

SITE MANAGEMENT PLAN STATUS REPORT
REPORT PERIOD: JUNE 1, 2019 THROUGH SEPTEMBER 30, 2019

HARMON RAILROAD YARD
OU-I AND OU-II
WESTCHESTER COUNTY, NEW YORK
SITE No. 3-60-010

SUMMARY OF WORK COMPLETED DURING THE REPORTING PERIOD: This status report summarizes the remedial actions and monitoring completed between July 1, 2019 and September 30, 2019 at the Harmon Railroad Yard OU-I and OU-II, Westchester County, New York, NYSDEC Site No. 3-60-010 (the Site). This document was prepared in accordance with the provisions of the document titled *Metro-North Railroad, Harmon Railroad Yard, Westchester, County, New York, Site Management Plan OU-I and OU-II, NYSDEC Site Number: 3-60-010* dated December 2011 as revised November 11, 2012, January 31, 2015 and January 31, 2016 (the SMP). During this report period, depth to free product and groundwater measurements were conducted as outlined in the SMP and free product was removed from select wells. Depth to free product and static water level measurements were also made in off-site monitoring wells that were installed in September 2016. The results of the work completed during the report period are summarized below.

DEPTH TO GROUNDWATER AND FREE PRODUCT MEASUREMENTS: Monitoring completed during this reporting period included the measurement of static water levels and free product thicknesses (if present) in select functioning wells within OU-I and OU-II (and off-site monitoring wells designated OUII-A through OUII-F). The wells monitored and the results of this monitoring are presented on the logs included in Attachment A. A groundwater contour map developed using static water levels measured in August 2019 is included as Figure 1. Apparent groundwater sinks are shown in the approximate location of well V-2 (i.e., within the OU-I sheet pile area) and in the approximate location of FA4-13 (i.e., near the wells with Spill Buster™ pumps installed). An apparent groundwater mound is shown in the approximate location of AI1-11 (i.e., near the Area L1 Sheet Pile Wall).

FREE PRODUCT REMOVAL RECORDS: The logs included in Attachment A also summarize the amount of free product removed (if any) from wells during this report period. [Note: During the report period, free product was removed from wells AI2-3, RW-1, FA4-8, and FA4-17 using a Spill Buster™ system (i.e., a system installed within the well that continuously monitors/removes free product) and from other locations using a portable Spill Buddy™.] A summary of the amount of free product removed from each well during the current report period is presented on Table 1. A summary of the total amount of free product removed from each well during prior report periods (i.e., between December 1, 2012 and May 31, 2019) is presented on Table 2. A spider diagram presenting the maximum free product thicknesses, and the amount of free product removed from select wells during the current report period (i.e., between June 1, 2019 and September 30, 2019) and the preceding report period (i.e., between January 1, 2019 and May 31, 2019) is included as Figure 2.

The free product removed was placed in 55-gallon drums, which were stored in a waste accumulation area. During the report period, three drums were removed from the waste accumulation area on September 26, 2019, and transported off-site to the disposal facility. A copy of the waste manifest for the drums disposed is included in attachment B.

Note: On November 2, 2018, a request was submitted to the NYSDEC to change the disposal requirements of the collected free product. Specifically, since polychlorinated biphenyls (PCBs) have not been detected in samples of free product removed from OU-II wells at concentrations greater than 50 parts per million

(ppm) since August 26, 2002, MNR requested that further disposal of free product collected from OU-II wells be disposed of as non-hazardous petroleum waste provided that waste characterization testing confirms PCB concentrations below 50 ppm. In the event a PCB concentration in excess of 50 ppm is detected in a free product accumulation drum, the contents of the drum would be disposed of as a TSCA regulated waste. NYSDEC approved this request in a letter dated January 4, 2019.

On April 11, 2019, samples of full drums were also collected and submitted to York Analytical Laboratories, Inc. (York) for testing of polychlorinated biphenyls (PCBs). PCBs were not detected at concentrations greater than the laboratory method detection limit in either sample. A copy of the analytical laboratory report is provided in Attachment B.

GROUNDWATER SAMPLING AND TESTING: Groundwater samples were collected from monitoring wells VE 1-2, VE 1-4, VE 2-1, VE 3-1, VE 4-11, and DAY-1 on September 10, 2019 and September 11, 2019 as part of the long-term monitoring plan identified in the SMP. The groundwater samples were submitted to Chemtech Laboratories (Chemtech) for testing of the following parameters:

- Volatile Organic Compounds (VOCs)
- Semi-Volatile Organic Compounds (SVOCs)
- Polychlorinated Biphenyls (PCBs)
- Metals

In addition, per NYSDEC request, groundwater samples collected from monitoring wells VE1-4, VE2-1, and VE4-11 were submitted to York Analytical Laboratories, Inc. (York) for testing of the following parameters:

- Per- & Polyfluorinated Alkyl Substances (PFAS)
- 1,4-Dioxane

Test results for the groundwater samples collected in September 2019 as well as those collected between March 2012 (i.e., the initial quarter completed under the SMP) and November 2018 per the requirements of the long-term monitoring plan, are presented on Table 3 through Table 6 for reference purposes. The groundwater standards or guidance values as referenced in NYSDEC TOGS 1.1.1 dated June 1998 as amended in January 1999, April 2000, and June 2004 (TOGS 1.1.1) are also included on Table 3 through Table 6. The groundwater test results include volatile organic compounds (i.e., Table 3), semi-volatile organic compounds (i.e., Table 4), polychlorinated biphenyls (i.e., Table 5), and metals (i.e., Table 6). The test results from the current report period and previous report periods are also shown on Figure 3 and Figure 3A.

- As shown on Table 3, VOCs were not detected in the groundwater samples collected from monitoring wells VE 1-2, VE 1-4, and VE 4-11 in September 2019. The samples collected from monitoring wells VE 2-1, VE 3-1, and DAY 1 in September 2019 contained detectable concentrations of various VOCs (e.g., 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, chlorobenzene, ethylbenzene, isopropylbenzene, n-butylbenzene, n-propylbenzene, o-xylene, m- & p-xylene, p-isopropyltoluene, sec-butylbenzene, tert-butylbenzene, and toluene). The concentration of 1,2,4-trimethylbenzene detected in the groundwater sample collected from monitoring well VE 3-1 (5.2 micrograms per liter [$\mu\text{g/L}$] or parts per billion [ppb]) exceeded the TOGS 1.1.1 groundwater standard or guidance value (5 ppb). The concentrations of the other detected VOCs were below the TOGS 1.1.1 groundwater standards or guidance values. The concentrations of VOCs detected were consistent with previous sampling events.

- As shown on Table 4, SVOCs were not detected in the groundwater samples collected from monitoring wells VE 1-2, VE 1-4, VE 2-1, and VE 4-11 in September 2019. The samples collected from monitoring wells VE 3-1, and DAY 1 contained detectable concentrations of various SVOCs (e.g., acenaphthene, fluorene, phenanthrene), however the concentrations of the detected SVOCs were below the TOGS 1.1.1 groundwater standards or guidance values. [Note: the reporting limit for various SVOCs (i.e., benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, and chrysene) exceeded the TOGS 1.1.1 groundwater standard or guidance values.]

The concentrations of SVOCs detected in the sample collected in September 2019 were consistent with previous sampling events.

- As shown on Table 5, PCBs were not detected in the groundwater samples collected from monitoring wells VE 1-2, VE 1-4, VE 2-1, VE 3-1, and DAY-1 in September 2019. Aroclor-1254 was detected in the groundwater sample collected from monitoring well VE 4-11 in September 2019 at an approximate concentration (0.29 ppb) exceeding the TOGS 1.1.1 groundwater standard or guidance value (0.09 ppb). The concentrations of PCBs detected in the sample collected in September 2019 were consistent with previous sampling events.
- As shown on Table 6, copper and lead were detected in the groundwater samples collected in September 2019 from monitoring wells VE 1-2, VE 1-4, VE 2-1, VE 3-1, VE 4-11, and DAY 1; however, the concentrations detected were below the TOGS 1.1.1 groundwater standards or guidance values. Arsenic and chromium were not detected at concentrations above the reporting limit. The concentrations of copper and lead detected in the sample collected in September 2019 were consistent with previous sampling events; however, previous sampling events had detectable concentrations of arsenic and chromium.

The test results for the emerging contaminants samples collected in September 2019 as well as those collected in August 2017 and November 2018 (i.e., the only other times that emerging contaminant testing was completed) are included on Table 7. The groundwater test results on Table 7 include PFAS and 1,4-Dioxane. The NYSDEC does not currently have groundwater standards or guidance values for PFAS, perfluorooctanoic acid (PFOA) or prefluorooctanesulfonic acid (PFOS); however, in 2016 the United States Environmental Protection Agency (USEPA) issued a health advisory level of 70 nanograms per liter (ng/l) or parts per trillion (ppt) for the combined concentration of PFOA and PFOS in drinking water. As shown on Table 7, the samples collected in September 2019 did not exceed 70 ng/l for combined PFOA and PFOS.

Copies of the analytical laboratory reports submitted by Chemtech and York are provided as Attachment C.

OFF-SITE MONITORING WELLS: Off-Site monitoring wells designated OUII-A through OUII-F were installed between September 20 and 22, 2016 (refer to Figure 1 for locations). Weekly monitoring of these monitoring wells commenced on October 4, 2016 to assess static water levels and free product thicknesses. The results of the monitoring during this report period for these wells are provided in Attachment A. As shown, during the weekly monitoring completed during the report period, free product was observed in monitoring wells OUII-A, OUII-B, OUII-D, and OUII-F. Table 8 shows the range of static water levels (SWLs) and the free product thickness measured in each well during the monitoring events completed to date. Free product was not detected in wells OUII-C and OUII-E in either the current or past report periods.

While the thickness of free product detected in the off-site wells generally appears to be decreasing; the amount of free product present within the off-site wells appears to be seasonally influenced (i.e., higher in fall and lower in spring). Free product has been consistently detected in off-site wells OUII-A, OUII-B, OUII-D, and OUII-F; occasionally detected in off-site well OUII-C; and has not been detected in off-site well OUII-E.

AREA L1 SHEET PILE WALL WELLS: Monitoring well WB-9 is located at the southern terminus of the sheet pile wall installed along the western boundary of Area L1. Monitoring well SP-North is located at the northern terminus of the sheet pile wall in Area L1 (refer to Figure 1). Routine monitoring of WB-9 commenced on November 16, 2016, and on October 4, 2016 for SP-North to evaluate the potential for free product to migrate around the sheet pile wall. To date, free product has only been detected on one occasion in SP-North (reported thickness of 0.03 ft. on March 15, 2017); however, the depth to free product was reported as ‘suspect’, as it was not identified during subsequent monitoring events. To date, free product has not been detected in WB-9. The static water level and free product thickness records completed during this report period for these wells are provided in Attachment A.

BI-ANNUAL OU-I AND OU-II INSPECTION: The most recent inspection of OU-I and OU-II was completed on September 10, 2019 by MNR. A copy of the inspection report is provided in Attachment D. The next inspection is tentatively scheduled for April 2020.

PROBLEMS ENCOUNTERED/RESOLUTION: During the September 10, 2019 inspection of the OU-I and OU-II areas, the following items requiring corrective actions were identified.

- Although some work was completed during the current and previous report periods, additional scrap and surplus equipment needs to be removed from locations within OU-II on top of the capped area;
- A curb box is required to be installed at well AI-1-16.

No other problems associated with the remedial systems or ECs requiring repair/modification were identified during the report period.

WORK ANTICIPATED FOR THE UPCOMING REPORT PERIOD AND SCHEDULE: During the upcoming reporting period (i.e., between October 1, 2019 and December 31, 2019), it is anticipated that free product and groundwater monitoring will continue in accordance with the schedule presented in the SMP (i.e., as modified by the schedule presented in the March 2014 CAP). Free product will be removed from wells RW-1, AI2-3, FA4-8, and FA4-17 using the Spill Buster™ system, and potentially other locations (e.g., FA4-13 and/or FA4-15 depending on the quantity of free product detected). A portable Spill Buddy™ will be used to remove free product from other wells, if warranted. If 0.5 ft. or more of free product is measured in a two-inch inner diameter (ID) well or 0.3 ft. or more of free product is measured in a four-inch ID well, it will be removed using a Spill Buddy™ (or similar). [Note: In the event that between 0.2 ft. and 0.5 ft. of free product is detected in a two-inch ID well or between 0.2 ft. and 0.3 ft. of free product is detected in a four-inch ID well during monitoring events, the free product will be removed from this location at least two times per year (i.e., in the spring and fall quarters when free product levels typically increase) using a Spill Buddy™ and/or bailer.]

If full drums of free product are generated during the upcoming quarter, samples should be collected and tested, as outlined in the SMP. The full free product drums, including any currently full free product drums, should subsequently be transported off the Site and disposed of in accordance with applicable regulations. [Note: If PCB concentrations are below 50 ppm, the drum contents will be disposed of as a non-hazardous petroleum waste. If a PCB concentration in excess of 50 ppm is detected in a free product accumulation drum, the contents of the free product drum will be disposed of as a TSCA regulated waste.]

The off-site monitoring wells should continue to be monitored on a weekly basis. During the upcoming reporting period, if sufficient free product is detected in these wells, samples of free product will be collected and submitted to an analytical laboratory for testing of PCBs.

The next OU-I/OU-II inspection is due on or about April 2020. A SMP status report for the work completed during the upcoming period (i.e., October 1, 2019 through December 31, 2019) will be submitted in January 2020. The next groundwater sampling and testing will be completed on, or about, August 30, 2020.

A Periodic Review Report (PRR) for the reporting period January 1, 2019 through January 1, 2022, will be submitted on, or before January 31, 2022. At that time, the SMP will be revised if deemed necessary.

