>4</sup>	
	2/4/2019	38.7	0.3		-	21	DMT <sup>4</sup>	
			OVERED TO DATE FRO	M HARW-3 (GALLONS)	28.6			
HARW-4	Cumulative 10/14/2010 - 12/10/2016	•			202.3			Elica Company and a company
	1/16/2017	39.3	1.7	-	-	37	DMT <sup>4</sup>	
	2/20/2017		DNAPL gauging of	or pumping not completed	due to adverse weather conditions		DMT <sup>4</sup>	-
	3/6/2017	39.5	1.5		-	49	DMT <sup>4</sup>	-
	4/4/2017	38.5	2.5	0.2	6.1	29	DMT <sup>4</sup>	double diaphragm pur
	5/1/2017	40.3	0.8		-	27	DMT <sup>4</sup>	-
	6/5/2017	40.3	0.8		***	35	DMT <sup>4</sup>	•
	7/10/2017	39.9	1.1	-		35	DMT <sup>4</sup>	
	8/7/2017	39.9	1.1	**		28	DMT <sup>4</sup>	-
	9/11/2017	39.6	1.4	-		35	DMT <sup>4</sup>	
	10/9/2017	39.8	1.2			28	DMT <sup>4</sup>	
	11/6/2017	39.4	1.6		-	28	DMT <sup>4</sup>	
	12/4/2017				pleted (10 event requirement met)		:=	
	1/8/2018 2/5/2018	39.3	DNAPL gauging of	or pumping not completed	due to adverse weather conditions	91	DMT <sup>4</sup>	-

SOVEREIGN CONSULTING INC.

	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 Us
HARW-4	4/2/2018	39.3	1.7	CONTRACTOR OF THE PROPERTY OF		28	DMT 4	CONTRACTOR OF STREET,
Continued	5/8/2018	38.8	2.2	0.1	5.4	. 36	DMT 4	double diaphragm pump
	6/5/2018	40.8	0.2	-		28	DMT <sup>4</sup>	-
	7/9/2018	40.8	0.2	_	_	34	DMT 4	- 4
	8/6/2018	40.8	0.3		-	28	DMT 4	.=.
	9/10/2018	40.8	0.2	-	_	35	DMT <sup>4</sup>	-
	10/1/2018	40.5	0.5	-	-	21	DMT <sup>4</sup>	
	11/5/2018	40.5	0.5		_	35	DMT <sup>4</sup>	
1	12/10/2018	40.4	0.6	**	-	35	DMT 4	
	1/14/2019	40.4	0.6		_	35	DMT 4	-
	2/4/2019	40.4	0.6			21	DMT 4	
		TOTAL VOLUME REC	OVERED TO DATE FRO	M HARW-4 (GALLONS)	213.8			
HARW-5	01	GEZONOS POR POSOCIONOS POR		ENGINEERING STORY	800.2		DALLES AND DESCRIPTION OF THE PARTY OF THE P	
HARW-5	Cumulative 7/18/2011 - 12/10/2016		F 4	0.2		37	DMT <sup>4</sup>	double disphragm numr
	1/17/2017 2/20/2017	35.2	5.1	0.2	14.1 due to adverse weather conditions	3/	DMT	double diaphragm pump
	3/6/2017	37.2	3.1	0.1	8.7	48	DMT <sup>4</sup>	double diaphragm pump
	4/4/2017	35.3	5.0	0.0	12.9	29	DMT <sup>4</sup>	double diaphragm pump
	5/2/2017	34.3	6.0	0.0	15.7	28	DMT <sup>4</sup>	double diaphragm pump
	6/5/2017	35.3	5.0	0.1	12.8	34	DMT <sup>4</sup>	double diaphragm pump
	7/11/2017	35.0	5.3	0.1	13.7	36	DMT <sup>4</sup>	double diaphragm pump
	8/7/2017	35.3	5.0	0.1	12.8	27	DMT <sup>4</sup>	double diaphragm pump
	9/11/2017	34.6	5.7	0.3	14.1	35	DMT <sup>4</sup>	double diaphragm pump
	10/9/2017	35.6	4.7	0.0	12.2	28	DMT 4	double diaphragm pump
	11/6/2017	36.0	4.3	0.0	11.3	28	DMT <sup>4</sup>	double diaphragm pump
	12/4/2017	00.0			leted (10 event requirement met)	20	-	-
	1/8/2018		DNAPL gauging	or pumping not completed	due to adverse weather conditions			
	2/6/20181	34.8	5.5	4.0	3.9	92	DMT 4	double diaphragm pump
	3/6/2018	35.3	5.0	0.1	12.8	28	DMT 4	double diaphragm pump
	4/3/2018	36.3	4.0	0.3	9.8	28	DMT 4	double diaphragm pump
	5/8/2018	35.1	5.2	0.1	13.3	35	DMT 4	double diaphragm pump
	6/5/2018	36.4	3.9	0.2	9.8	28	DMT 4	double diaphragm pump
	7/9/2018	35.8	4.5	0.1	11.5	34	DMT 4	double diaphragm pump
	8/7/2018	36.6	3.8	0.0	9.7	29	DMT 4	double diaphragm pump
	9/10/2018	35.7	4.6	0.1	11.7	34	DMT <sup>4</sup>	double diaphragm pump
	10/2/2018	38.3	2.0	0.1	5.0	22	DMT 4	double diaphragm pump
	11/5/2018	36.3	4.0	0.1	10.2	34	DMT <sup>4</sup>	double diaphragm pump
	12/11/2018	36.3	4.0	0.1	10.2	36	DMT <sup>4</sup>	double diaphragm pump
	1/14/2019	36.6	3.7	0.1	9.4	34	DMT <sup>4</sup>	double diaphragm pump
	2/4/2019		2.2	0.1	5.4	21	DMT 4	double diaphragm pump
		38.1						
	2.722.73							- County dispinagin paint
			OVERED TO DATE FRO		1051,2			acasic dapinegiii paniş
HAPWS		TOTAL VOLUME REC						NAMES CONTROL OF THE PROPERTY OF THE PARTY O
HARW-6	Cumulative 7/19/2011 - 12/10/2016	TOTAL VOLUME REC	OVERED TO DATE FRO		0.0	STREET, STREET		
