

**SITE MANAGEMENT PLAN STATUS REPORT**  
**REPORT PERIOD: SEPTEMBER 1, 2017 THROUGH NOVEMBER 30, 2017**

**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 report summarizes the remedial actions and monitoring completed between June 1, 2017 through August 31, 2017 (i.e., the 23<sup>rd</sup> Quarter of operation) 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 monitoring was conducted as outlined in the SMP and free product was removed from select wells. Additionally, depth to free product and groundwater monitoring was conducted 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:** During this report period, quarterly monitoring for OU-I and OU-II was conducted between September 9, 2017 and November 28, 2017. This monitoring included the measurement of static water levels and free product thicknesses (if present) in select functioning wells. The monitoring results are presented on the logs included in Attachment A. A groundwater contour map developed using static water levels measured on November 2, 2017, including off-site wells designated OUII-A through OUII-F, is included as Figure 1.

**FREE PRODUCT REMOVAL RECORDS:** The logs included in Attachment A also summarize the free product removed from wells during this report period. [Note: During the report period, free product was removed from well AI2-3, well RW-1, well FA4-8, and well FA4-17 using a Spill Buster™ system (i.e., a system installed within the well that continuously monitors/removes free product) and removed (i.e., when necessary) from other locations using a portable Spill Buddy™. The Spill Buster™ was installed in well FA4-17 and free product was removed subsequent to October 3, 2017. Prior to October 3, 2017 free product was removed from well FA4-17 using a Spill Buddy™. The free product removed was placed in 55-gallon drums located adjacent to the wells.

A summary of the total amount of free product removed from each well during the current report period is presented on Table 1, and a summary of the total amount of free product historically removed from each well between December 1, 2012 and August 31, 2017 is presented on Table 2. A spider diagram presenting the maximum free product thicknesses, and the amount of free product removed from the wells at the Site during the current and preceding report period is included as Figure 2.

Drum samples were collected from the 55-gallon drums used to store oil removed from well RW-1 and well FA4-8 on October 6, 2017, and from a 55-gallon drum used to store oil from the remaining wells on September 26, 2017. These drums samples were submitted to York Analytical Laboratories, Inc. (York) for testing of polychlorinated biphenyls (PCBs). Copies of the analytical laboratory

reports submitted by York are provided in Attachment B. Off-site disposal of the drums was not completed in this report period.

**GROUNDWATER SAMPLING AND TESTING:** Groundwater sampling and testing of wells located in OU-II was not required during the report period. However, test results for the groundwater samples collected between March 2012 (i.e., the initial quarter completed under the SMP) and August 2017 (the most recent sampling event), are included on Table 3 through Table 7 for reference purposes. 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), metals (i.e., Table 6), and perfluorinated compounds (i.e., Table 7). [Note: testing for perfluorinated compounds (PFCs) was completed on August 2, 2017 based on a request from the NYSDEC.]

**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. The static water level and free product thickness records completed during this report period for these wells are provided in Attachment A. During the weekly monitoring completed during the report period, free product was observed in monitoring wells OUII-A, OUII-B, OUII-C, 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. The range of free product thicknesses measured in the off-Site monitoring wells during the current report period is comparable to the range of free product thicknesses measured from October 4, 2016 through November 30, 2016 (i.e., a report period covering a similar season). The average free product thickness decreased in the current report period when compared to the October 2016 to November 2016 report period in wells OUII-A, OUII-B, and OUII-D, and increased in wells OUII-C and OUII-F. Free product was not detected in well OUII-E in either the current or past report period.

**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 was only 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', and it was not identified during subsequent monitoring events. 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:** During this report period, an inspection of OU-I and OU-II was completed on October 11, 2017. The results of this inspection are summarized in the documents included in Attachment D. Generally, this inspection revealed that the remedial systems and Engineering Controls (ECs) were functioning as designed. However, the need for several corrective actions and maintenance items were identified during the inspection, and these actions are summarized below.

**PROBLEMS ENCOUNTERED/RESOLUTION:** During the most recent inspection of the OU-I and OU-II areas (i.e., conducted on October 11, 2017), 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-I;
- A curb box is required to be installed at well AI-1-16.