Tables

Table 1:	Free Product Removal Totals: June 1, 2019 through September 30, 2019
Table 2:	Historic Free Product Removal Totals: December 1, 2012 through May 31, 2018
Table 3:	Summary of VOCs: Groundwater Samples
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Table 5:	Summary of PCBs: Groundwater Samples
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Table 8:	Off-Site Wells Static Water Levels and Range of Free Product Thickness

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Figure 1:	Groundwater Contour Map: August 2019
Figure 2:	Summary of Free Product Removal for the Report Periods January 2019 – May 2019 and June 2019 – September 2019
Figure 3 & 3A:	Long-Term Monitoring Results Samples Collected May 27&28, 2014, May 19&20, 2015, May 17&18, 2016, August 2&3, 2017, November 27&28, 2018, and September 10&11, 2019

Attachments

Attachment A:	Well Monitoring Logs and Free Product Removal Records: June 1, 2019 through September 30, 2019
Attachment B:	Waste Manifest Documentation and Analytical Laboratory Report for drum samples collected April 11, 2019
Attachment C:	Analytical Laboratory Reports for monitoring well samples collected September 2019
Attachment D:	Inspection Report

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TABLES

Table 1

Harmon Railroad Yard
OU-I and OU-II
Westchester County, New York
Site No. 3-60-010

Free Product Removal Totals
Current Report Period: June 1, 2019 through September 30, 2019

OU I		OU II							
		Free Product AREA L1		Free Product AREA L2		Free Product AREA L3		Free Product AREA L4	
Well ID	Gallons Removed	Well ID	Gallons Removed	Well ID	Gallons Removed	Well ID	Gallons Removed	Well ID	Gallons Removed
V1	0	AI1-1	0	AI2-2	0	AI3-4	0	DAY-1	0
V2	1.25	AI1-4	0	AI2-3*	47.2	AI3-5	NM	FA4-8*	30.6
V3	0	AI1-8	0	VE2-1	0	AI3-6	0	FA4-9	2
V4	2.5	AI1-11	0	Total	47.2	VE3-1	0	FA4-10	NM
Total	3.75	AI1-12	0					FA4-11	2.64
		AI1-15	0	Free Product AREA L3				FA4-12	0
		AI1-16	0	AI3-4	0			FA4-13	0
		AI1-17	0	AI3-5	NM			FA4-14	4.51
		SP-North	0	AI3-6	0			FA4-15	0
		VE1-1	1.38	VE3-1	0			FA4-16	0
		VE1-2	0	Total	0.13			FA4-17*	1.35
		VE1-3	0					FA4-18	8.45
		VE1-4	0					FA4-19	NM
		WB-9	0					FA4-20	0
		Total	1.38					FA4-21	0
								FA4-23	0.13
								PGW-2	0.00
								RW-1*	42.2
								VE4-1	0
								VE4-5	4.76
								VE4-6	0
								VE4-7	0
								VE4-8	0
								VE4-9	0
								VE4-10	0
								VE4-11	0
								VE4-12	0
								VE4-13	NM
								Total	96.64

NM = Not measured

*Free product was removed from these wells using a Spill Buster™ system (i.e., a

Free product was removed from other locations using a portable Spill Buddy™

Table 2

Harmon Railroad Yard
OU-I and OU-II
Westchester County, New York
Site No. 3-60-010

Historic Free Product Removal Totals (i.e., Prior to Current Report Period)
December 1, 2012 - May 31, 2019

OU I	
Well ID	Gallons Removed
V1	5.18
V2	4.01
V3	19.08
V4	123.31
Total	151.58

OU II							
Free Product AREA L1		Free Product AREA L2		Free Product AREA L4			
Well ID	Gallons Removed	Well ID	Gallons Removed	Well ID	Gallons Removed		
AI1-1	0.03	AI2-2	1.63	DAY-1	0		
AI1-4	0.04	AI2-3	750.83	FA4-8	291.56		
AI1-8	0.06	VE2-1	0	FA4-9	1.23		
AI1-11	0.122	Total	752.46	FA4-10	0.13		
AI1-12	0.18			FA4-11	130		
AI1-15	0.38			FA4-12	9.67		
AI1-16	0			FA4-13	101.3		
AI1-17	9.14			FA4-14	208.13		
VE1-1	12.23			FA4-15	64.76		
VE1-2	0.01			FA4-16	56.67		
VE1-3	0.1			FA4-17	55.17		
VE1-4	0			FA4-18	93.42		
Total	22.222			FA4-19	0		
				FA4-20	0		
				FA4-21	0.54		
				FA4-23	1.04		
				PGW-2	21.95		
				RW-1	1318.8		
				VE4-1	0		
				VE4-5	178.95		
				VE4-6	2.26		
				VE4-7	0.08		
				VE4-8	2.92		
				VE4-9	9.41		
				VE4-10	4.93		
				VE4-11	0		
				VE4-12	0		
				VE4-13	0		
				Total	2552.92		

Table 3
NYSDEC Site #360010
Harmon Yard Waste Water Area
OU II

Summary of Volatile Organic Compounds
Groundwater Samples

Compound	Groundwater Standard or Guidance Value ⁽¹⁾	Test Location and Sample Date																													
		VE 1-2										VE 1-4										VE 2-1									
		3/27/12	9/12/12	4/2/13	9/25/13	5/27/14	5/20/15	5/17/16	8/2/17	11/27/18	9/10/19	3/27/12	9/12/12	4/2/13	9/25/13	5/27/14	5/20/15	5/18/16	8/2/17	11/27/18	9/10/19	3/28/12	9/12/12	4/2/13	9/24/13	5/28/14	5/20/15	5/18/16	8/3/17	11/28/18	9/11/19
1,2,4-Trimethylbenzene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.11]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.11]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.11]
1,3,5-Trimethylbenzene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.14]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.14]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.14]
Benzene	1	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.10]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.10]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.10]
Chlorobenzene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	NT	ND [0.080]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	NT	ND [0.080]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	NT	ND [0.080]		
Ethylbenzene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.080]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.080]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.080]	
Isopropylbenzene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.13]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.13]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.13]	
Methyl tert-butyl ether (MTBE)	10	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.070]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.070]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.070]	
Naphthalene	10	1.7 J, B	ND [10]	1.4 J	ND [10]	ND [10]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	NT	0.93 J, B	ND [10]	ND [10]	ND [10]	ND [10]	ND [1.0]	ND [1.0]	ND [0.20]	NT	ND [10]	ND [10]	ND [10]	1.3 J,B	1.3 J,B	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	NT	
n-Butylbenzene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.12]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.12]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.12]	
n-Propylbenzene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.11]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.11]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.11]	
o-Xylene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.13]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.13]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.13]	
p- & m- Xylenes	NS	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [2.0]	ND [1.0]	ND [2.0]	ND [0.50]	ND [0.20]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [2.0]	ND [2.0]	ND [0.50]	ND [0.20]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [2.0]	ND [2.0]	ND [2.0]	ND [0.50]	ND [0.20]	
p-Isopropyltoluene	NS	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.12]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.12]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.12]	
sec-Butylbenzene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.12]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.12]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.12]	
tert-Butylbenzene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.11]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.11]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.11]	
Toluene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	2.1	0.48 J	ND [0.20]	ND [0.12]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.12]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	23.7	ND [0.20]	0.56 J	
Xylenes, Total	5	ND [15]	ND [15]	ND [15]	ND [15]	ND [15]	ND [3.0]	ND [3.0]	ND [3.0]	ND [0.60]	ND [0.33]	ND [15]	ND [15]	ND [15]	ND [15]	ND [15]	ND [3.0]	ND [3.0]	ND [0.60]	ND [0.33]	ND [15]	ND [15]	ND [15]	ND [15]	ND [15]	ND [3.0]	ND [3.0]	ND [3.0]	ND [0.60]	ND [0.33]	

Compound	Groundwater Standard or Guidance Value ⁽¹⁾	Test Location and Sample Date																															
		VE 3-1										VE 4-11										DAY 1											
		3/27/12	9/11/12	4/2/13	9/25/13	5/28/14	5/19/15	5/18/16	8/3/17	11/28/18	9/11/19	3/27/12	9/11/12	9/11/12 DUF	4/2/13	9/24/13	5/27/14	5/19/15	5/17/16	8/2/17	11/27/18	9/10/19	3/27/12	9/11/12	4/2/13	9/24/13	5/27/14	5/19/15	5/17/16	8/2/17	11/27/18	9/10/2019	
1,2,4-Trimethylbenzene	5	3.4 J	2.6 J	ND [5.0]	5.1	5.1	3.60	6.4	3.9	4.5	5.2	1.1 J	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	0.78	ND [0.11]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	0.35 J	ND [0.11]	
1,3,5-Trimethylbenzene	5	1.9 J	1.2 J	ND [5.0]	2.0 J	2.2 J	1.70	2.7	1.9	2	2.7	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.14]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.14]	
Benzene	1	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.40]	ND [0.10]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.10]	ND [5.0]	0.82 J	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	0.53 J	0.62 J	0.32 J	0.61	ND [0.10]
Chlorobenzene	5	2.6 J	2.4 J	ND [5.0]	3.6 J	2.5 J	2.70	3.6	3.5	NT	2.9	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	NT	ND [0.080]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	NT	ND [0.080]	
Ethylbenzene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	0.81 J	0.40 J	0.48 J	0.34 J	0.62 J	0.39 J	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.080]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	0.27 J	ND [1.0]	ND [1.0]	0.28 J	ND [0.080]	
Isopropylbenzene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	0.46 J	0.31 J	0.42 EJ	0.42 J	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.13]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	0.39 J	0.22 J	0.41 EJ	ND [0.13]	
Methyl tert-butyl ether (MTBE)	10	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.40]	ND [0.070]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.070]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.070]	
Naphthalene	10	5.6 J, B	6.6 J	ND [10]	9.3 J	10	9.00	9.4	6.2	8	NT	4.0 J, B	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [1.0]	ND [1.0]	ND [1.0]	2.9	NT	1.9 J, B	ND [10]	ND [10]	ND [10]	ND [10]	1.9 J	2.00	3.50	ND [1.0]	1.8 J	NT
n-Butylbenzene	5	1.1 J	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	0.52 J	ND [0.40]	1.1	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.12]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	0.37 J	0.79 J	0.31 J	0.40 J	0.59 J	
n-Propylbenzene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	0.42 J	0.76 J	0.53 J	0.74 J	0.83 J	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	0.22 J	ND [0.11]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	0.7 J	0.37 J	0.75	0.86 J	
o-Xylene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	1.0 J	0.97 J	1.3	0.96 J	1.3	1.1	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.13]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	0.48 J	ND [1.0]	0.25 J	0.59	ND [0.13]	
p- & m- Xylenes	NS	ND [10]	ND [10]	ND [10]	ND [10]	1.1 J	0.56 J	0.75 J	0.55 J	ND [1.0]	0.71 J	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [2.0]	ND [2.0]	ND [2.0]	ND [0.50]	ND [0.20]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [2.0]	ND [2.0]	ND [2.0]	ND [0.50]	ND [0.20]	
p-Isopropyltoluene	NS	1.5 J	ND [5.0]	ND [5.0]	0.89 J	1.6 J	0.79 J	ND [1.0]	0.69 J	ND [0.40]	1	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.12]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.12]	
sec-Butylbenzene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	0.6 J	0.45 J	0.50 J	0.72 J	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.12]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	0.42 J	0.21 J	0.43 J	ND [0.12]	
tert-Butylbenzene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.40]	0.29 J	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.11]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.11]	
Toluene	5	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	0.77 J	0.75 J	0.52 J	0.92 J	0.39 J	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [0.20]	ND [0.12]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	0.40 J	ND [1.0]	ND [1.0]	0.26 J	ND [0.12]	
Xylenes, Total	5	ND [15]	ND [15]	ND [15]	ND [15]	2.1 J	1.35 J	2.05	1.51 J	2.2 J	1.81 J	ND [15]	ND [15]	ND [15]	ND [15]	ND [15]	ND [15]	ND [3.0]	ND [3.0]	ND [3.0]	ND [0.60]	ND [0.33]	ND [15]	ND [15]	ND [15]	ND [15]	ND [15]	0.48 J	ND [3.0]	ND [3.0]	0.85 J	ND [0.33]	

Table 4
NYSDEC Site #360010
Harmon Yard Waste Water Area
OU II

Summary of Semi-Volatile Organic Compounds
Groundwater Samples

Compound	Groundwater Standard or Guidance Value ⁽¹⁾	Test Location and Sample Date																													
		VE 1-2										VE 1-4										VE 2-1									
		3/27/12	9/12/12	4/2/13	9/25/13	5/27/14	5/20/15	5/17/16	8/2/17	11/27/18	9/10/19	3/27/12	9/12/12	4/2/13	9/25/13	5/27/14	5/20/15	5/18/16	8/2/17	11/27/18	9/10/19	3/28/12	9/12/12	4/2/13	9/24/13	5/28/14	5/20/15	5/18/16	8/3/17	11/28/18	9/11/19
2-Methylnaphthalene	NS	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [5.88]	ND [10.1]	ND [10.2]	ND [10.1]	ND [2.91]	ND [2.50]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [6.67]	ND [10.2]	ND [10.2]	ND [10.1]	ND [2.83]	ND [2.50]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [5.88]	ND [10.1]	ND [10]	ND [10.1]	ND [2.83]	ND [2.50]
Acenaphthene	20	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [0.06]	ND [10.1]	ND [10.2]	ND [10.1]	0.663	ND [2.80]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [0.07]	ND [10.2]	ND [10.2]	ND [10.1]	0.554	ND [2.80]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [0.06]	ND [10.1]	ND [10]	ND [10.1]	ND [0.0513]	ND [2.80]
Acenaphthylene	NS	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [0.06]	ND [10.1]	ND [10.2]	ND [10.1]	0.0947	ND [2.70]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [0.07]	ND [10.2]	ND [10.2]	ND [10.1]	0.164	ND [2.70]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [0.06]	ND [10.1]	ND [10]	ND [10.1]	ND [0.0513]	ND [2.70]
Anthracene	50	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [0.06]	ND [10.1]	ND [10.2]	ND [10.1]	0.189	ND [2.50]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [0.07]	ND [10.2]	ND [10.2]	ND [10.1]	0.0821	ND [2.50]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [0.06]	ND [10.1]	ND [10]	ND [10.1]	ND [0.0513]	ND [2.50]
Benzo(a)anthracene	0.002	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [0.06]	ND [10.1]	ND [10.2]	ND [10.1]	ND [0.0526]	ND [2.30]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [0.07]	ND [10.2]	ND [10.2]	ND [10.1]	ND [0.0513]	ND [2.30]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [0.06]	ND [10.1]	ND [10]	ND [10.1]	ND [0.0513]	ND [2.30]
Benzo(a)pyrene	ND	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [0.06]	ND [10.1]	ND [10.2]	ND [10.1]	ND [0.0526]	ND [2.40]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [0.07]	ND [10.2]	ND [10.2]	ND [10.1]	0.0513 J	ND [2.40]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [0.06]	ND [10.1]	ND [10]	ND [10.1]	ND [0.0513]	ND [2.40]
Benzo(b)fluoranthene	0.002	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [0.06]	ND [10.1]	ND [10.2]	ND [10.1]	ND [0.0526]	ND [2.30]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [0.07]	ND [10.2]	ND [10.2]	ND [10.1]	0.0615	ND [2.30]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [0.06]	ND [10.1]	ND [10]	ND [10.1]	ND [0.0513]	ND [2.30]
Benzo(g,h,i)perylene	NS	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [0.06]	ND [10.1]	ND [10.2]	ND [10.1]	ND [0.0526]	ND [2.60]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [0.07]	ND [10.2]	ND [10.2]	ND [10.1]	0.0513 J	ND [2.60]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [0.06]	ND [10.1]	ND [10]	ND [10.1]	ND [0.0513]	ND [2.60]
Benzo(k)fluoranthene	0.002	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [0.06]	ND [10.1]	ND [10.2]	ND [10.1]	ND [0.0526]	ND [2.30]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [0.07]	ND [10.2]	ND [10.2]	ND [10.1]	ND [0.0513]	ND [2.30]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [0.06]	ND [10.1]	ND [10]	ND [10.1]	ND [0.0513]	ND [2.30]
Chrysene	0.002	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [0.06]	ND [10.1]	ND [10.2]	ND [10.1]	ND [0.0526]	ND [2.40]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [0.07]	ND [10.2]	ND [10.2]	ND [10.1]	0.133	ND [2.40]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [0.06]	ND [10.1]	ND [10]	ND [10.1]	ND [0.0513]	ND [2.40]
Dibenzo(a,h)anthracene	NS	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [0.06]	ND [10.1]	ND [10.2]	ND [10.1]	ND [0.0526]	ND [2.60]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [0.07]	ND [10.2]	ND [10.2]	ND [10.1]	ND [0.0513]	ND [2.60]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [0.06]	ND [10.1]	ND [10]	ND [10.1]	ND [0.0513]	ND [2.60]
Fluoranthene	50	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [0.06]	ND [10.1]	ND [10.2]	ND [10.1]	0.0842	ND [2.90]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [0.07]	ND [10.2]	ND [10.2]	ND [10.1]	0.256	ND [2.90]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [0.06]	ND [10.1]	ND [10]	ND [10.1]	ND [0.0513]	ND [2.90]
Fluorene	50	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [0.06]	ND [10.1]	ND [10.2]	ND [10.1]	1.47	ND [2.50]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [0.07]	ND [10.2]	ND [10.2]	ND [10.1]	0.451	ND [2.50]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [0.06]	ND [10.1]	ND [10]	ND [10.1]	ND [0.0513]	ND [2.50]
Indeno(1,2,3-cd)pyrene	0.002	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [0.06]	ND [10.1]	ND [10.2]	ND [10.1]	ND [0.0526]	ND [3.30]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [0.07]	ND [10.2]	ND [10.2]	ND [10.1]	ND [0.0513]	ND [3.30]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [0.06]	ND [10.1]	ND [10]	ND [10.1]	ND [0.0513]	ND [3.30]
Naphthalene	10	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [0.06]	ND [10.1]	NT	ND [10.1]	0.0526 J	ND [2.50]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [0.07]	ND [10.2]	NT	ND [10.1]	ND [0.0513]	ND [2.50]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [0.06]	ND [10.1]	NT	NT	ND [0.0513]	ND [2.50]
Phenanthrene	50	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [0.06]	ND [10.1]	ND [10.2]	ND [10.1]	0.0842	ND [2.50]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [0.07]	ND [10.2]	ND [10.2]	ND [10.1]	0.503	ND [2.50]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [0.06]	ND [10.1]	ND [10]	ND [10.1]	ND [0.0513]	ND [2.50]
Pyrene	50	ND [5.13]	ND [5.56]	ND [5.13]	ND [6.25]	ND [0.06]	ND [10.1]	ND [10.2]	ND [10.1]	0.295	ND [2.50]	ND [5.13]	ND [5.71]	ND [5.26]	ND [5.88]	ND [0.07]	ND [10.2]	2.8 J	ND [10.1]	1.10	ND [2.50]	ND [5.13]	ND [6.25]	ND [26.3]	ND [5.56]	ND [0.06]	ND [10.1]	ND [10]	ND [10.1]	ND [0.0513]	ND [2.50]