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017	TOTAL VOLUME REC	OVERED TO DATE FRO	M HARW-5 (GALLONS)	0.0	37	DMT 4	
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017	TOTAL VOLUME REC	OVERED TO DATE FRO - 0.8 DNAPL gauging	M HARW-5 (GALLONS)		37		
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017	40.0 40.0	0.8 DNAPL gauging 0.8	M HARW-5 (GALLONS)	0.0	37 49	DMT 4	
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017	TOTAL VOLUME REC	OVERED TO DATE FRO - 0.8 DNAPL gauging	M HARW-5 (GALLONS)	0.0	37	DMT <sup>4</sup>	Salvina (1920) (
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017	40.0 40.0 40.1 40.1	0.8 DNAPL gauging 0.8 0.7	M HARW-5 (GALLONS)	0.0	37 49 28 28	DMT <sup>4</sup> DMT <sup>4</sup> - DMT <sup>4</sup> DMT <sup>4</sup>	
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017	40.0 40.0 40.1 40.1 40.3	0.8 0.8 0.8 0.8 0.8 0.8 0.7 0.5	M HARW-5 (GALLONS)	0.0	37 49 28	DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup>	SHAALAG PERSERBANKELEDI
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017	40.0 40.0 40.1 40.1	0.8 DNAPL gauging 0.8 0.7	M HARW-5 (GALLONS)	0.0	37 49 28 28 35	DMT <sup>4</sup>	
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/11/2017 6/5/2017 7/10/2017 8/7/2017	40.0 40.0 40.1 40.1 40.1 40.3 40.2 40.3	0.8  DNAPL gauging 0.8  0.8  0.7  0.5  0.6	M HARW-5 (GALLONS)	0.0	37 49 28 28 35 35	DMT <sup>4</sup>	334934 - 352 0 3 N 2 67 (42 14 16 16 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017	40.0 40.0 40.1 40.1 40.1 40.3 40.2	0.8 DNAPL gauging 0.8 0.8 0.7 0.5 0.6	M HARW-5 (GALLONS)	0.0	37 49 28 28 35 35 35	DMT <sup>4</sup>	SHAMING PERSONALANDI SIGI
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/11/2017 6/5/2017 7/10/2017 8/7/2017	40.0 40.0 40.1 40.1 40.1 40.3 40.2 40.3 40.0 39.9	0.8 0.8 0.8 0.8 0.7 0.5 0.6 0.5 0.8	or pumping not completed	0.0 - due to adverse weather conditions	37 49 28 28 35 35 28 35	DMT <sup>4</sup>	
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/1/2017 9/11/2017 10/9/2017	40.0 40.0 40.1 40.1 40.1 40.3 40.2 40.3 40.0	0.8  DNAPL gauging 0.8  0.8  0.7  0.5  0.6  0.5  0.8  0.9  1.0  DNAPL pumpir	or pumping not completed	0.0 - due to adverse weather conditions	37 49 28 28 35 35 35 28 35 28	DMT <sup>4</sup>	SHERA PARA PER REPORTATION
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 12/4/2017 18/2018	40.0 40.0 40.1 40.1 40.3 40.2 40.3 40.0 39.9 39.8	0.8  DNAPL gauging 0.8  0.8  0.7  0.5  0.6  0.5  0.8  0.9  1.0  DNAPL gauging	or pumping not completed	0.0	37 49 28 28 35 35 35 28 35 28	DMT <sup>4</sup>	SHEAL I STOP THE SET IN CHARGE I STOP
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017	40.0 40.0 40.1 40.1 40.1 40.3 40.2 40.3 40.0 39.9	0.8  DNAPL gauging 0.8  0.8  0.7  0.5  0.6  0.5  0.8  0.9  1.0  DNAPL pumpir	or pumping not completed	0.0 - due to adverse weather conditions	37 49 28 28 35 35 35 28 35 28 39 91	DMT <sup>4</sup>	SHPAN (4) (2) PBR (4) PBR (4) PBR (4) (4) PBR
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 12/4/2017 18/2018	40.0 40.0 40.1 40.1 40.1 40.3 40.2 40.3 40.0 39.9 39.8	0.8  DNAPL gauging 0.8  0.8  0.7  0.5  0.6  0.5  0.8  0.9  1.0  DNAPL pumpir  DNAPL gauging 0.8  0.1	or pumping not completed	0.0 - due to adverse weather conditions	37 49 28 28 35 35 28 35 28 35 28 35 28 28	DMT <sup>4</sup>	SHERAT ACAPTER SEPTEMBER STOP
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 12/4/2017 1/9/2018	40.0 40.0 40.1 40.1 40.3 40.2 40.3 40.0 39.9 39.8	0.8  DNAPL gauging 0.8  0.8  0.7  0.5  0.6  0.5  0.8  0.9  1.0  DNAPL gauging 0.8  0.9  1.0  DNAPL gauging 0.8  0.9	or pumping not completed	0.0 - due to adverse weather conditions	37 49 28 28 35 35 35 28 35 28 35 28 28 28	DMT <sup>4</sup>	5344441430 P 3153450 49480 15167