Paving of an area of settlement north of the OU-I catch basin was completed in August 2017 to address the ponding water observed during previous reporting periods. 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 December 1, 2017 and February 28, 2018), 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). 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 from other wells using a Spill Buster™ (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 are generated during the upcoming quarter, samples of free product should be collected and tested, as outlined in the SMP. The full free product drums, including currently full free product drums, should subsequently be transported off the Site and disposed of in accordance with applicable regulations.

The off-site monitoring wells should continue to be monitored on a weekly basis. Alternatives are being evaluated to assess possible remedial actions to address the off-site free product and it is anticipated that a Corrective Action Plan (CAP) describing a proposed remedial action will be submitted in 2018.

The next OU-I/OU-II inspection is due on or about April 2018.

A SMP status report for the work completed during the upcoming period (i.e., December 1, 2017 through February 28, 2018) will be submitted in March 2018. The next groundwater sampling and testing will be completed on, or about, July 2018.

A Period Review Report (PRR) for the reporting period January 1, 2016 through January 1, 2019, will be submitted in March 2019.

## **Tables**

Table 1:	Free Product Removal Totals: September 1, 2017 through November 30, 2017
Table 2:	Historic Free Product Removal Totals: December 1, 2012 through August 31, 2017
Table 3:	Summary of VOCs: Groundwater Samples
Table 4:	Summary of SVOCs: Groundwater Samples
Table 5:	Summary of PCBs: Groundwater Samples
Table 6:	Summary of Metals: Groundwater Samples
Table 7:	Summary of Perfluorinated Compounds: Groundwater Samples
Table 8:	Off-Site Wells Static Water Levels and Range of Free product Thickness

## **Figures**

Figure 1:	Groundwater Contour Map: November 2, 2017
Figure 2:	Summary of Free Product Removal for the Quarters June 2017 through August 2017 & September 2017 through November 2017
Figure 3:	Long-Term Monitoring Results Sample Collected May 27 & 28, 2014, May 19 & 20, 2015, May 17 & 18, 2016, and August 2 & 3, 2017

## **Attachments**

Attachment A:	Well Monitoring Logs and Free Product Removal Records: September 1, 2017 through November 30, 2017
Attachment B:	Inspection Form: October 11, 2017
Attachment C:	Laboratory Reports: Oil Drum Samples

S:\Project PDFs\MNR\Harmon Yard\Remediation (46) Reports\OU I & OU II\OUI-OUII Status Reports\2017-12 SMP Status Report Qtr 4 2017\TEXT PC.5063M-15 Harmon OUI-OUII - SMP STATUS REPORT Qtr 4 2017.doc

## **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: September 1, 2017 to November 30, 2017

OU I	
Well ID	Gallons Removed
V1	0
V2	0
V3	0
V4	15.34
<b>Total</b>	<b>15.34</b>

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	AI2-2	0	DAY-1	0
AI1-4	0	AI2-3	152.2	FA4-8	11.8
AI1-8	0	VE2-1	0	FA4-9	0
AI1-11	0	<b>Total</b>	<b>152.2</b>	FA4-10	0
AI1-12	0			FA4-11	15.55
AI1-15	0			FA4-12	1.38
AI1-16	0			FA4-13	24.4
SP-North	0			FA4-14	24.06
VE1-1	0.75			FA4-15	4.77
VE1-2	0			FA4-16	5.41
VE1-3	0			FA4-17	1.45
VE1-4	0			FA4-18	7.52
WB-9	0			FA4-19	0
<b>Total</b>	<b>0.75</b>			FA4-20	0
				FA4-21	0
				FA4-23	0.13
				PGW-2	7.52
				RW-1	71.4
				VE4-1	0
				VE4-5	14.65
				VE4-6	0
				VE4-7	0
				VE4-8	0.38
				VE4-9	1.88
				VE4-10	0.75
				VE4-11	0
				VE4-12	0
				VE4-13	0
				<b>Total</b>	<b>193.05</b>