Compound	Groundwater Standard or Guidance Value ⁽¹⁾	Test Location and Sample Date																					
		VE 3-1											VE 4-11										
		3/27/12	9/11/12	4/2/13	9/25/13	5/28/14	5/19/15	5/18/16	8/3/17	8/3/17	11/28/18	9/11/19	3/27/12	9/11/12	/11/12 DU	4/2/13	9/24/13	5/27/14	5/19/15	5/17/16	8/2/17	11/27/18	9/10/19
2-Methylnaphthalene	NS	ND [5.13]	ND [5.26]	ND [5.13]	12	4.30 J	ND [10]	34.7	30.1	30.1	36.3	ND [2.50]	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [6.06]	ND [10.3]	ND [10]	ND [10]	ND [2.91]	ND [2.50]
Acenaphthene	20	ND [5.13]	ND [5.26]	ND [5.13]	9.26	ND [0.06]	3.600 J	4.7 J	5.9 J	5.9 J	6.66	5.00 J	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [0.06]	ND [10.3]	ND [10]	ND [10]	ND [0.0526]	ND [2.80]
Acenaphthylene	NS	ND [5.13]	ND [5.26]	ND [5.13]	ND [5.88]	ND [0.06]	ND [10]	ND [10]	ND [10.1]	ND [10.1]	1.29	ND [2.70]	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [0.06]	ND [10.3]	ND [10]	ND [10]	ND [0.0526]	ND [2.70]
Anthracene	50	ND [5.13]	ND [5.26]	ND [5.13]	3.44 J	ND [0.06]	ND [10]	ND [10]	ND [10.1]	ND [10.1]	2.35	ND [2.50]	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [0.06]	ND [10.3]	ND [10]	ND [10]	ND [0.0526]	ND [2.50]
Benzo(a)anthracene	0.002	ND [5.13]	ND [5.26]	ND [5.13]	ND [5.88]	0.238	ND [10]	ND [10]	ND [10.1]	ND [10.1]	0.0821	ND [2.30]	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [0.06]	ND [10.3]	ND [10]	ND [10]	ND [0.0526]	ND [2.30]
Benzo(a)pyrene	ND	ND [5.13]	ND [5.26]	ND [5.13]	ND [5.88]	0.112	ND [10]	ND [10]	ND [10.1]	ND [10.1]	ND [0.0513]	ND [2.40]	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [0.06]	ND [10.3]	ND [10]	ND [10]	ND [0.0526]	ND [2.40]
Benzo(b)fluoranthene	0.002	ND [5.13]	ND [5.26]	ND [5.13]	ND [5.88]	0.275	ND [10]	ND [10]	ND [10.1]	ND [10.1]	0.0718	ND [2.30]	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [0.06]	ND [10.3]	ND [10]	ND [10]	ND [0.0526]	ND [2.30]
Benzo(g,h,i)perylene	NS	ND [5.13]	ND [5.26]	ND [5.13]	ND [5.88]	0.100	ND [10]	ND [10]	ND [10.1]	ND [10.1]	ND [0.0513]	ND [2.60]	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [0.06]	ND [10.3]	ND [10]	ND [10]	ND [0.0526]	ND [2.60]
Benzo(k)fluoranthene	0.002	ND [5.13]	ND [5.26]	ND [5.13]	ND [5.88]	0.262	ND [10]	ND [10]	ND [10.1]	ND [10.1]	0.0718	ND [2.30]	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [0.06]	ND [10.3]	ND [10]	ND [10]	ND [0.0526]	ND [2.30]
Chrysene	0.002	ND [5.13]	ND [5.26]	ND [5.13]	ND [5.88]	0.250	ND [10]	ND [10]	ND [10.1]	ND [10.1]	0.185	ND [2.40]	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [0.06]	ND [10.3]	ND [10]	ND [10]	ND [0.0526]	ND [2.40]
Dibenzo(a,h)anthracene	NS	ND [5.13]	ND [5.26]	ND [5.13]	ND [5.88]	ND [0.06]	ND [10]	ND [10]	ND [10.1]	ND [10.1]	ND [0.0513]	ND [2.60]	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [0.06]	ND [10.3]	ND [10]	ND [10]	ND [0.0526]	ND [2.60]
Fluoranthene	50	ND [5.13]	ND [5.26]	ND [5.13]	1.94 J	ND [0.06]	ND [10]	ND [10]	ND [10.1]	ND [10.1]	0.697	ND [2.90]	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [0.06]	ND [10.3]	ND [10]	ND [10]	ND [0.0526]	ND [2.90]
Fluorene	50	ND [5.13]	2.85 J	ND [5.13]	12.3	6.75	3.200 J	6.4 J	7.8 J	7.8 J	9.31	4.50 J	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [0.06]	ND [10.3]	ND [10]	ND [10]	ND [0.0526]	ND [2.50]
Indeno(1,2,3-cd)pyrene	0.002	ND [5.13]	ND [5.26]	ND [5.13]	ND [5.88]	0.112	ND [10]	ND [10]	ND [10.1]	ND [10.1]	ND [0.0513]	ND [3.30]	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [0.06]	ND [10.3]	ND [10]	ND [10]	ND [0.0526]	ND [3.30]
Naphthalene	10	ND [5.13]	ND [5.26]	ND [5.13]	ND [5.88]	ND [0.06]	ND [10]	NT	NT	NT	0.974	ND [2.50]	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [0.06]	ND [10.3]	NT	NT	ND [0.0526]	ND [2.50]
Phenanthrene	50	ND [5.13]	2.41 J	1.87 J	23	10.8	2.600 J	12.2	11.1	11.1	16.8	7.20 J	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [0.06]	ND [10.3]	ND [10]	ND [10]	ND [0.0526]	ND [2.50]
Pyrene	50	ND [5.13]	ND [5.26]	ND [5.13]	2.08 J	3.28	ND [10]	ND [10]	ND [10.1]	ND [10.1]	1.42	ND [2.50]	ND [5.13]	ND [5.71]	ND [6.06]	ND [25.0]	ND [6.67]	ND [0.06]	ND [10.3]	ND [10]	ND [10]	ND [0.0526]	ND [2.50]

Table 5
NYSDEC Site #360010
Harmon Yard Waste Water Area
OU II

Summary of Polychlorinated Biphenyls (PCBs)
Groundwater Samples

Compound	Groundwater Standard or Guidance Value ⁽¹⁾	Test Location and Sample Date																													
		VE 1-2										VE 1-4										VE 2-1									
		3/27/12	9/12/12	4/2/13	9/25/13	5/27/14	5/20/15	5/17/16	8/2/17	11/27/18	9/10/19	3/27/12	9/12/12	4/2/13	9/25/13	5/27/14	5/20/15	5/18/16	8/2/17	11/27/18	9/10/19	3/28/12	9/12/12	4/2/13	9/24/13	5/28/14	5/20/15	5/18/16	8/3/17	11/28/18	9/11/19
Aroclor 1016	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0606]	ND [0.0588]	ND [0.096]	ND [0.5]	ND [0.505]	ND [0.0513]	ND [0.093]	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.098]	ND [0.51]	ND [0.502]	ND [0.0513]	ND [0.093]	ND [0.0513]	ND [0.0571]	ND [0.0526]	ND [0.0667]	ND [0.0625]	ND [0.097]	ND [0.505]	ND [0.507]	ND [0.0513]	ND [0.093]
Aroclor 1221	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0606]	ND [0.0588]	ND [0.1]	ND [0.5]	ND [0.505]	ND [0.0513]	ND [0.13]	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.102]	ND [0.51]	ND [0.502]	ND [0.0513]	ND [0.13]	ND [0.0513]	ND [0.0571]	ND [0.0526]	ND [0.0667]	ND [0.0625]	ND [0.101]	ND [0.505]	ND [0.507]	ND [0.0513]	ND [0.13]
Aroclor 1232	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0606]	ND [0.0588]	ND [0.1]	ND [0.5]	ND [0.505]	ND [0.0513]	ND [0.18]	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.0102]	ND [0.51]	ND [0.502]	ND [0.0513]	ND [0.18]	ND [0.0513]	ND [0.0571]	ND [0.0526]	ND [0.0667]	ND [0.0625]	ND [0.101]	ND [0.505]	ND [0.507]	ND [0.0513]	ND [0.18]
Aroclor 1242	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0606]	ND [0.0588]	ND [0.089]	ND [0.5]	ND [0.505]	ND [0.0513]	ND [0.18]	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.091]	ND [0.51]	ND [0.502]	ND [0.0513]	ND [0.18]	ND [0.0513]	ND [0.0571]	ND [0.0526]	ND [0.0667]	ND [0.0625]	ND [0.09]	ND [0.505]	ND [0.507]	ND [0.0513]	ND [0.18]
Aroclor 1248	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0606]	ND [0.0588]	ND [0.1]	ND [0.5]	ND [0.505]	ND [0.0513]	ND [0.12]	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.102]	ND [0.51]	ND [0.502]	ND [0.0513]	ND [0.12]	ND [0.0513]	ND [0.0571]	ND [0.0526]	ND [0.0667]	ND [0.0625]	ND [0101]	ND [0.505]	ND [0.507]	ND [0.0513]	ND [0.12]
Aroclor 1254	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0606]	ND [0.0588]	ND [0.044]	ND [0.5]	ND [0.505]	ND [0.0513]	ND [0.12]	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.045]	ND [0.51]	ND [0.502]	ND [0.0513]	ND [0.12]	ND [0.0513]	ND [0.0571]	ND [0.0526]	ND [0.0667]	ND [0.0625]	ND [0.044]	ND [0.505]	ND [0.507]	ND [0.0513]	ND [0.12]
Aroclor 1260	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0606]	ND [0.0588]	ND [0.081]	ND [0.5]	ND [0.505]	ND [0.0513]	ND [0.14]	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.083]	ND [0.51]	ND [0.502]	ND [0.0513]	ND [0.14]	ND [0.0513]	ND [0.0571]	ND [0.0526]	ND [0.0667]	ND [0.0625]	ND [0.082]	ND [0.505]	ND [0.507]	ND [0.0513]	ND [0.14]
Aroclor 1262	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0606]	ND [0.0588]	ND [0.081]	ND [0.5]	ND [0.505]	ND [0.0513]	ND [0.19]	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.083]	ND [0.51]	ND [0.502]	ND [0.0513]	ND [0.19]	ND [0.0513]	ND [0.0571]	ND [0.0526]	ND [0.0667]	ND [0.0625]	ND [0.082]	ND [0.505]	ND [0.507]	ND [0.0513]	ND [0.19]
Aroclor 1268	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0606]	ND [0.0588]	ND [0.081]	ND [0.5]	ND [0.505]	ND [0.0513]	ND [0.14]	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.083]	ND [0.51]	ND [0.502]	ND [0.0513]	ND [0.14]	ND [0.0513]	ND [0.0571]	ND [0.0526]	ND [0.0667]	ND [0.0625]	ND [0.082]	ND [0.505]	ND [0.507]	ND [0.0513]	ND [0.14]
Total PCBs	0.09	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0606]	ND [0.0588]	ND [0.1]	ND [0.5]	ND [0.505]	ND [0.0513]	ND	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.102]	ND [0.51]	ND [0.502]	ND [0.0513]	ND	ND [0.0513]	ND [0.0571]	ND [0.0526]	ND [0.0667]	ND [0.0625]	ND [0.101]	ND [0.505]	ND [0.507]	ND [0.0513]	ND