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 12/4/2017 18/2018	40.0 40.0 40.1 40.1 40.1 40.3 40.2 40.3 40.0 39.9 39.8	0.8  DNAPL gauging 0.8  0.8  0.7  0.5  0.6  0.5  0.8  0.9  1.0  DNAPL pumpir  DNAPL gauging 0.8  0.1	or pumping not completed	0.0 - due to adverse weather conditions	37 49 28 28 35 35 28 35 28 35 28 35 28 28	DMT <sup>4</sup>	334944-3523-333-352-344941-3151
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 10/9/2017 11/6/2017 11/6/2017 12/4/2017 18/2018 2/5/2018 4/2/2018 5/7/2018	40.0 40.0 40.1 40.1 40.1 40.3 40.2 40.3 40.0 39.9 39.8	0.8  DNAPL gauging 0.8  0.8  0.7  0.5  0.6  0.5  0.8  0.9  1.0  DNAPL gauging 0.8  0.7  0.5  0.8  0.9  1.0  0.8  0.7  0.8  0.1  0.8  0.1  0.8  0.7  0.8	or pumping not completed	0.0 - due to adverse weather conditions	37  49 28 28 35 35 35 28 35 28 28 28 28 28 28 29	DMT 4  DMT 5  DMT 4  DMT 4  DMT 4  DMT 4  DMT 6  DMT 6  DMT 6  DMT 6  DMT 7  DMT 6  DMT 7  DMT 6  DMT 7  DMT 6  DMT 7  DMT 6  DMT 7	201944-1-9-2-P-3-18-2-P-3-18-2-P-3-18-2-P-3-18-2-P-3-18-2-P-3-18-2-P-3-18-2-P-3-18-2-P-3-18-2-P-3-2-P-
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 12/4/2017 1/8/2018 2/5/2018 3/5/2018 4/2/2018 5/7/2018	40.0 40.0 40.1 40.1 40.1 40.3 40.2 40.3 40.0 39.9 39.8	0.8  DNAPL gauging 0.8  0.8  0.7  0.5  0.6  0.5  0.8  0.9  1.0  DNAPL pumpir DNAPL gauging 0.8  0.1  0.9  0.0  0.0  0.0  0.0  0.0  0.0	or pumping not completed	0.0 - due to adverse weather conditions	37  49 28 28 35 35 35 28 35 28 28 28 28 28 31 28 29 34	DMT <sup>4</sup>	534444   450 P # R 587 P # R 488 P 5 (45)
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 10/9/2017 11/6/2017 11/6/2017 12/4/2017 18/2018 2/5/2018 4/2/2018 5/7/2018	40.0 40.0 40.1 40.1 40.1 40.3 40.2 40.3 40.0 39.9 39.8	0.8  DNAPL gauging 0.8  0.8  0.7  0.5  0.6  0.5  0.8  0.9  1.0  DNAPL gauging 0.8  0.7  0.5  0.8  0.9  1.0  0.8  0.7  0.8  0.1  0.8  0.1  0.8  0.7  0.8	or pumping not completed	0.0 - due to adverse weather conditions	37  49 28 28 35 35 35 28 35 28 28 28 28 28 28 29	DMT <sup>4</sup>	23/1945 3520 23 H20/22-24/08/H21-2101
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 12/4/2017 18/2/2018 4/2/2018 5/7/2018 6/5/2018 7/9/2018	40.0 40.0 40.1 40.1 40.3 40.2 40.3 40.0 39.9 39.8 40.0 40.7 40.1 40.1 40.1	0.8  DNAPL gauging 0.8  0.8  0.7  0.5  0.6  0.5  0.9  1.0  DNAPL pumpin DNAPL gauging 0.8  0.7  0.6  0.7  0.8  0.9  1.0  DNAPL gauging 0.8  0.1  0.8  0.7	or pumping not completed	0.0 - due to adverse weather conditions	37  49 28 28 35 35 35 28 35 28 28 28 28 28 31 28 29 34	DMT 4  DMT 5  DMT 4  DMT 4  DMT 4  DMT 4  DMT 4  DMT 5  DMT 6  DMT 6  DMT 6  DMT 6  DMT 7  DMT 6  DMT 6  DMT 7  DMT 6  DMT 7  DMT 6  DMT 6  DMT 7  DMT 6  DMT 6  DMT 7  DMT 6  DMT 7  DMT 6  DMT 7  DMT 6  DMT 7  DMT 7  DMT 6  DMT 7	52/144-1430 P3 H3 9 S2 4 4 4 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 12/4/2017 18/2018 3/5/2018 4/2/2018 5/7/2018 6/5/2018 7/9/2018 8/6/2018	40.0 40.0 40.1 40.1 40.1 40.2 40.2 40.3 40.0 39.9 39.8	0.8  DNAPL gauging 0.8  0.8  0.7  0.5  0.6  0.5  0.8  0.9  1.0  DNAPL pumpir  DNAPL gauging 0.8  0.7  0.5  0.6  0.7  0.7  0.8  0.9  1.0  DNAPL gauging 0.8  0.1  0.8  0.7  0.8	or pumping not completed	0.0 - due to adverse weather conditions	37  49 28 28 35 35 35 28 35 28 28 28 35 28 28 31 31 28 32 32 33 34 28 35 21	DMT <sup>4</sup>	2014441400 P.B.1300 P.C.14000 P.S.1601
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/1/2017 10/9/2017 11/6/2017 11/6/2017 11/6/2017 12/4/2017 18/2018 2/5/2018 3/5/2018 4/2/2018 5/7/2018 6/5/2018 7/9/2018 8/6/2018 9/10/2018	40.0 40.0 40.1 40.1 40.1 40.3 40.2 40.3 40.0 39.9 39.8 40.0 40.7 40.1 40.1 40.1 40.1 40.1 40.1	0.8  DNAPL gauging 0.8  0.7  0.5  0.6  0.5  0.8  0.9  1.0  DNAPL gauging 0.8  0.7  0.5  0.8  0.9  1.0  0.8  0.7  0.8  0.7  0.8  0.7  0.8  0.7  0.8  0.7  0.8  0.7  0.8	or pumping not completed	0.0 - due to adverse weather conditions	37  49 28 28 35 35 35 28 35 28 28 28 28 28 28 28 35 28 28 35 28 35 35 35 35 35 35 35 35 35 35 35 35 35	DMT 4  DMT 5  DMT 4  DMT 4  DMT 4  DMT 4  DMT 4  DMT 5  DMT 6  DMT 6  DMT 6  DMT 6  DMT 7  DMT 6  DMT 6  DMT 7  DMT 6  DMT 7  DMT 6  DMT 6  DMT 7  DMT 6  DMT 6  DMT 7  DMT 6  DMT 7  DMT 6  DMT 7  DMT 6  DMT 7  DMT 7  DMT 6  DMT 7	201841-3020-3 H2800-0 H8801-2001
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 11/6/2018 2/5/2018 3/5/2018 4/2/2018 5/7/2018 6/5/2018 7/9/2018 8/6/2018 9/10/2018	40.0 40.0 40.1 40.1 40.3 40.2 40.3 40.0 39.9 39.8 40.0 40.7 40.1 40.1 40.1 40.1 40.1	0.8  DNAPL gauging 0.8  0.8  0.7  0.5  0.6  0.5  0.8  0.9  1.0  DNAPL pumpir  DNAPL gauging 0.8  0.1  0.8  0.1  0.8  0.7  0.8  0.1  0.8  0.7  0.8  0.1  0.8  0.7  0.8  0.7  0.8  0.7  0.8  0.7  0.8  0.7  0.8  0.7	or pumping not completed	0.0 - due to adverse weather conditions	37  49 28 28 35 35 35 28 35 28 28 28 35 28 28 31 31 28 32 32 33 34 28 35 21	DMT 4  DMT 5  DMT 4  DMT 4  DMT 4  DMT 4  DMT 4  DMT 5  DMT 6  DMT 6  DMT 7  DMT 6  DMT 7  DMT 7  DMT 7  DMT 7  DMT 6  DMT 7	52H441430 P3 H369 SCH 4968 H3169
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 12/4/2017 18/2018 2/5/2018 4/2/2018 5/7/2018 6/5/2018 7/9/2018 8/6/2018 9/10/2018 10/1/2018	40.0 40.0 40.1 40.1 40.1 40.3 40.2 40.3 40.0 39.9 39.8 40.0 40.7 40.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1	0.8  DNAPL gauging 0.8  0.7  0.5  0.6  0.5  0.8  0.9  1.0  DNAPL gauging 0.8  0.7  0.5  0.8  0.9  1.0  DNAPL gauging 0.8  0.1  0.8  0.7  0.8  0.1  0.8  0.7  0.8  0.7  0.8  0.7  0.8  0.7	or pumping not completed	0.0 - due to adverse weather conditions	37  49 28 28 35 35 35 28 35 28 35 28 28 28 28 21 35 21 35 35 35 35	DMT 4  DMT 5  DMT 4  DMT 6  DMT 6  DMT 6  DMT 7  DMT 7  DMT 6  DMT 7  DMT 7  DMT 7  DMT 7  DMT 7  DMT 8  DMT 9  DMT 9  DMT 1	33/H44-3520/3 H26/C-24/46/61/2007
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/1/2017 10/9/2017 11/6/2017 11/6/2017 11/6/2018 2/5/2018 4/2/2018 5/7/2018 6/5/2018 7/9/2018 8/6/2018 9/10/2018 10/1/2018 11/5/2018	40.0 40.0 40.1 40.1 40.3 40.2 40.3 40.0 39.9 39.8 40.0 40.7 40.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1	0.8  DNAPL gauging 0.8  0.8  0.7  0.5  0.6  0.5  0.8  0.9  1.0  DNAPL gauging 0.8  0.7  0.5  0.8  0.9  1.0  DNAPL gauging 0.8  0.9  1.0  DNAPL gauging 0.8  0.1  0.8  0.7  0.8  0.7  0.8  0.7  0.8  0.7  0.8  0.7  0.9  0.8  0.7	or pumping not completed	0.0 - due to adverse weather conditions	37  49 28 28 35 35 35 28 35 28 28 28 28 28 28 28 21 35 29 34 28 35 21 35 35	DMT 4  DMT 5  DMT 4  DMT 4  DMT 4  DMT 4  DMT 4  DMT 5  DMT 6  DMT 6  DMT 7  DMT 6  DMT 7  DMT 7  DMT 7  DMT 7  DMT 6  DMT 7	2011941-1922 P2 H2 50 P2 H3 60 P1
HARW-6	Cumulative 7/19/2011 - 12/10/2016 1/16/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 12/4/2017 18/2018 2/5/2018 3/5/2018 4/2/2018 5/7/2018 6/5/2018 7/9/2018 8/6/2018 9/10/2018 10/1/2018 10/1/2018	40.0 40.0 40.1 40.1 40.1 40.3 40.2 40.3 40.0 39.9 39.8 40.0 40.7 40.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1	0.8  DNAPL gauging 0.8  0.8  0.7  0.5  0.6  0.5  0.8  0.9  1.0  DNAPL gauging 0.8  0.7  0.5  0.8  0.9  1.0  DNAPL gauging 0.8  0.1  0.8  0.7  0.8  0.7  0.8  0.7  0.8  0.7  0.8  0.7  0.9  0.8  0.7  0.9  0.8  0.8  0.1	or pumping not completed	0.0 - due to adverse weather conditions	37  49 28 28 35 35 35 28 35 28 35 28 28 28 28 21 35 21 35 35 35 35	DMT 4  DMT 5  DMT 4  DMT 6  DMT 6  DMT 6  DMT 7  DMT 7  DMT 6  DMT 7  DMT 7  DMT 7  DMT 7  DMT 7  DMT 8  DMT 9  DMT 9  DMT 1	52H44-1430 P3 H367 P3144681 2405

SOVEREIGN CONSULTING INC.