Compound	Groundwater Standard or Guidance Value ⁽¹⁾	Test Location and Sample Date																				
		VE 3-1										VE 4-11										
		3/27/12	9/11/12	4/2/13	9/25/13	5/28/14	5/19/15	5/18/16	8/3/17	11/28/18	9/11/19	3/27/12	9/11/12	9/11/12 DUP	4/2/13	9/24/13	5/27/14	5/19/15	5/17/16	8/2/17	11/27/18	9/10/19
Aroclor 1016	NS	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.096]	ND [0.505]	ND [0.505]	ND [0.0513]	ND [0.093]	ND [0.0513]	ND [0.0625]	ND [0.0690]	ND [0.0500]	ND [0.0667]	ND [0.0588]	ND [0.099]	ND [0.5]	ND [0.506]	ND [0.0513]	ND [0.093]
Aroclor 1221	NS	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.1]	ND [0.505]	ND [0.505]	ND [0.0513]	ND [0.13]	ND [0.0513]	ND [0.0625]	ND [0.0690]	ND [0.0500]	ND [0.0667]	ND [0.0588]	ND [0.103]	ND [0.5]	ND [0.506]	ND [0.0513]	ND [0.13]
Aroclor 1232	NS	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.1]	ND [0.505]	ND [0.505]	ND [0.0513]	ND [0.18]	ND [0.0513]	ND [0.0625]	ND [0.0690]	ND [0.0500]	ND [0.0667]	ND [0.0588]	ND [0.103]	ND [0.5]	ND [0.506]	ND [0.0513]	ND [0.18]
Aroclor 1242	NS	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.089]	ND [0.505]	ND [0.505]	ND [0.0513]	ND [0.18]	ND [0.0513]	ND [0.0625]	ND [0.0690]	ND [0.0500]	ND [0.0667]	ND [0.0588]	ND [0.092]	ND [0.5]	ND [0.506]	ND [0.0513]	ND [0.18]
Aroclor 1248	NS	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.1]	ND [0.505]	ND [0.505]	ND [0.0513]	ND [0.12]	ND [0.0513]	ND [0.0625]	ND [0.0690]	ND [0.0500]	ND [0.0667]	ND [0.0588]	ND [0.103]	ND [0.5]	ND [0.506]	ND [0.0513]	ND [0.12]
Aroclor 1254	NS	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.044]	ND [0.505]	ND [0.505]	ND [0.0513]	ND [0.12]	ND [0.0513]	0.0805	0.0786	ND [0.0500]	0.0928	ND [0.0588]	ND [0.045]	0.914	0.711	ND [0.0513]	0.291
Aroclor 1260	NS	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.081]	ND [0.505]	ND [0.505]	ND [0.0513]	ND [0.14]	ND [0.0513]	ND [0.0625]	ND [0.0690]	ND [0.0500]	ND [0.0667]	ND [0.0588]	ND [0.084]	ND [0.5]	ND [0.506]	ND [0.0513]	ND [0.14]
Aroclor 1262	NS	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.081]	ND [0.505]	ND [0.505]	ND [0.0513]	ND [0.19]	ND [0.0513]	ND [0.0625]	ND [0.0690]	ND [0.0500]	ND [0.0667]	ND [0.0588]	ND [0.084]	ND [0.5]	ND [0.506]	ND [0.0513]	ND [0.19]
Aroclor 1268	NS	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.081]	ND [0.505]	ND [0.505]	ND [0.0513]	ND [0.14]	ND [0.0513]	ND [0.0625]	ND [0.0690]	ND [0.0500]	ND [0.0667]	ND [0.0588]	ND [0.084]	ND [0.5]	ND [0.506]	0.0747	ND [0.14]
Total PCBs	0.09	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.1]	ND [0.505]	ND [0.505]	ND [0.0513]	ND	ND [0.0513]	0.0805	0.0786	ND [0.0500]	0.0928	ND [0.0588]	ND [0.103]	0.914	0.711	0.0747	0.291

Compound	Groundwater Standard or Guidance Value ⁽¹⁾	Test Location and Sample Date																
		DAY 1										Field Blank						
		3/27/12	9/11/12	4/2/13	9/24/13	5/27/14	5/19/15	5/17/16	8/2/17	11/27/18	9/11/19	3/28/12	9/12/12	4/2/13	9/25/13	5/20/15	11/28/18	9/11/19
Aroclor 1016	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.098]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.093]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.097]	ND [0.0513]	ND [0.093]
Aroclor 1221	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.102]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.13]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.101]	ND [0.0513]	ND [0.13]
Aroclor 1232	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.102]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.18]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.101]	ND [0.0513]	ND [0.18]
Aroclor 1242	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.091]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.18]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.09]	ND [0.0513]	ND [0.18]
Aroclor 1248	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.102]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.12]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.101]	ND [0.0513]	ND [0.12]
Aroclor 1254	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.045]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.12]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.044]	ND [0.0513]	ND [0.12]
Aroclor 1260	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.083]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.14]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.082]	ND [0.0513]	ND [0.14]
Aroclor 1262	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.083]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.19]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.082]	ND [0.0513]	ND [0.19]
Aroclor 1268	NS	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.083]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.14]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.082]	ND [0.0513]	ND [0.14]
Total PCBs	0.09	ND [0.0513]	ND [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.102]	ND [0.51]	ND [0.504]	ND [0.0513]	ND	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.101]	ND [0.0513]	ND

Notes:
All results and groundwater standards/guidance values are in parts per billion (ppb)
(1) = Groundwater standard or guidance value as referenced in NYSDEC TOGS 1.1.1 dated June 1998 as amended in January 1999, April 2000, and June 2004.
ND [Reporting Limit] = Not Detected at a concentration greater than the reporting limit shown in brackets
NS = No Standard

BOLD TYPE indicates the concentration exceeds the groundwater standard for total PCBs

Table 6
NYSDEC Site #360010
Harmon Yard Waste Water Area
OU II

Summary of Metals
Groundwater Samples

Compound	Groundwater Standard or Guidance Value ⁽¹⁾	Test Location and Sample Date																			
		VE 1-2										VE 1-4									
		3/27/12	9/12/12	4/2/13	9/25/13	5/27/14	5/20/15	5/17/16	8/2/17	11/27/18	9/10/19	3/27/12	9/12/12	4/2/13	9/25/13	5/27/14	5/20/15	5/18/16	8/2/17	11/27/18	9/10/19
Arsenic	25	ND [10]	ND [4.0]	ND [4.0]	ND [4.0]	ND [4.0]	2.82	4.71	1.57	ND [1.11]	ND [0.68]	ND [10]	ND [4.0]	ND [4.0]	ND [4.0]	ND [4.0]	3.5	36.5	1.21	1.22	ND [0.68]
Chromium	50	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	0.969 J	1.71 JN*	0.85 JN	ND [1.11]	ND [1.33]	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	0.796 J	139 N*	1.62 JN	1.26	ND [1.33]
Copper	200	ND [5]	ND [5]	ND [5]	ND [3]	ND [3]	3.21	21.5 N	4.48	5.52	9.93 J	ND [5]	ND [5]	ND [5]	ND [3]	ND [3]	10.8	6060 N	48	57.3	5.01 J
Lead	25	ND [3]	ND [3]	ND [3]	ND [3]	ND [3]	4.34	7.76	1.56*	2.32	22.2	ND [3]	ND [3]	ND [3]	ND [3]	ND [3]	3.89	1690	14.7*	17.8	14.4

Compound	Groundwater Standard or Guidance Value ⁽¹⁾	Test Location and Sample Date																			
		VE 2-1										VE 3-1									
		3/28/12	9/12/12	4/2/13	9/24/13	5/28/14	5/20/15	5/18/16	8/3/17	11/28/18	9/11/19	3/27/12	9/11/12	4/2/13	9/25/13	5/28/14	5/19/15	5/18/16	8/3/17	11/28/18	9/11/19
Arsenic	25	ND [10]	ND [4.0]	ND [4.0]	ND [4.0]	ND [4.0]	0.507 J	0.42 J	0.92 J	ND [1.11]	ND [0.68]	ND [10]	4.71	6.03	ND [4.0]	5.62	9.16	16.5	19.1	26.9	ND [0.68]
Chromium	50	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	0.137 J	0.65 JN*	0.73 JN	ND [1.11]	ND [1.33]	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	3.07	5.62 N*	5.35 N	6.34	ND [1.33]
Copper	200	ND [5]	6.72	5.56	4.70	9.00	4.55	3.5 N	3.48	10.70	3.74 J	ND [5]	ND [5]	ND [5]	ND [3]	ND [3]	5.24	6.73 N	9.65	10.50	21.70
Lead	25	ND [3]	ND [3]	ND [3]	ND [3]	ND [3]	1.38	0.3 J	0.17 J*	ND [1.11]	8.83	ND [3]	ND [3]	ND [3]	ND [3]	ND [3]	3.77	1.44	2.71 *	3.59	9.18

Compound	Groundwater Standard or Guidance Value ⁽¹⁾	Test Location and Sample Date																				
		VE 4-11											DAY 1									
		3/27/12	9/11/12	11/2012 DU	4/2/13	9/24/13	5/27/14	5/19/15	5/17/16	8/2/17	11/27/18	9/10/19	3/27/12	9/11/12	4/2/13	9/24/13	5/27/14	5/19/15	5/17/16	8/2/17	11/27/18	9/10/19
Arsenic	25	ND [10]	ND [4.0]	ND [4.0]	ND [4.0]	ND [4.0]	ND [4.0]	2.3	0.76 J	1.67	ND [1.11]	ND [0.68]	ND [10]	12.5	ND [4.0]	ND [4.0]	ND [4.0]	10.7	10.6	10.8	12.4	ND [0.68]
Chromium	50	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	1.37 J	0.66 JN*	0.81 JN	ND [1.11]	ND [1.33]	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	1.31 J	1.44 JN*	0.95 JN	ND [1.11]	ND [1.33]
Copper	200	7.64	10.1	8.7	ND [5]	13.7	4.44	9.24	9.02 N	7.24	ND [1.11]	9.00 J	ND [5]	ND [5]	ND [5]	ND [3]	ND [3]	1.34 J	2.77 N	2.99	1.57	7.79 J
Lead	25	ND [3]	ND [3]	ND [3]	ND [3]	ND [3]	ND [3]	1.55	0.19 J	0.66 J*	ND [1.11]	11.6	ND [3]	ND [3]	ND [3]	ND [3]	ND [3]	1.75	0.15 J	0.41 J*	ND [1.11]	3.80 J

Compound	Groundwater Standard or Guidance Value ⁽¹⁾	Test Location and Sample Date						
		Field Blank						
		3/28/12	9/12/12	4/2/13	9/25/13	5/20/15	11/28/18	9/11/19
Arsenic	25	ND [10]	ND [4.0]	ND [4.0]	ND [4.0]	ND [1.0]	ND [1.11]	ND [0.68]
Chromium	50	ND [5]	ND [5]	ND [5]	ND [5]	0.431 J	ND [1.11]	ND [1.33]
Copper	200	ND [5]	ND [5]	ND [5]	17.3	80	ND [1.11]	ND [0.49]
Lead	25	ND [3]	ND [3]	ND [3]	ND [3]	1.6	ND [1.11]	ND [1.43]

Notes:

All results and groundwater standards/guidance values are in parts per billion (ppb)

(1) = Groundwater standard or guidance value as referenced in NYSDEC TOGS 1.1.1 dated June 1998 as amended in January 1999, April 2000,and June 2004.

ND (Method Detection Limit) [Reporting Limit] = Not Detected at a concentration greater than the reporting limit shown in brackets

NS = No Standard

J = Estimated Concentration

N = Indicates the spiked sample recovery is not within control limits

* = Indicates that the duplicate analysis is not within control limits

Table 7
Emerging Contaminant Testing
Harmon OU-2

Compound	Test Location and Sample Date																
	VE 1-2	VE 1-4			VE 2-1					VE 3-1	VE 4-11			DAY 1	Field Blank		
	8/2/17	8/2/17	11/27/18	9/10/19	8/2/17	11/28/18	DUP (11/28/18)	9/11/19	DUP (9/11/19)	8/2/17	8/2/17	11/27/18	9/10/19	8/2/17	2017	2018	FB91119
Perfluoroheptanoic acid (PFHpA)	ND [0.79]	7.7	45	12.9	4	ND [2.0]	ND [2.0]	ND [10]	ND [10]	3.3	ND [0.81]	ND [2.0]	ND [10]	5.4	ND [0.67]	ND [2.0]	ND [10]
Perfluorooctanoic acid (PFOA)	5.2	29	50	51.3	7.7	ND [2.0]	ND [2.0]	ND [10]	ND [10]	5.6	ND [0.75]	ND [2.0]	ND [10]	18	ND [0.62]	ND [2.0]	ND [10]
Perfluorononanoic acid (PFNA)	1.3 J	2.8	7.1	ND [10]	2.6	ND [2.0]	ND [2.0]	ND [10]	ND [10]	1.1 J	ND [0.66]	ND [2.0]	ND [10]	2.4	ND [0.54]	ND [2.0]	ND [10]
Perfluorodecanoic acid (PFDA)	ND [0.43]	ND [0.43]	4.1	ND [10]	0.76 J	ND [2.0]	ND [2.0]	ND [10]	ND [10]	ND [0.44]	ND [0.44]	ND [2.0]	ND [10]	ND [0.44]	ND [0.37]	ND [2.0]	ND [10]
Perfluoroundecanoic acid (PFUnA)	ND [0.73]	ND [0.73]	ND [2.0]	ND [10]	ND [0.74]	ND [2.0]	ND [2.0]	ND [10]	ND [10]	ND [0.75]	ND [0.75]	ND [2.0]	ND [10]	ND [0.75]	ND [0.62]	ND [2.0]	ND [10]
Perfluorododecanoic acid (PFDoA)	1.2 J	ND [0.57]	ND [2.0]	ND [10]	ND [0.58]	ND [2.0]	ND [2.0]	ND [10]	ND [10]	ND [0.75]	1.4 J	ND [2.0]	ND [10]	ND [0.58]	ND [0.49]	ND [2.0]	ND [10]
Perfluorotridecanoic acid (PFTriA)	ND [0.54]	ND [0.54]	ND [2.0]	ND [10]	ND [0.54]	ND [2.0]	ND [2.0]	ND [10]	ND [10]	ND [0.59]	ND [0.56]	ND [2.0]	ND [10]	ND [0.55]	ND [0.46]	ND [2.0]	ND [10]
Perfluorotetradecanoic acid (PFTeA)	ND [0.20]	ND [0.19]	ND [2.0]	ND [10]	0.27 J B	ND [2.0]	ND [2.0]	ND [10]	ND [10]	ND [0.55]	ND [0.20]	ND [2.0]	ND [10]	ND [0.20]	ND [0.17]	ND [2.0]	ND [10]
Perfluorohexanesulfonic acid (PFHxS)	7.4	9.7	11	20.3	24	3.4	5.4	ND [10]	ND [10]	2	39	ND [2.0]	10.5	5.0	ND [0.72]	ND [2.0]	ND [10]
Perfluoroheptanesulfonic acid (PFHpS)	ND [0.70]	0.77 J	2.2	ND [10]	ND [0.70]	ND [2.0]	ND [2.0]	ND [10]	ND [10]	ND [0.72]	ND [0.72]	ND [2.0]	ND [10]	ND [0.71]	ND [0.59]	ND [2.0]	ND [10]
Perfluorooctanesulfonic acid (PFOS)	37	62	43	63.3	55	16	21	42.9	38.2	14	7.2	4.2	ND [10]	16	ND [1.1]	ND [2.0]	ND [10]
Perfluorodecanesulfonic acid (PFDS)	ND [1.2]	ND [1.2]	ND [2.0]	ND [10]	ND [1.2]	ND [2.0]	ND [2.0]	ND [10]	ND [10]	ND [1.2]	ND [1.2]	ND [2.0]	ND [10]	ND [1.2]	ND [1.0]	ND [2.0]	ND [10]
Perfluorooctane Sulfonamide (FOSA)	ND [0.63]	ND [0.62]	ND [2.0]	ND [10]	3.9 J	ND [2.0]	ND [2.0]	ND [10]	ND [10]	ND [0.64]	ND [0.64]	ND [2.0]	ND [10]	ND [0.64]	ND [0.53]	ND [2.0]	ND [10]
Perfluorobutanoic acid (PFBA)	ND [22]	ND [22]	10	13.4	54 J B CI	ND [2.0]	ND [2.0]	ND [10]	ND [10]	2200 B CI	ND [23]	ND [2.0]	ND [10]	2000 B CI	ND [0.38]	ND [2.0]	ND [10]
Perfluoropentanoic acid (PFPeA)	ND [48]	ND [48]	93	14.6	ND [49]	ND [2.0]	ND [2.0]	ND [10]	ND [10]	ND [50]	ND [50]	ND [2.0]	ND [10]	4600 CI	ND [0.82]	ND [2.0]	ND [10]
Perfluorohexanoic acid (PFHxA)	ND [39]	ND [38]	50	14.2	ND [39]	ND [2.0]	ND [2.0]	ND [10]	ND [10]	ND [39]	ND [40]	5.7	ND [10]	ND [39]	ND [0.65]	ND [2.0]	ND [10]
Perfluorobutanesulfonic acid (PFBS)	ND [45]	ND [45]	13	ND [10]	ND [45]	ND [2.0]	ND [2.0]	ND [10]	ND [10]	ND [46]	ND [46]	15	ND [10]	ND [46]	ND [0.76]	ND [2.0]	ND [10]
6:2 Fluorotelomersulfonate (6:2 FTS)	NT	NT	50	ND [25]	NT	ND [2.0]	ND [2.0]	ND [10]	ND [25]	NT	NT	ND [2.0]	ND [25]	NT	NT	ND [2.0]	ND [25]
8:2 Fluorotelomersulfonate (8:2 FTS)	NT	NT	5.3	ND [10]	NT	ND [2.0]	ND [2.0]	ND [10]	ND [10]	NT	NT	ND [2.0]	ND [10]	NT	NT	ND [2.0]	ND [10]
NMeFOSAA	NT	NT	ND [2.0]	ND [10]	NT	ND [2.0]	ND [2.0]	ND [10]	ND [10]	NT	NT	ND [2.0]	ND [10]	NT	NT	ND [2.0]	ND [10]
NEtFOSAA	NT	NT	ND [2.0]	ND [10]	NT	ND [2.0]	ND [2.0]	ND [10]	ND [10]	NT	NT	ND [2.0]	ND [10]	NT	NT	ND [2.0]	ND [10]
PFOA & PFOS	42.2	91	93	114.6	62.7	16	21	42.9	38.2	19.6	7.2	4.2	-	34	ND	ND	ND
Maximum PFAS (not inc PFOA/PFOS)	7.4	9.7	93	20.3	24	3.4	5.4	0	0	3.3	39	15	10.5	5.4	ND	ND	ND
Total PFAS	49.6	111.2	383.7	190	93.3	19.4	26.4	42.9	38.2	24.9	46.2	24.9	10.5	46.8	ND	ND	ND
1,4-Dioxane	NT	NT	ND [200]	ND [200]	NT	ND [200]	ND [200]	ND [200]	NT	NT	NT	ND [200]	ND [200]	NT	NT	ND [200]	NT

Notes:

All results are in nanograms per liter (ng/L) or parts per trillion (ppt)

ND (Method Detection Limit) [Reporting Limit] = Not Detected at a concentration greater than the reporting limit shown in brackets

NT = Not Tested

J = Estimated Concentration

B = Compound was found in the blank and samples

CI = The peak identified in the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias

The NYSDEC does not have groundwater standard or guidance values for perfluorooctanoic acid (PFOA) or perfluorooctanesulfonic acid (PFOS); however, in 2016 the United States Environmental Protection Agency (USEPA) issued a health advisory level of 70 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined concentration of PFOA and PFOS in drinking water sources.

Table 8
NYSDEC Site #360010
Harmon Yard Waste Water Area

Off-Site Monitoring Wells (OU11-A to OU11-F)
Depth to Static Water Levels and Range of Free Product Thickness

Date Range		OU11-A	OU11-B	OU11-C	OU11-D	OU11-E	OU11-F
October 4, 2016 - November 30, 2016	Depth to Static Water Level	4.58-5.04	4.36-5.04	4.58-5.18	4.40-4.97	4.55-5.05	2.87-5.09
	Range of Free Product Thickness (ft.)	0.7-3.0	1.3-3.2	0	1.9-3.0	0	0.0-1.3
	Average Free Product Thickness (ft.)	2.3	2.5	0	2.5	0	0.68
December 1, 2016 - February 28, 2017	Depth to Static Water Level	5.53-6.19	5.58-6.11	5.99-6.76	5.47-5.96	5.56-6.18	5.8-7.02
	Range of Free Product Thickness (ft.)	0.0-0.55	0.0-0.96	0	1.65-2.15	0	0-0.93
	Average Free Product Thickness (ft.)	0.36	0.39	0	1.8	0	0.29
March 1, 2017 - May 31, 2017	Depth to Static Water Level	5.56-6.86	5.46-6.89	5.53-7.45	5.3-6.77	5.57-6.89	5.27-8.05
	Range of Free Product Thickness (ft.)	0.0-0.94	0.08-1.97	0.0-1.24	0.0-1.84	0	0.0-0.28
	Average Free Product Thickness (ft.)	0.29	1.1	0.099	1.3	0	0.043
June 1, 2017 - July 31, 2017	Depth to Static Water Level	5.37-6.28	5.12-6.13	4.82-6.31	5.19-6.18	5.28-6.26	4.43-6.69
	Range of Free Product Thickness (ft.)	0.04-1.28	0.68-1.7	0	0.5-1.85	0	0-0.26
	Average Free Product Thickness (ft.)	1.3	1.7	0	1.9	0	0.26
September 1, 2017 - November 30, 2017	Depth to Static Water Level	9.36-9.82	9.28-9.84	9.18-9.59	9.57-9.93	9.44-9.82	7.19-7.82
	Range of Free Product Thickness (ft.)	0.67-2.01	1.39-2.36	0-1.82	1.78-2.24	0	0.40-2.78
	Average Free Product Thickness (ft.)	1.3	1.9	0.12	2.0	0	2.0
December 1, 2017 - February 28, 2018	Depth to Static Water Level	8.31-10.00	8.20-10.02	7.25-9.81	8.46-10.18	8.34-10.07	4.18-8.11
	Range of Free Product Thickness (ft.)	0-2.26	0-2.71	0	0.48-2.37	0	0.35-3.19
	Average Free Product Thickness (ft.)	1.1	1.9	0	1.8	0	1.9
March 1, 2018 - May 31, 2018	Depth to Static Water Level	7.75-8.54	7.77-9.11	6.85-8.09	7.97-8.76	7.92-8.52	3.87-5.61
	Range of Free Product Thickness (ft.)	0-0.59	0-1.36	0	0.02-1.88	0	0.01-0.24
	Average Free Product Thickness (ft.)	0.15	0.90	0	0.94	0	0.1
June 1, 2018 - August 31, 2018	Depth to Static Water Level	8.15-9.15	7.96-9.20	7.41-8.96	8.10-9.32	8.24-9.37	4.43-6.81
	Range of Free Product Thickness (ft.)	0-0.24	0.02-1.38	0	0.1-1.67	0	0-0.04
	Average Free Product Thickness (ft.)	0.084	1.0	0	1.1	0	0.009
September 1, 2018 - November 30, 2018	Depth to Static Water Level	7.18-8.63	7.31-8.56	6.56-8.09	7.12-8.81	7.62-8.69	3.29-5.91
	Range of Free Product Thickness (ft.)	0-0.26	0-1.75	0	0-1.37	0	0-0.03
	Average Free Product Thickness (ft.)	0.043	0.44	0	0.37	0	0.011
January 1, 2019 - May 31, 2019	Depth to Static Water Level	6.61-7.82	6.83-7.86	6.15-7.38	6.12-7.59	6.92-7.89	2.72-4.86
	Range of Free Product Thickness (ft.)	0-0.02	0.86-2.80	0	0-0.62	0	0
	Average Free Product Thickness (ft.)	0.009	1.6	0	0.10	0	0
June 1, 2019 - September 30, 2019	Depth to Static Water Level	6.97-8.95	7.08-8.93	8.50-8.62	6.58-9.01	7.26-9.03	3.45-6.78
	Range of Free Product Thickness (ft.)	0-0.12	0-1.86	0	0-1.27	0	0-0.01
	Average Free Product Thickness (ft.)	0.009	0.65	0	0.91	0	0.002

Note:

Depth to Static Water Level in feet above mean sea level corrected for the presence of Free Product based on the following relationship:

$$\text{Corrected SWL (ft. bgs)} = \text{Measured SWL (ft. bgs)} - 0.85 \times \text{Measured Free Product Thickness (ft.)}$$

FIGURES

Document Path: \\MINROIS\MNR_Documents\GIS_Data\MINR\Hammon Yard\OU1_OU2\Remediation_OU1_OU2\100802.mxd
Last Date Saved: 21 Oct 2019

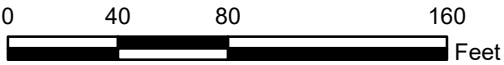


NOTES:

1. This drawing was prepared from a CAD base file provides by others, from a drawing by ERM, entitled "EXISTING SITE PLAN AND SURVEY CONTROL" sheet No. C-1 dated 7/31/00 and from a drawing by ERM, "SITE PLAN WITH LOCATIONS OF PROPOSED WELLS AND SHEET PILING", sheet No. C-2, dated 7/31/00.
2. Operable Unit II (OU-II) remedy well locations were determined from coordinate values listed on the ERM drawings identified in note No. 1.

LEGEND:

- VE 4-6 (6.52 ft)
Former Vapor Extraction (VE), Air Inlet (AI), Forced Air Injection (FA), or existing monitoring well and designation
- Groundwater elevation for water level measurement made August 2019
- Off-site monitoring well installed September 2016
- Existing monitoring well near the southern terminus of the sheet pile wall in NAPL Area L1
- 4.0
Groundwater contour
- Apparent groundwater flow direction
- OU-II NAPL area boundaries
- Approximate location of sheet pile wall around remediated former lagoon area (OU-I)
- Approximate location of L1 sheet pile wall
- Extent of OU-I final cover system
- OU-II Boundary



PROJECT MANAGER	DATE	10-2019
RLK	DATE DRAWN	10-2019
CPS	DATE ISSUED	10-21-2019
As Noted	SCALE	

day
DAY ENGINEERING, P.C.
ENVIRONMENTAL ENGINEERING CONSULTANTS
ROCHESTER, NEW YORK 14606
NEW YORK, NEW YORK 10170

Project Title
**METRO-NORTH RAIL ROAD
HARMON YARD OPERABLE UNITS OU-I AND OU-II
CROTON-ON-HUDSON, NEW YORK**

Drawing Title
SITE MANAGEMENT PLAN

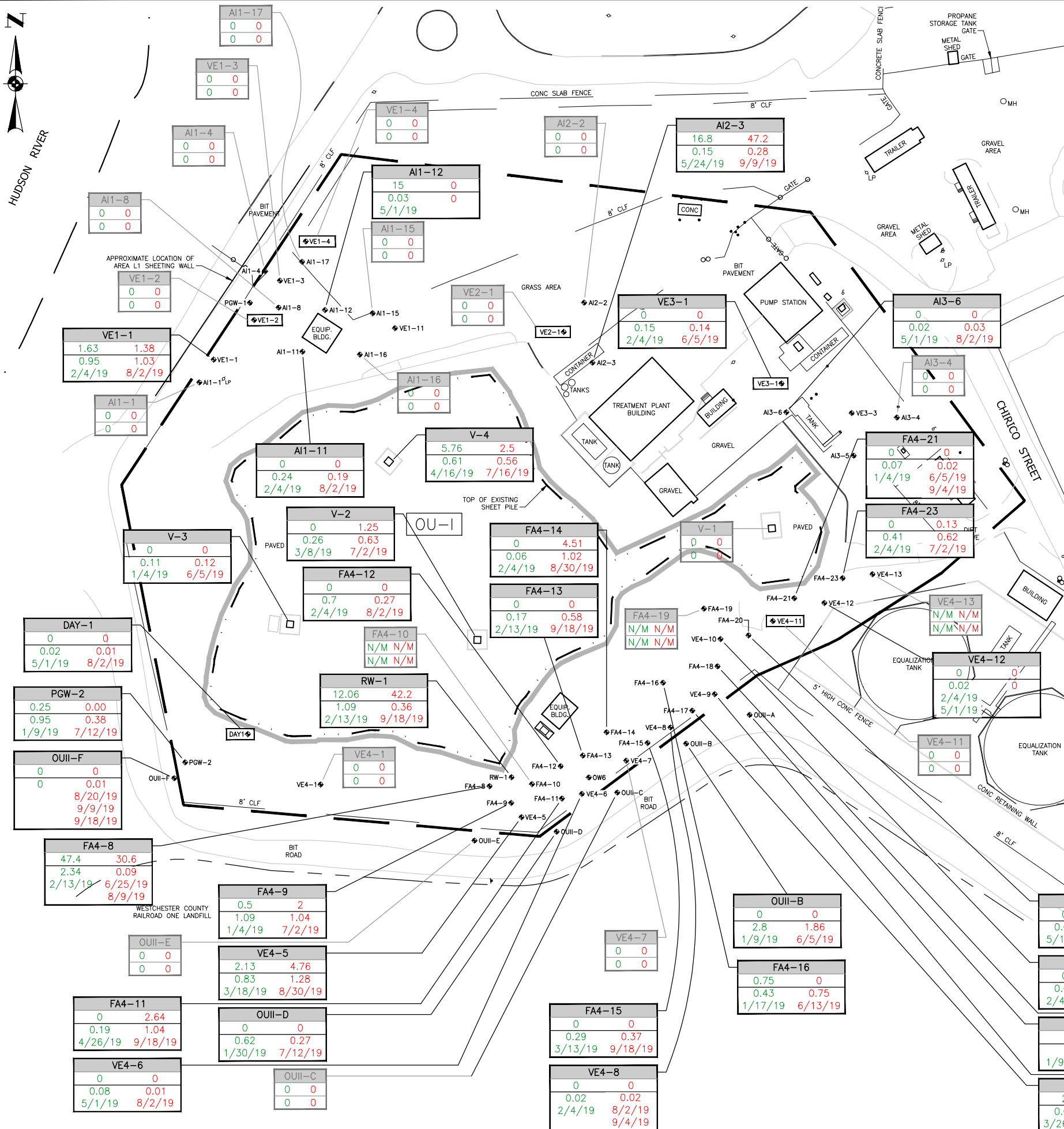
Groundwater Contour Map: August 2019

Project No.
15-3356M (46)

FIGURE 1

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NOTES:

- This drawing was prepared from a CAD base file provided by others, from a drawing by ERM, entitled "EXISTING SITE PLAN AND SURVEY CONROL" sheet No. C-1 dated 7/31/00 and from a drawing by ERM, "SITE PLAN WITH LOCATIONS OF PROPOSED WELLS AND SHEET PILING", sheet No. C-2, dated 7/31/00.
- Operable Unit II (OU-II) remedy well locations were determined from coordinate values listed on the ERM drawings identified in note No. 1, or by reference to site features (e.g., DAY-1, RW-1, etc...)
- Free Product is removed from RW-1, AI2-3, FA4-8 and FA4-17 using a Spill Buster product removal pump and placed within 55-gallon drums.