	Date	Depth to Product (ft)	Product Apparent Height - Pre-pumping (ft)	Product Apparent Height - Post-pumping (ft)	Approximate Volume of Product Recovered (gallons) *	Days Elapsed Between Measurement Readings	Measurement Tool Used	Recovery Procedure
HARW-7	Cumulative 7/18/2011 - 12/10/2016	Departo Froduct (iii)	rre-partipling (re	r ost-painping (it)	482.1	measurement Readings	Useu	Recovery Frocedure
DAUXWY-7	1/17/2017	37.3	4.8	0.1	12.2	37	DMT <sup>4</sup>	double diaphragm p
	2/20/2017	07.0			due to adverse weather conditions		-	- according to the
	3/6/2017	41.0	1.0	-	a a a a a a a a a a a a a a a a a a a	48	DMT <sup>4</sup>	
	4/3/2017	40.5	1.5		-	28	DMT <sup>4</sup>	· ·
	5/1/2017	38.0	4.0	0.2	10.0	28	DMT <sup>4</sup>	double diaphragm p
	6/5/2017	40.5	1.5		-	35	DMT 4	
	7/10/2017	40.0	2.0	0.2	4.8	35	DMT <sup>4</sup>	double diaphragm p
	8/7/2017	41.5	0.5	-	-	28	DMT 4	
	9/11/2017	40.3	1.8		-	35	DMT 4	
	10/9/2017	40.3	1.8		-	28	DMT <sup>4</sup>	-
	11/6/2017	37.7	4.3	0.0	11.3	28	DMT <sup>4</sup>	double diaphragm p
	12/4/2017		DNAPL pumpin		pleted (10 event requirement met)			-
	1/8/2018			or pumping not completed	due to adverse weather conditions			
	2/5/2018 <sup>1</sup>	39.3	2.7	-	-	91	DMT <sup>4</sup>	-
	3/6/2018	38.5	3.5	0.3	8.3	29	DMT <sup>4</sup>	double diaphragm p
	4/2/2018	41.0	1.0			27	DMT <sup>4</sup>	-
	5/8/2018	40.0	2.0	0.1	5.0	36	DMT <sup>4</sup>	double diaphragm p
	6/5/2018	41.9	0.1			28	DMT <sup>4</sup>	-
	7/9/2018	41.1	0.9			34	DMT <sup>4</sup>	
	8/7/2018	39.4	2.6	0.1	6.5	29	DMT <sup>4</sup>	double diaphragm po
	9/10/2018	41.0	1.0		-	34	DMT <sup>4</sup>	-
	10/2/2018	40.0	2.0	0.1	5.0	22	DMT <sup>4</sup>	double diaphragm po
	11/5/2018	40.8	1.2		-	34	DMT <sup>4</sup>	-
	12/11/2018	40.0	2.0	0.1	5.0	36	DMT <sup>4</sup>	double diaphragm p
		44.4	0.0			34	DMT <sup>4</sup>	_
	1/14/2019	41.1	0.9					
	1/14/2019 2/4/2019	40.8	1.2 OVERED TO DATE FRO	M HARW-7 (GALLONS)	550.2	21	DMT <sup>4</sup>	-
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016	40.8  TOTAL VOLUME REC	1.2 OVERED TO DATE FRO	M HARW-7 (GALLONS)	- 550.2 18.0	21	DMT <sup>4</sup>	
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017	40.8  TOTAL VOLUME REC	1.2 OVERED TO DATE FRO 2.2	M HARW-7 (GALLONS) - 0.2	- 550.2 18.0 5.2	21		· 
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017	40.8  TOTAL VOLUME REC	1.2 OVERED TO DATE FRO 2.2	M HARW-7 (GALLONS) - 0.2	- 550.2 18.0	21	DMT <sup>4</sup>	
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017	40.8  TOTAL VOLUME REC.  40.8  41.7	1.2  OVERED TO DATE FRO  2.2  DNAPL gauging of	M HARW-7 (GALLONS) - 0.2	- 550.2 18.0 5.2	21	DMT <sup>4</sup>	-
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017	40.8  TOTAL VOLUME REC	1.2  OVERED TO DATE FRO  2.2  DNAPL gauging of 1.3	0.2 or pumping not completed	- 550.2 18.0 5.2	21 37 47	DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup>	-
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017	40.8  TOTAL VOLUME REC  40.8  41.7  42.5  42.3	1.2  OVERED TO DATE FRO  2.2  DNAPL gauging of 1.3  0.5	0.2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21 - 37 - 47 - 28	DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup>	-
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017	40.8  TOTAL VOLUME REC- 40.8  41.7 42.5	1.2  OVERED TO DATE FRO  2.2  DNAPL gauging of 1.3  0.5  0.7	0.2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28	DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup> DMT <sup>4</sup>	-
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017	40.8 TOTAL VOLUME RECO 40.8 41.7 42.5 42.3 42.3 42.3	1.2  OVERED TO DATE FRO  2.2  DNAPL gauging of 1.3  0.5  0.7  0.7	M HARW-7 (GALLONS)  0.2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35	DMT 4	-