LEGEND:

- VE1-3: Former Vapor Extraction (VE), Air Inlet (AI), Forced Air Injection (FA), Existing Monitoring Well Or Product Recovery Well (RW) and Designation
- VE1-2: Long-Term Monitoring Well
- Approximate Location Of Sheet Pile Wall Around Remediated Former Lagoon Area (OU-I)
- Extent Of OU-I Final Cover System
- OU-II Boundary
- OU-I Contingency Vapor Extraction System Wells
- Long-Term Monitoring Well Identification
- Free Product Removed (Gallons) During Report Period
- Maximum Free Product Thickness (Feet) Measured During Report Period With Date Of Measurement
- Measurements Made During The Report Period January 1, 2019 Through May 31, 2019 Shown In Green (Left)
- Measurements Made During The Report Period June 1, 2019 Through September 30, 2019 Shown In Red (Right)
- N/M: Well Not Measured

PROJECT MANAGER	DATE
HMM	10/2019
DRAWN BY	DATE DRAWN
RJM/CPS/TW	10/9/2019
SCALE	DATE ISSUED
As Noted	10/9/2019

day
DAY ENGINEERING, P.C.
ENVIRONMENTAL ENGINEERING CONSULTANTS
ROCHESTER, NEW YORK 14606
NEW YORK, NEW YORK 10170

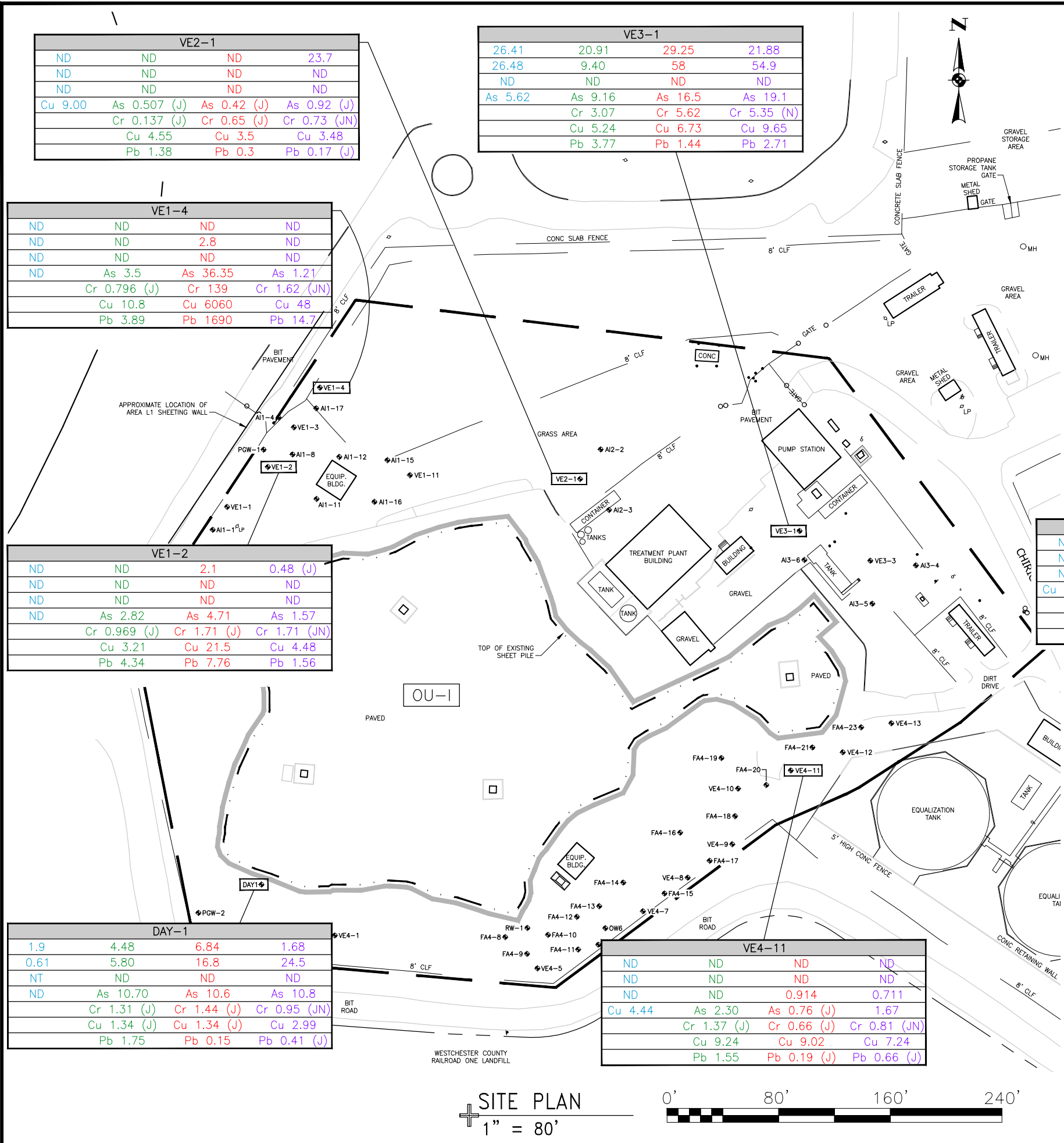
PROJECT TITLE
METRO-NORTH RAILROAD
HARMON YARD OPERABLE UNITS OU-I AND OU-II
CROTON-ON-HUDSON, NEW YORK
NYSDEC SITE #360010

DRAWING TITLE
Summary Of Free Product Removal For The Report Periods
January - May 2019 & June - September 2019

PROJECT NO.
15-3356M (46)

FIGURE 2

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Ref1: Layout1
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Ref3:



PROJECT TITLE
**METRO-NORTH RAILROAD
HARMON YARD OPERABLE UNITS OU-I AND OU-II
CROTON-ON-HUDSON, NEW YORK
NYSDEC SITE #360010**

PROJECT NO.
15-3356M (46)

FIGURE 3

PROJECT MANAGER
HMM

DATE
9-2017

DRAWN BY
RJM

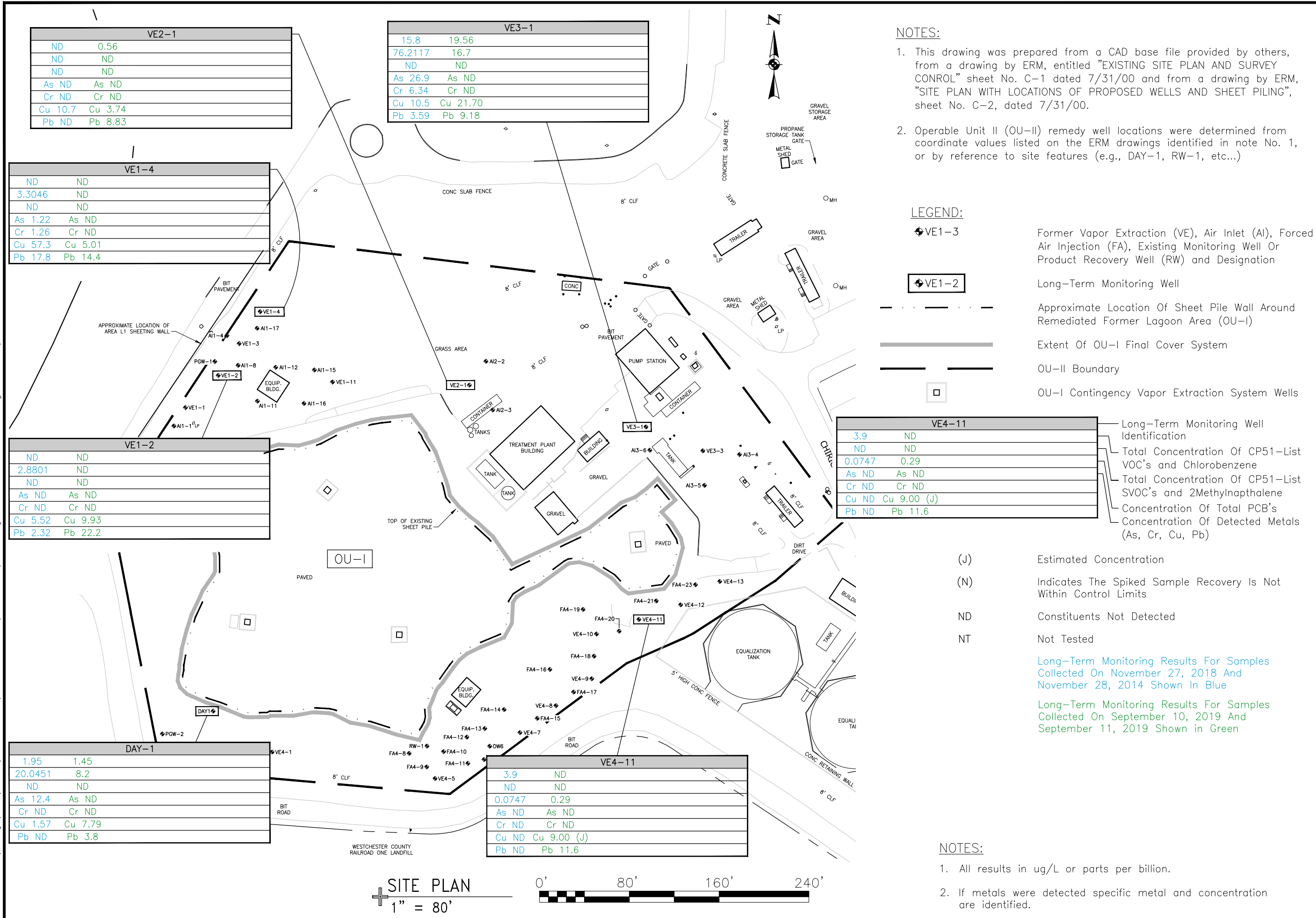
DATE DRAWN
9-22-2017

SCALE
As Noted

DATE ISSUED
9-22-2017

day
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ENVIRONMENTAL ENGINEERING CONSULTANTS
ROCHESTER, NEW YORK 14606
NEW YORK, NEW YORK 10170

Long-Term Monitoring Results Samples Collected May 27 & 28, 2014, May 19 & 20, 2015, May 17 & 18, 2016 & August 2 & 3, 2017



PROJECT MANAGER	DATE
HMM	9/2019
DRAWN BY	DATE DRAWN
RJM	10/9/2019
SCALE	DATE ISSUED
As Noted	10/9/2019

day
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ENVIRONMENTAL ENGINEERING CONSULTANTS
ROCHESTER, NEW YORK 14606
NEW YORK, NEW YORK 10170

PROJECT TITLE	METRO-NORTH RAILROAD HARMON YARD OPERABLE UNITS OU-I AND OU-II CROTON-ON-HUDSON, NEW YORK
DRAWING TITLE	NYSDC SITE #360010 Long-Term Monitoring Results Samples Collected September 10 & 11, 2019

PROJECT NO.
15-3356M (46)

FIGURE 3A

ATTACHMENT A

Well Monitoring Logs and Free Product Removal Records

June 1, 2019 through September 30, 2019

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: P1 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	13.43	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I)		Well ID: P2		Diameter: 2 in.	
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I)		Well ID: P3		Diameter: 2 in.	
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I)			Well ID: P4	Diameter: 2 in.	
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: P5 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	14.45	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I)			Well ID: P6	Diameter: 2 in.	
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
Not measured					