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017	40.8 	1.2  OVERED TO DATE FRO  2.2  DNAPL gauging of 1.3  0.5  0.7  0.7  0.7	0.2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35	DMT 4	-
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017	40.8  TOTAL VOLUME REC: 40.8  41.7 42.5 42.3 42.3 42.3 42.3 42.1	1.2  OVERED TO DATE FRO  2 2  DNAPL gauging c  1.3  0.5  0.7  0.7  0.7  0.9	0.2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35 35	DMT 4	-
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017	40.8  TOTAL VOLUME REC  40.8  41.7  42.5  42.3  42.3  42.3  42.1  41.7  42.2	1.2  OVERED TO DATE FRO  2.2  DNAPL gauging of 1.3  0.5  0.7  0.7  0.7  0.9  1.3  0.8	M HARW-7 (GALLONS)  0.2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35 35 28 35 28	DMT 4	
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017	40.8  TOTAL VOLUME REC.  40.8  41.7  42.5  42.3  42.3  42.3  42.1  41.7	1.2  OVERED TO DATE FRO  2 2  DNAPL gauging of 1.3  0.5  0.7  0.7  0.7  0.9  1.3  0.8  1.2	M HARW-7 (GALLONS)  0.2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35 28 35	DMT 4	
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017	40.8  TOTAL VOLUME REC  40.8  41.7  42.5  42.3  42.3  42.3  42.1  41.7  42.2	1.2  DVERED TO DATE FRO  2.2  DNAPL gauging of 1.3  0.5  0.7  0.7  0.7  0.9  1.3  0.8  1.2  DNAPL pumpin	M HARW-7 (GALLONS)  0.2  or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35 35 28 35 28	DMT 4  DMT 5  DMT 4  DMT 6  DMT 6  DMT 6  DMT 7  DMT 7  DMT 6  DMT 7  DMT 7  DMT 6  DMT 6  DMT 7  DMT 7  DMT 6  DMT 7  DMT 8  DMT 9  DM	
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 11/18/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/17/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 11/6/2017	40.8  TOTAL VOLUME REC.  40.8  41.7  42.5  42.3  42.3  42.3  42.1  41.7  42.2  41.8	1.2  DVERED TO DATE FRO  2 2  DNAPL gauging of 1.3  0.5  0.7  0.7  0.9  1.3  0.8  1.2  DNAPL pumpin DNAPL gauging of 1.3	M HARW-7 (GALLONS)  0.2  or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35 28 35 28 28 39 91	DMT 4	
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 11/8/2018 2/5/2018	40.8  TOTAL VOLUME REC  40.8  41.7  42.5  42.3  42.3  42.3  42.1  41.7  42.2  41.8	1.2  DVERED TO DATE FRO  2 2  DNAPL gauging of 1,3  0.5  0.7  0.7  0.9  1.3  0.8  1.2  DNAPL pumpin DNAPL gauging of 1,3  1.7	M HARW-7 (GALLONS)  0.2  or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35 35 28 35 28 35 28 35 28	DMT 4	
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 6/5/2017 7/10/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 12/4/2017 11/8/2018 2/5/2018 3/5/2018	40.8  TOTAL VOLUME REC:  40.8  41.7  42.5  42.3  42.3  42.3  42.1  41.7  42.2  41.8  41.7  41.3  41.1	1.2  DVERED TO DATE FRO  2 2  DNAPL gauging of 1.3  0.5  0.7  0.7  0.9  1.3  0.8  1.2  DNAPL gauging of 1.3  1.1  DNAPL gauging of 1.3  1.1  1.1  1.9	0.2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35 28 35 28 28 28 28	DMT <sup>4</sup>	
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 12/4/2017 1/8/2018 4/2/2018 5/8/2018	40.8  TOTAL VOLUME REC.  40.8  41.7  42.5  42.3  42.3  42.3  42.1  41.7  42.2  41.8  41.7  41.0	1.2  DVERED TO DATE FRO  2.2  DNAPL gauging of 1.3  0.5  0.7  0.7  0.9  1.3  0.8  1.2  DNAPL pumpin DNAPL gauging of 1.3  1.7  1.9  2.0	M HARW-7 (GALLONS)  0.2 or pumping not completed g not required to be comport pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35 28 35 28 28 28 28 28 36	DMT 4  DMT 6  DMT 7	
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 12/4/2017 1/8/2018 2/5/2018 4/2/2018 5/8/2018 6/5/2018	40.8  TOTAL VOLUME REC  40.8  41.7  42.5  42.3  42.3  42.3  42.1  41.7  42.2  41.8  41.7  41.3  41.1  41.0  42.5	1.2  DVERED TO DATE FRO  2.2  DNAPL gauging of 1.3  0.5  0.7  0.7  0.9  1.3  0.8  1.2  DNAPL pumpin  DNAPL gauging of 1.3  1.7  1.9  2.0  0.5	0.2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35 35 28 35 28 28 28 28 28 28	DMT 4  DMT 6  DMT 6  DMT 6  DMT 6  DMT 7  DMT 6  DMT 7  DMT 6  DMT 6  DMT 6  DMT 6  DMT 7  DMT 6  DMT 6  DMT 6  DMT 7  DMT 6  DMT 6  DMT 7  DMT 6  DMT 7  DMT 6  DMT 7  DMT 7  DMT 6  DMT 7	