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I)			Well ID: P7	Diameter: 2 in.	
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	13.68	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I)			Well ID: P8	Diameter: 2 in.	
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	13.30	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I)			Well ID: P9	Diameter: 2 in.	
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	13.36	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I)			Well ID: P10	Diameter: 2 in.	
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	13.21	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I)		Well ID: V-1		Diameter: 4 in.	
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	-	15.13	0	0	
8/2/2019	-	15.72	0	0	
9/4/2019	-	15.97	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I)		Well ID: V-2		Diameter: 4 in.	
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	16.11	16.27	0.16	0	
7/2/2019	16.53	17.16	0.63	0	
8/2/2019	17.02	17.44	0.42	1.25	
9/4/2019	17.09	17.1	0.01	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I)		Well ID: V-3		Diameter: 4 in.	
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	15.79	15.91	0.12	0	
7/2/2019	16.46	16.53	0.07	0	
8/2/2019	16.66	16.68	0.02	0	
9/4/2019	16.82	16.83	0.01	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: V-4 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	15.04	15.17	0.13	0	
6/13/2019	15.2	15.42	0.22	0	
6/17/2019	15.3	15.54	0.24	0	
6/25/2019	15.33	15.6	0.27	0	
7/2/2019	15.56	15.82	0.26	0	
7/12/2019	15.71	16.05	0.34	0	
7/16/2019	15.78	16.34	0.56	0.75	
7/24/2019	15.78	16.02	0.24	0	
7/30/2019	15.77	16.25	0.48	1.25	
8/9/2019	15.78	15.95	0.17	0	
8/14/2019	15.9	16.31	0.41	0.5	
8/20/2019	15.94	16.12	0.18	0	
8/31/2019	15.98	16.26	0.28	0	
9/4/2019	16.09	16.19	0.1	0	
9/9/2019	16.09	16.49	0.4	0	
9/23/2019	16.51	16.78	0.27	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: AI1-1 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	11.20	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: AI1-4 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	10.18	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: AI1-8 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	13.18	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: AI1-11 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	13.64	13.83	0.19	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: AI1-12 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	16.93	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: AI1-15 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	18.47	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: AI1-16 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	13.74	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: AI1-17 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	11.96	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: SP-North Diameter: 1 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	-	8.5	0	0	
6/13/2019	-	8.7	0	0	
6/17/2019	-	8.76	0	0	
6/25/2019	-	8.81	0	0	
7/2/2019	-	8.98	0	0	
7/12/2019	-	9.16	0	0	
7/16/2019	-	9.23	0	0	
7/24/2019	-	9.13	0	0	
7/30/2019	-	9.28	0	0	
8/9/2019	-	9.14	0	0	
8/14/2019	-	9.3	0	0	
8/20/2019	-	9.38	0	0	
8/30/2019	-	9.37	0	0	
9/4/2019	-	9.38	0	0	
9/23/2019	-	9.78	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: VE-1-1 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	8.51	9.57	1.03	1.38	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: VE-1-2 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	9.29	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: VE-1-3 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	8.51	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: VE-1-4 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	10.01	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: WB-9 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	8.71	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: AI2-2 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	14.68	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: AI2-3 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments*
6/5/2019	14.08	14.11	0.03	0	drum 0.94 ft
6/13/2019	14.3	14.35	0.05	0	drum 1.02 ft
6/17/2019	14.48	14.49	0.01	0	drum 1.07 ft
6/25/2019	14.42	14.46	0.04	0	drum 1.12 ft
7/2/2019	14.61	14.62	0.01	0	Drum- 1.14ft
7/12/2019	14.75	14.76	0.01	0	Drum-1.22
7/16/2019	14.89	14.96	0.07	0	Drum- 1.23
7/24/2019	14.83	14.87	0.04	0	Drum- 1.38
7/30/2019	15	15.01	0.01	0	Drum- 1.35
8/2/2019	15.1	15.11	0.01	0	
8/9/2019	14.94	14.97	0.03	0	Drum- 1.41ft
8/14/2019	15.2	15.21	0.01	0	drum- 1.47ft
8/20/2019	15.13	15.18	0.05	0	Drum- 1.54ft
8/30/2019	15.11	15.2	0.09	0	Drum - 1.63
9/4/2019	15.3	15.32	0.02	0	Drum- 1.8ft
9/9/2019	15.27	15.55	0.28	0	Drum- 1.97
9/23/2019	15.61	15.63	0.02	0	New Drum- 3.2

*Measured height of Free Product accumulated in drum. Height of drum is assumed to be 2.5 ft and equal to approximately 50 gallons. Comment on 5/24/20198 stated 'drum 0.84 ft'. Total amount of Free Product Recovered = 47.2 gallons

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: VE2-1 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	11.12	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: AI3-4 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	13.59	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: AI3-5 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
Not measured					

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: AI3-6 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	16.38	16.41	0.03	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: VE3-1 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	9.99	10.13	0.14	0	
7/2/2019	10.59	10.71	0.12	0	
8/2/2019	13.79	13.81	0.02	0	
9/4/2019	13.95	13.96	0.01	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: DAY-1 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	16.17	16.18	0.01	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: FA4-8 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments*
6/5/2019	15.19	15.21	0.02	0	drum 0.61 ft
6/13/2019	15.58	15.59	0.01	0	drum 0.70 ft
6/17/2019	15.61	15.62	0.01	0	drum 0.78 ft
6/25/2019	15.65	15.74	0.09	0	drum 0.83 ft
7/2/2019	15.79	15.86	0.07	0	Drum-0.88ft
7/12/2019	16	16.02	0.02	0	Drum- 1.01
7/16/2019	16.15	16.16	0.01	0	Drum- 1.06
7/24/2019	16.16	16.18	0.02	0	Drum- 1.16
7/30/2019	16.28	16.29	0.01	0	Drum- 1.24
8/9/2019	16.3	16.39	0.09	0	Drum- 0.23 ft
8/14/2019	16.5	16.56	0.06	0	drum- 1.42ft
8/20/2019	16.49	16.57	0.08	0	drum- 1.49ft
8/30/2019	16.55	16.58	0.03	0	Drum- 2.57
9/4/2019	16.59	16.6	0.01	0	Drum- 1.7ft
9/9/2019	-	9.58	0	0	
9/23/2019	16.81	16.83	0.02	0	Drum- 2.01

*Measured height of Free Product accumulated in drum. Height of drum is assumed to be 2.5 ft and equal to approximately 50 gallons. Comment on 5/24/2019 stated 'drum 0.61 ft'. Total amount of Free Product Recovered = 30.6 gallons from pump

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: FA4-9 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
7/2/2019	7.07	8.11	1.04	2	
8/2/2019	8.08	8.43	0.35	0	
9/4/2019	8.37	8.5	0.13	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: FA4-10 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
Not measured					

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: FA4-11 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	-	9.63	0	0	
6/13/2019	-	10.17	0	0	
6/17/2019	-	10.29	0	0	
6/25/2019	-	10.24	0	0	
7/2/2019	-	10.56	0	0	
7/12/2019	10.72	10.73	0.01	0	
7/16/2019	11	11.03	0.03	0	
7/24/2019	10.72	10.97	0.25	0	
7/30/2019	10.91	11.42	0.51	0.63	
8/2/2019	11.24	11.27	0.03	0	
8/9/2019	11.05	11.12	0.07	0	
8/14/2019	11.24	11.31	0.07	0	
8/20/2019	11.33	11.51	0.18	0	
8/30/2019	11.35	11.98	0.63	0	
9/4/2019	11.38	11.51	0.13	0	
9/9/2019	11.4	12.31	0.91	0	
9/18/2019	11.53	12.57	1.04	1.13	
9/23/2019	11.54	12.41	0.87	0.88	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: FA4-12 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	14.02	14.29	0.27	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: FA4-13R Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	8.95	9.06	0.11	0	
6/13/2019	9.57	9.63	0.06	0	
6/17/2019	9.65	9.71	0.06	0	
6/25/2019	9.62	9.73	0.11	0	
7/2/2019	10.05	9.92	-0.13	0	
7/12/2019	10.16	10.23	0.07	0	
7/16/2019	10.31	10.35	0.04	0	
7/24/2019	10.25	10.34	0.09	0	
7/30/2019	10.5	10.58	0.08	0	
8/2/2019	10.55	10.67	0.12	0	
8/9/2019	10.46	10.63	0.17	0	
8/14/2019	10.59	10.65	0.06	0	
8/20/2019	10.64	10.85	0.21	0	
8/30/2019	10.73	11	0.27	0	
9/4/2019	10.75	11.01	0.26	0	
9/9/2019	10.86	11.13	0.27	0	
9/18/2019	10.36	10.94	0.58	0	
9/23/2019	11	11.29	0.29	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: FA4-14 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	11.59	11.6	0.01	0	
6/13/2019	12.05	12.06	0.01	0	
6/17/2019	12.16	12.2	0.04	0	
6/25/2019	12.14	12.19	0.05	0	
7/2/2019	12.44	12.45	0.01	0	
7/12/2019	12.69	12.73	0.04	0	
7/16/2019	12.85	12.86	0.01	0	
7/24/2019	12.77	13.01	0.24	0	
7/30/2019	12.9	13	0.1	0	
8/9/2019	12.91	13.24	0.33	0	
8/14/2019	13.02	13.58	0.56	1	
8/20/2019	13.04	13.68	0.64	0.5	
8/30/2019	13.11	14.13	1.02	1	
9/4/2019	13.19	13.96	0.77	0.88	
9/9/2019	13.28	14.25	0.97	0.5	
9/23/2019	13.45	14.18	0.73	0.63	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: FA4-15R Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	8.51	8.56	0.05	0	
6/13/2019	9.01	9.18	0.17	0	
6/25/2019	9.07	9.23	0.16	0	
7/2/2019	9.33	9.55	0.22	0	
7/12/2019	9.63	9.74	0.11	0	
7/16/2019	9.78	9.8	0.02	0	
7/24/2019	9.76	9.89	0.13	0	
7/30/2019	9.92	9.99	0.07	0	
8/9/2019	9.97	10.03	0.06	0	
8/14/2019	10	10.08	0.08	0	
8/20/2019	10.08	10.21	0.13	0	
8/22/2019	9.94	10.08	0.14	0	
8/30/2019	10.15	10.27	0.12	0	
9/4/2019	10.2	10.33	0.13	0	
9/9/2019	10.28	10.51	0.23	0	
9/18/2019	10.37	10.74	0.37	0	
9/23/2019	10.41	10.61	0.2	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: FA4-16 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	12.63	12.66	0.03	0	
6/13/2019	13.05	13.80	0.75	0	
6/17/2019	13.15	13.24	0.09	0	
6/25/2019	13.19	13.32	0.13	0	
7/2/2019	13.43	13.57	0.14	0	
7/12/2019	13.68	13.72	0.04	0	
7/16/2019	13.8	13.90	0.10	0	
7/24/2019	13.85	13.96	0.11	0	
7/30/2019	14.01	14.05	0.04	0	
8/9/2019	14	14.13	0.13	0	
8/14/2019	14.12	14.14	0.02	0	
8/20/2019	14.17	14.35	0.18	0	
8/30/2019	14.26	14.44	0.18	0	
9/4/2019	14.34	14.41	0.07	0	
9/9/2019	14.4	14.54	0.14	0	
9/18/2019	14.49	14.68	0.19	0	
9/23/2019	14.51	14.69	0.18	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: FA4-17R Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	8.59	8.6	0.01	0	drum 1.80 ft
6/13/2019	9.11	9.12	0.01	0	drum 1.83
6/17/2019	9.28	9.29	0.01	0	drum 1.83 ft
6/25/2019	9.3	9.32	0.02	0	drum 1.79 ft
7/2/2019	9.57	9.58	0.01	0	Drum- 1.8ft
7/12/2019	9.87	9.89	0.02	0	Drum-1.82
7/16/2019	10	10.01	0.01	0	Drum- 1.82
7/24/2019	10	10.03	0.03	0	Drum - 1.81
7/30/2019	10.1	10.11	0.01	0	Drum- 1.82
8/9/2019	10.2	10.21	0.01	0	Drum- 1.8ft
8/14/2019	10.2	10.21	0.01	0	Drum- 1.82ft
8/20/2019	10.31	10.36	0.05	0	drum- 1.82ft
8/30/2019	10.39	10.43	0.04	0	Drum -1.79
9/4/2019	10.47	10.48	0.01	0	Drum- 1.22ft
9/9/2019	10.51	10.53	0.02	0	Drum- 1.82
9/18/2019	10.63	10.66	0.03	0	
9/23/2019	10.65	10.66	0.01	0.35	

*Measured height of Free Product accumulated in drum. Height of drum is assumed to be 2.5 ft and equal to approximately 50 gallons. Comment on 5/24/2019 stated 'drum 1.76 ft'. Total amount of Free Product Recovered = 1.35 gallons

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: FA4-18 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	11.15	12.13	0.98	1.06	
6/13/2019	11.65	12.74	1.09	1.63	
6/17/2019	11.75	12.76	1.01	1.38	
6/25/2019	12.74	13.72	0.98	1.25	
7/2/2019	11.96	12.94	0.98	1.25	
7/12/2019	12.21	13	0.79	0.88	
7/16/2019	12.35	13.04	0.69	1	
7/24/2019	12.38	12.54	0.16	0	
7/30/2019	12.51	12.61	0.1	0	
8/9/2019	12.55	12.68	0.13	0	
8/14/2019	12.68	12.71	0.03	0	
8/20/2019	12.66	12.84	0.18	0	
8/30/2019	12.78	12.94	0.16	0	
9/4/2019	12.82	13	0.18	0	
9/9/2019	12.91	13.17	0.26	0	
9/18/2019	13.37	14.26	0.89	0	
9/23/2019	13.05	13.25	0.2	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: FA4-19 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
Not measured					

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: FA4-20 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	11.38	0.00	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: FA4-21 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	12.13	12.15	0.02	0	
7/2/2019	12.81	12.82	0.01	0	
8/2/2019	13.36	13.37	0.01	0	
9/4/2019	13.63	13.65	0.02	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: FA4-23 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	11.65	12.00	0.35	0	
7/2/2019	12.18	12.80	0.62	0.13	
8/2/2019	12.69	12.7	0.01	0	
9/4/2019	12.93	12.99	0.06	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: PGW-2 Diameter: 2 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	4.27	4.28	0.01	0	
6/13/2019	5.16	5.17	0.01	0	
6/17/2019	5.45	5.46	0.01	0	
6/25/2019	5.32	5.51	0.19	0	
7/2/2019	5.84	5.87	0.03	0	
7/12/2019	6.03	6.41	0.38	0	
7/16/2019	6.42	6.68	0.26	0	
7/24/2019	6.27	6.64	0.37	0	
7/30/2019	6.63	6.95	0.32	0	
8/9/2019	6.67	6.96	0.29	0	
8/14/2019	6.89	6.92	0.03	0	
8/20/2019	6.95	7.21	0.26	0	
8/30/2019	7.08	7.42	0.34	0	
9/4/2019	7.15	7.18	0.03	0	
9/9/2019	7.22	7.59	0.37	0	
9/18/2019	7.33	7.68	0.35	0	
9/23/2019	7.4	7.61	0.21	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: RW-1 Diameter: 6 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments*
6/5/2019	13.23	13.24	0.01	0	drum 0.25 ft
6/13/2019	13.69	13.7	0.01	0	drum 0.32 ft
6/17/2019	13.72	13.73	0.01	0	drum 0.42 ft
6/25/2019	13.76	13.83	0.07	0	drum 0.45 ft
7/2/2019	13.87	14.21	0.34	0	Drum- 0.57ft
7/12/2019	14.7	14.72	0.02	0	Drum- 0.66
7/16/2019	14.28	14.29	0.01	0	Drum- 1.02
7/24/2019	14.25	14.28	0.03	0	drum- 1.34
7/30/2019	14.35	14.36	0.01	0	Drum- 1.59
8/9/2019	14.41	14.45	0.04	0	Drum- 1.9ft
8/14/2019	14.45	14.46	0.01	0	Drum- 2.15ft
8/20/2019	15.17	15.19	0.02	0	drum- 2.25ft
9/4/2019	14.71	14.73	0.02	0	Drum- 1.22
9/9/2019	14.72	14.74	0.02	0	
9/18/2019	15.27	15.63	0.36	0.4	drum
9/23/2019	14.85	14.89	0.04	0	Drum - 2.18

*Measured height of Free Product accumulated in drum. Height of drum is assumed to be 2.5 ft and equal to approximately 50 gallons. Comment on 5/24/2019 stated 'drum 0.09 ft'. Total amount of Free Product Recovered = 42.2 gallons