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 12/4/2017 11/8/2018 2/5/2018 3/5/2018 4/2/2018 5/8/2018 6/5/2018	40.8  TOTAL VOLUME REC.  40.8  41.7  42.5  42.3  42.3  42.3  42.1  41.7  42.2  41.8  41.7  41.3  41.1  41.0  42.5  42.5	1.2  DVERED TO DATE FRO  2 2  DNAPL gauging of 1.3  0.5  0.7  0.7  0.9  1.3  0.8  1.2  DNAPL gauging of 1.3  1.1  DNAPL gauging of 1.3  1.7  1.9  2.0  0.5  0.5	0.2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35 28 35 28 28 36 28 28	DMT 4  DMT 6  DMT 6  DMT 7  DMT 6  DMT 7  DMT 7  DMT 6  DMT 7	double diaphragm p
JARWS	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 12/4/2017 1/8/2018 4/2/2018 5/8/2018 6/5/2018 6/5/2018 8/6/2018	40.8  TOTAL VOLUME REC.  40.8  41.7  42.5  42.3  42.3  42.3  42.1  41.7  42.2  41.8  41.7  41.1  41.0  42.5  42.3	1.2  DVERED TO DATE FRO  2.2  DNAPL gauging of 1.3  0.5  0.7  0.7  0.9  1.3  0.8  1.2  DNAPL pumpin DNAPL gauging of 1.3  1.7  1.9  2.0  0.5  0.7	M HARW-7 (GALLONS)  0 2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35 28 35 28 28 28 28 28 28 28 28 28 35 28 35 28 35 28 35 35 28 35 35 35 28 35 35 36 36 37 38 38 38 38 38 38 38 38 38 38	DMT 4	double diaphragm p
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 6/5/2017 7/10/2017 8/17/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 11/8/2018 2/5/2018 3/5/2018 4/2/2018 6/5/2018 7/9/2018 8/6/2018	40.8  TOTAL VOLUME REC  40.8  41.7  42.5  42.3  42.3  42.1  41.7  41.2  41.8  41.7  41.0  42.5  42.5  42.3  42.1	1.2  DVERED TO DATE FRO  2.2  DNAPL gauging of 1.3  0.5  0.7  0.7  0.9  1.3  0.8  1.2  DNAPL pumpin  DNAPL gauging of 1.3  1.7  1.9  2.0  0.5  0.7  0.9	0.2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35 35 28 35 28 28 28 28 28 28 28 28 36 28 28 35 35 35 35 35 35 36 37 38 38 38 38 38 38 38 38 38 38	DMT 4  DMT 6  DMT 6  DMT 6  DMT 7  DMT 6  DMT 6  DMT 7  DMT 7  DMT 6  DMT 7  DMT 6  DMT 7  DMT 7  DMT 6  DMT 7	double diaphragm p
HARWS	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 1/10/2017 1/1/2017 1/1/2017 1/1/2017 1/1/2017 1/1/2017 1/1/2017 1/1/2017 1/1/2017 1/1/2017 1/1/2018 2/5/2018 3/5/2018 4/2/2018 5/8/2018 6/5/2018 7/9/2018 8/6/2018 9/10/2018	40.8  TOTAL VOLUME REC.  40.8  41.7  42.5  42.3  42.3  42.3  42.1  41.7  42.2  41.8  41.7  41.3  41.1  41.0  42.5  42.5  42.1  42.0	1.2  DVERED TO DATE FRO  2.2  DNAPL gauging of 1.3  0.5  0.7  0.7  0.9  1.3  0.8  1.2  DNAPL pumpin DNAPL gauging of 1.3  1.7  1.9  2.0  0.5  0.7  0.7  0.9  1.3  1.7  1.9  1.0	M HARW-7 (GALLONS)  0.2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35 28 35 28 28 28 28 28 28 28 28 28 28	DMT 4	double diaphragm p
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/202017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/7/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 12/4/2017 18/2018 4/2/2018 4/2/2018 6/5/2018 6/5/2018 7/9/2018 8/6/2018 9/10/2018 10/1/2018	40.8  TOTAL VOLUME REC.  40.8  41.7  42.5  42.3  42.3  42.3  42.1  41.7  42.2  41.8  41.7  41.0  42.5  42.5  42.3  42.1  41.1  41.0  42.5  42.3  42.1	1.2  DVERED TO DATE FRO  2.2  DNAPL gauging of 1.3  0.5  0.7  0.7  0.9  1.3  0.8  1.2  DNAPL pumpin DNAPL gauging of 1.3  1.7  1.9  2.0  0.5  0.7  0.9  1.10  0.9	0.2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35 28 35 28 28 28 28 28 28 28 28 28 28	DMT 4	double diaphragm p
JARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 6/5/2017 7/10/2017 6/5/2017 7/10/2017 8/7/2017 1/10/2017 1/1/2017 1/1/2017 1/1/2017 1/1/2017 1/1/2018 2/5/2018 3/5/2018 4/2/2018 6/5/2018 6/5/2018 6/5/2018 8/6/2018 9/10/2018 1/1/2018 1/1/2018 1/1/2018	40.8  TOTAL VOLUME REC:  40.8  41.7  42.5  42.3  42.3  42.3  42.1  41.7  41.2  41.8  41.7  41.3  41.1  41.0  42.5  42.5  42.5  42.1  42.0  42.1  41.7	1.2  DVERED TO DATE FRO  2 2  DNAPL gauging of 1.3  0.5  0.7  0.7  0.9  1.3  0.8  1.2  DNAPL pumpin DNAPL gauging of 1.3  1.7  1.9  2.0  0.5  0.7  0.9  1.1  1.9  1.0  1.0  1.0  1.0  1.0	M HARW-7 (GALLONS)  0.2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35 28 35 28 28 28 28 28 28 28 28 28 28	DMT 4  DMT 5  DMT 6  DMT 6  DMT 6  DMT 7  DMT 7  DMT 7  DMT 7  DMT 7  DMT 8  DMT 9	double diaphragm p
MARW-S	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/202017 3/6/2017 4/3/2017 5/1/2017 6/5/2017 7/10/2017 8/17/2017 9/11/2017 10/9/2017 11/6/2017 11/6/2017 12/4/2017 1/8/2018 2/5/2018 4/2/2018 5/8/2018 6/5/2018 6/5/2018 7/9/2018 8/6/2018 9/10/2018 10/1/2018 11/5/2018	40.8  TOTAL VOLUME REC.  40.8  41.7  42.5  42.3  42.3  42.3  42.1  41.7  42.2  41.8  41.7  41.0  42.5  42.3  42.1  41.1  41.0  42.5  42.1  42.1  41.7  41.1	1.2  DVERED TO DATE FRO  2.2  DNAPL gauging of 1.3  0.5  0.7  0.7  0.9  1.3  0.8  1.2  DNAPL pumpin DNAPL gauging of 1.3  1.7  1.9  2.0  0.5  0.7  0.7  0.9  1.3  1.7  1.9  2.0  0.5  0.7  0.9  1.3  1.7  1.9  2.0  1.3  1.7	M HARW-7 (GALLONS)  0.2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21  37  47  28  28  35  35  28  35  28  36  28  36  28  36  28  36  28  31  35  35  35  35  35  35  35  35  35	DMT 4	double diaphragm p
HARW-8	2/4/2019  Cumulative 7/19/2011 - 12/10/2016 1/18/2017 2/20/2017 3/6/2017 4/3/2017 6/5/2017 7/10/2017 6/5/2017 7/10/2017 8/7/2017 1/10/2017 1/1/2017 1/1/2017 1/1/2017 1/1/2017 1/1/2018 2/5/2018 3/5/2018 4/2/2018 6/5/2018 6/5/2018 6/5/2018 8/6/2018 9/10/2018 1/1/2018 1/1/2018 1/1/2018	40.8  TOTAL VOLUME REC:  40.8  41.7  42.5  42.3  42.3  42.3  42.1  41.7  41.2  41.8  41.7  41.3  41.1  41.0  42.5  42.5  42.5  42.1  42.0  42.1  41.7	1.2  DVERED TO DATE FRO  2 2  DNAPL gauging of 1.3  0.5  0.7  0.7  0.9  1.3  0.8  1.2  DNAPL pumpin DNAPL gauging of 1.3  1.7  1.9  2.0  0.5  0.7  0.9  1.1  1.9  1.0  1.0  1.0  1.0  1.0	M HARW-7 (GALLONS)  0.2 or pumping not completed	18.0 5.2 due to adverse weather conditions	21 37 47 28 28 35 35 28 35 28 28 28 28 28 28 28 28 28 28	DMT 4  DMT 5  DMT 6  DMT 6  DMT 6  DMT 7  DMT 7  DMT 7  DMT 7  DMT 7  DMT 8  DMT 9	double diaphragm p

TOTAL VOLUME RECOVERED TO DATE FROM ALL WELLS (GALLONS)

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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>a</sup>	Days Elapsed Between Measurement Readings	Measurement Tool Used	Recovery Pr
Notes: MW-12		HAOW-12A					
Depth to Top of Screen: 33 ft Depth to Bottom: 36 ft		Depth to Top of Screen: 2 Depth to Bottom: 43.6 ft	28.6 ft				
HARW-1 Depth to Top of Screen: 24 ft Depth to Bottom: 42 ft		HARW-2 Depth to Top of Screen: 2 Depth to Bottom: 40 ft	26 ft	HARW-3 Angle from Vertical: 16.5° Vertical Depth to Top of Screen: 2' Vertical Depth to Bottom: 39 ft	5.4 ft	HARW-4 Angle from Vertical: 24.5° Vertical Depth to Top of So Vertical Depth to Bottom:	
HARW-5 Angle from Vertical: 23.5° Vertical Depth to Top of Screen: 27 ft Vertical Depth to Bottom: 40.5 ft		HARW-6 Angle from Vertical: 14° Vertical Depth to Top of S Vertical Depth to Bottom:		HARW-7 Depth to Top of Screen: 27.5 ft Depth to Bottom: 42 ft		HARW-8 Depth to Top of Screen: 2 Depth to Bottom: 43 ft	8.5 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.

DMT = DNAPL Measurement Tool, consisting of a copper tubing handle, a spacer section to prevent the proper from contacting the sides of the well riser, and an all-infread rod prode to extend and an all-infread rod prode to extend and an all-infread rod prode to extend an all infread rod p