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: VE4-1 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	8.42	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: VE4-5 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	8.04	8.28	0.24	0	
6/13/2019	8.48	9.56	1.08	0	
6/17/2019	8.65	8.72	0.07	0	
6/25/2019	8.63	8.91	0.28	0	
7/2/2019	8.78	9.46	0.68	0.5	
7/12/2019	9	9.28	0.28	0	
7/16/2019	9.1	9.21	0.11	0	
7/24/2019	9.06	9.33	0.27	0	
7/30/2019	9.12	10.22	1.1	1.13	
8/9/2019	9.27	9.61	0.34	0	
8/14/2019	9.3	9.71	0.41	0	
8/20/2019	9.6	9.88	0.28	0	
8/30/2019	9.42	10.7	1.28	1	
9/4/2019	9.53	9.81	0.28	0	
9/9/2019	9.56	10.27	0.71	1	
9/18/2019	9.75	10.27	0.52	1.13	
9/23/2019	9.81	9.91	0.1	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: VE4-6 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	7.9	7.91	0.01	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: VE4-7 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	-	5.68	0	0	
7/2/2019	-	6.9	0	0	
8/2/2019	-	7.43	0	0	
9/4/2019	-	7.72	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: VE4-8 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	6.28	6.29	0.01	0	
7/2/2019	7.21	7.22	0.01	0	
8/2/2019	7.77	7.79	0.02	0	
9/4/2019	8.04	8.06	0.02	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: VE4-9 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	6.04	6.44	0.4	0	
7/2/2019	7.5	7.71	0.21	0	
8/2/2019	8.02	8.2	0.18	0	
9/4/2019	8.31	8.44	0.13	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: VE4-10 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	12.11	12.12	0.01	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: VE4-11 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	13.24	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: VE4-12 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
8/2/2019	-	13.43	0.00	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: VE4-13 Diameter: 4 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
Not measured					

OFF-SITE WELLS

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU II) Well ID: OUII-A Diameter: 1 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	-	6.97	0	0	
6/13/2019	7.52	7.54	0.02	0	
6/17/2019	-	7.61	0	0	
6/25/2019	-	7.67	0	0	
7/2/2019	-	7.86	0	0	
7/12/2019	-	8.15	0	0	
7/16/2019	8.25	8.26	0.01	0	
7/24/2019	0	8.19	0	0	
7/30/2019	0	8.36	0	0	
8/9/2019	-	8.38	0	0	
8/14/2019	-	8.38	0	0	
8/20/2019	-	8.55	0	0	
8/30/2019	-	8.61	0	0	
9/4/2019	-	8.7	0	0	
9/9/2019	-	8.82	0	0	
9/18/2019	8.85	8.97	0.12	0	
9/23/2019	8.95	8.96	0.01	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU II) Well ID: OUII-B Diameter: 1 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	6.8	8.66	1.86	0	
6/13/2019	7.51	8.58	1.07	0	
6/17/2019	7.61	8.45	0.84	0	
6/25/2019	7.49	8.33	0.84	0	
7/2/2019	-	7.59	0	0	
7/12/2019	8.11	8.46	0.35	0	
7/16/2019	8.19	8.75	0.56	0	
7/24/2019	8.07	8.62	0.55	0	
7/30/2019	8.24	8.66	0.42	0	
8/9/2019	8.24	8.72	0.48	0	
8/14/2019	8.23	8.71	0.48	0	
8/20/2019	8.34	8.93	0.59	0	
9/4/2019	8.68	9.08	0.4	0	
9/9/2019	8.64	9.24	0.6	0	
9/18/2019	8.67	9.46	0.79	0	
9/23/2019	8.84	9.46	0.62	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU II) Well ID: OUII-C Diameter: 1 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	-	6.63	0	0	
6/13/2019	-	7.17	0	0	
6/17/2019	-	7.35	0	0	
6/25/2019	-	7.24	0	0	
7/2/2019	-	7.59	0	0	
7/12/2019	-	7.85	0	0	
7/16/2019	-	8.09	0	0	
7/24/2019	-	7.97	0	0	
7/30/2019	-	8.11	0	0	
8/9/2019	-	8.28	0	0	
8/14/2019	-	8.29	0	0	
8/20/2019	-	8.25	0	0	
8/30/2019	-	8.41	0	0	
9/4/2019	-	8.61	0	0	
9/9/2019	-	8.5	0	0	
9/18/2019	-	8.59	0	0	
9/23/2019	-	8.62	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU II) Well ID: OUII-D Diameter: 1 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	-	6.58	0	0	
6/13/2019	7.53	8.54	1.01	0	
6/17/2019	7.7	8.75	1.05	0	
6/25/2019	7.63	8.22	0.59	0	
7/2/2019	7.9	8.81	0.91	0	
7/12/2019	8.05	9.32	1.27	0	
7/16/2019	8.26	9.24	0.98	0	
7/24/2019	8.26	9.24	0.98	0	
7/30/2019	8.36	9.29	0.93	0	
8/9/2019	8.37	9.14	0.77	0	
8/14/2019	8.48	9.51	1.03	0	
8/20/2019	8.61	9.66	1.05	0	
8/30/2019	8.65	9.35	0.7	0	
9/4/2019	8.85	9.86	1.01	0	
9/9/2019	8.73	9.73	1	0	
9/18/2019	8.84	9.97	1.13	0	
9/23/2019	8.86	9.89	1.03	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU II) Well ID: OUII-E Diameter: 1 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	-	7.26	0	0	
6/13/2019	-	7.58	0	0	
6/17/2019	-	7.65	0	0	
6/25/2019	-	8.68	0	0	
7/2/2019	-	7.78	0	0	
7/12/2019	-	8.05	0	0	
7/16/2019	-	8.31	0	0	
7/24/2019	-	8.29	0	0	
7/30/2019	-	8.31	0	0	
8/9/2019	-	8.39	0	0	
8/14/2019	-	8.47	0	0	
8/20/2019	-	8.72	0	0	
8/30/2019	-	8.64	0	0	
9/4/2019	-	8.81	0	0	
9/9/2019	-	8.84	0	0	
9/18/2019	-	9.03	0	0	
9/23/2019	-	9.00	0	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU II) Well ID: OUII-F Diameter: 1 in.					
Date	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Free Product Recovered (gal)	Comments
6/5/2019	-	3.45	0	0	
6/13/2019	-	4.43	0	0	
6/17/2019	-	4.76	0	0	
6/25/2019	-	4.56	0	0	
7/2/2019	-	5.11	0	0	
7/12/2019	-	5.6	0	0	
7/16/2019	-	5.81	0	0	
7/24/2019	-	5.57	0	0	
7/30/2019	-	6	0	0	
8/9/2019	-	5.96	0	0	
8/14/2019	-	6.14	0	0	
8/20/2019	6.31	6.32	0.01	0	
8/30/2019	-	6.35	0	0	
9/4/2019	-	6.52	0	0	
9/9/2019	6.61	6.62	0.01	0	
9/18/2019	6.74	6.75	0.01	0	
9/23/2019	-	6.78	0	0	

ATTACHMENT B

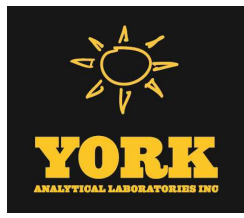
Waste Manifest

Analytical Laboratory Report for drum samples collected April 11, 2019

Waste Manifest Documentation

[illegible]DESIGNATED FACILITY

Analytical Laboratory Report for drum samples collected April 11, 2019



Technical Report

prepared for:

Metro North Commuter Railroad
Env. Dept. c/o Yardmaster, 24 Fisher Lane
White Plains NY, 10603
Attention: Kenny Mekeel

Report Date: 04/23/2019
Client Project ID: Harmon Oil Recovery
York Project (SDG) No.: 19D0578

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

120 RESEARCH DRIVE
www.YORKLAB.com

STRATFORD, CT 06615
(203) 325-1371

132-02 89th AVENUE
FAX (203) 357-0166

RICHMOND HILL, NY 11418
ClientServices@yorklab.com

Report Date: 04/23/2019
Client Project ID: Harmon Oil Recovery
York Project (SDG) No.: 19D0578

Metro North Commuter Railroad
Env. Dept. c/o Yardmaster, 24 Fisher Lane
White Plains NY, 10603
Attention: Kenny Mekeel

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on April 12, 2019 with a temperature of 1.6 C. The project was identified as your project: **Harmon Oil Recovery**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
19D0578-01	Harmon Well# RW1	Oil	04/11/2019	04/12/2019
19D0578-02	Harmon Well# FA4-8	Oil	04/11/2019	04/12/2019

General Notes for York Project (SDG) No.: 19D0578

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By:



Benjamin Gulizia
Laboratory Director

Date: 04/23/2019





Sample Information

Client Sample ID: Harmon Well# RW1

York Sample ID: 19D0578-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19D0578

Harmon Oil Recovery

Oil

April 11, 2019 8:30 am

04/12/2019

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Oil Preparation for GC

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854	04/19/2019 11:08	04/23/2019 11:50	TJD
11104-28-2	Aroclor 1221	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854	04/19/2019 11:08	04/23/2019 11:50	TJD
11141-16-5	Aroclor 1232	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854	04/19/2019 11:08	04/23/2019 11:50	TJD
53469-21-9	Aroclor 1242	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854	04/19/2019 11:08	04/23/2019 11:50	TJD
12672-29-6	Aroclor 1248	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854	04/19/2019 11:08	04/23/2019 11:50	TJD
11097-69-1	Aroclor 1254	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854	04/19/2019 11:08	04/23/2019 11:50	TJD
11096-82-5	Aroclor 1260	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854	04/19/2019 11:08	04/23/2019 11:50	TJD
1336-36-3	* Total PCBs	ND		mg/kg	5.00	1	EPA 8082A Certifications:	04/19/2019 11:08	04/23/2019 11:50	TJD
Surrogate Recoveries		Result	Acceptance Range							
877-09-8	Surrogate: Tetrachloro-m-xylene	10400 %	30-150							
2051-24-3	Surrogate: Decachlorobiphenyl	10600 %	30-150							

Sample Information

Client Sample ID: Harmon Well# FA4-8

York Sample ID: 19D0578-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19D0578

Harmon Oil Recovery

Oil

April 11, 2019 8:35 am

04/12/2019

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Oil Preparation for GC

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854	04/19/2019 11:08	04/23/2019 12:14	TJD
11104-28-2	Aroclor 1221	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854	04/19/2019 11:08	04/23/2019 12:14	TJD
11141-16-5	Aroclor 1232	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854	04/19/2019 11:08	04/23/2019 12:14	TJD
53469-21-9	Aroclor 1242	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854	04/19/2019 11:08	04/23/2019 12:14	TJD



Sample Information

Client Sample ID: Harmon Well# FA4-8

York Sample ID: 19D0578-02

York Project (SDG) No.
19D0578

Client Project ID
Harmon Oil Recovery

Matrix
Oil

Collection Date/Time
April 11, 2019 8:35 am

Date Received
04/12/2019

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Oil Preparation for GC

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12672-29-6	Aroclor 1248	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854	04/19/2019 11:08	04/23/2019 12:14	TJD
11097-69-1	Aroclor 1254	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854	04/19/2019 11:08	04/23/2019 12:14	TJD
11096-82-5	Aroclor 1260	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854	04/19/2019 11:08	04/23/2019 12:14	TJD
1336-36-3	* Total PCBs	ND		mg/kg	5.00	1	EPA 8082A Certifications:	04/19/2019 11:08	04/23/2019 12:14	TJD
Surrogate Recoveries		Result	Acceptance Range							
877-09-8	Surrogate: Tetrachloro-m-xylene	10400 %	30-150							
2051-24-3	Surrogate: Decachlorobiphenyl	11200 %	30-150							



Sample and Data Qualifiers Relating to This Work Order

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

Field Chain-of-Custody Record

Page of

York Project No. 19D0578

NOTE: York's Std. Terms & Conditions are listed on the back side of this document. This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

[illegible]

ATTACHMENT C

Analytical Laboratory Reports for monitoring well samples collected September 2019

ATTACHMENT D

Inspection Report

Metro-North Railroad Harmon Yard Operational Unit OU-I and OU-II
Inspection Form
NYSDEC Site Number 3-60-010

*Note the location(s) of the inspection findings described below on the attached site sketch.
 Also attach copies of photographs to document conditions observed at the time of this inspection
 and show the location/orientation of the photographs taken on the site sketch.*

	Yes	No	Corrective Action Needed?
<u>OU-I Asphalt Cover</u>			
Are there any cracks in the asphalt cover?	☐	☒	
Any geotextile observed?	☐	☒	
Is there any surface water ponding on the asphalt cover?	☐	☒	
Is there any evidence of settlement?	☐	☒	
Is there any elevation difference at the grouted manhole covers?	☐	☒	
Settlement or erosion in the area of the perimeter sheet pile wall?	☐	☒	

Specify the Recommended Corrective Actions and Other Relevant Observations:

OU-I Contingency Air-Inlet/Vapor Extraction Well Clusters

Describe the condition of the protective covers and the well clusters. Also, provide other relevant observations, and include photographs (if warranted).

Good condition

OU-II Areas Around the Asphalt Cover

Are there any erosion rivulets?	☐	☒	
Is there evidence of any washouts or soil slides?	☐	☒	
Is the vegetative cover maintained?	☒	☐	
Is there debris or other material on the slopes?	☒	☐	☒
Settlement or erosion in the area of the NAPL Area L1 sheet pile wall?	☐	☒	

Specify the Recommended Corrective Actions and Other Relevant Observations:

OU-II Monitoring and Product Removal Wells

Describe condition of monitoring wells and protective casings noting wells that require repairs. If warranted include photographs of wells and note the location of the photograph and well on the site sketch.

Recommend that L1-AI-1-16 should have a curb box installed

OU-I/OU-II Drainage Channels

Is there any exposed geotextile in the drainage channel?

	X
	X
	X

If so, is the exposed geotextile damaged?

Is there significant sedimentation in the drainage channel?

{The rip rap drainage channel is located adjacent to the asphalt cover so there should be minimal sedimentation, and any significant sedimentation should be investigated to determine its source and cause.]

Specify the Recommended Corrective Actions and Other Relevant Observations:

Yes	No	Corrective Action Needed?
-----	----	---------------------------

OU-I/OU-II Waste Accumulation Drums and TankIs the 500-gallon waste oil disposal AST full? **REMOVED – N/A**

Are the 55-gallon waste oil disposal drums full?

Is the 55-gallon NRD disposal drum full? **N/A**

Evidence of spillage/leakage in the area of disposal vessels?

	X
	X

Explain when the drums and AST were last sampled, and attach copies of test results (if available). Identify when the drums and AST last emptied/replaced and list disposal facilities/dates (if known). Provide additional information as warranted.

3 Drums sampled and removed 9/19/19 – results attached

OU-I/OU-II Perimeter Fencing

Is there any damaged fencing?

	X
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--

Is there any vegetation close to the exterior of the fence that should be removed to eliminate a means for access to the Site over the fence?

	X
X	

Are the gate locks present and in good working condition?

Specify Correction Actions Needed:

Date of Inspection: 9/10/19Inspection Completed By: S. Gianazza

cc: Metro-North Department of Environmental Compliance and Services