Free Product AREA L3	
Well ID	Gallons Removed
AI3-4	0
AI3-5	0
AI3-6	0
VE3-1	1.38
<b>Total</b>	<b>1.38</b>

Table 2

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

Free Product Removal Totals Prior to Current Report Period  
 December 1, 2012 - August 31, 2017

OU I	
Well ID	Gallons Removed
V1	5.18
V2	4.01
V3	19.08
V4	66.94
<b>Total</b>	<b>95.21</b>

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	452.83	FA4-8	162.17
AI1-8	0.06	VE2-1	0	FA4-9	0.6
AI1-11	0.122	<b>Total</b>	<b>454.46</b>	FA4-10	0.13
AI1-12	0.18			FA4-11	95.67
AI1-15	0.38			FA4-12	6.91
AI1-16	0			FA4-13	27.98
VE1-1	7.34			FA4-14	140.01
VE1-2	0.01			FA4-15	47.34
VE1-3	0.1			FA4-16	37.86
VE1-4	0			FA4-17	17.72
<b>Total</b>	<b>8.192</b>			FA4-18	45.98
				FA4-19	0
				FA4-20	0
				FA4-21	0.29
				FA4-23	0.91
				PGW-2	8.16
				RW-1	1185.86
				VE4-1	0
				VE4-5	142.76
				VE4-6	2.26
				VE4-7	0.08
				VE4-8	2.04
				VE4-9	6.65
				VE4-10	2.18
				VE4-11	0
				VE4-12	0
				VE4-13	0
				<b>Total</b>	<b>1933.555</b>







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 <sup>(1)</sup>	Test Location and Sample Date																															
		VE 1-2								VE 1-4								VE 2-1								VE 3-1							
		3/27/12	9/12/12	4/2/13	9/25/13	5/27/14	5/20/15	5/17/16	8/2/17	3/27/12	9/12/12	4/2/13	9/25/13	5/27/14	5/20/15	5/18/16	8/2/17	3/28/12	9/12/12	4/2/13	9/24/13	5/28/14	5/20/15	5/18/16	8/3/17	3/27/12	9/11/12	4/2/13	9/25/13	5/28/14	5/19/15	5/18/16	8/3/17
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 [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.098]	ND [0.51]	ND [0.502]	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 [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.096]	ND [0.505]	ND [0.505]
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 [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.102]	ND [0.51]	ND [0.502]	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 [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.1]	ND [0.505]	ND [0.505]
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 [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.102]	ND [0.51]	ND [0.502]	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 [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.1]	ND [0.505]	ND [0.505]
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 [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.091]	ND [0.51]	ND [0.502]	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 [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.089]	ND [0.505]	ND [0.505]
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 [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.102]	ND [0.51]	ND [0.502]	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 [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.1]	ND [0.505]	ND [0.505]
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 [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.045]	ND [0.51]	ND [0.502]	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 [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.044]	ND [0.505]	ND [0.505]
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 [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.083]	ND [0.51]	ND [0.502]	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 [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.081]	ND [0.505]	ND [0.505]
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 [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.083]	ND [0.51]	ND [0.502]	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 [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.081]	ND [0.505]	ND [0.505]
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 [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.083]	ND [0.51]	ND [0.502]	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 [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.081]	ND [0.505]	ND [0.505]
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 [0.0513]	ND [0.0526]	ND [0.0625]	ND [0.0606]	ND [0.102]	ND [0.51]	ND [0.502]	ND [0.0513]	ND [0.0571]	ND [0.0526]	ND [0.0667]	ND [0.0625]	ND [0.101]	ND [0.505]	ND [0.507]	ND [0.0513]	ND [0.0513]	ND [0.0526]	ND [0.0588]	ND [0.0625]	ND [0.1]	ND [0.505]	ND [0.505]

Compound	Groundwater Standard or Guidance Value <sup>(1)</sup>	Test Location and Sample Date																					
		VE 4-11								DAY 1								Field Blank					
		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	3/27/12	9/11/12	4/2/13	9/24/13	5/27/14	5/19/15	5/17/16	8/2/17	3/28/12	9/12/12	4/2/13	9/25/13	5/20/15
Aroclor 1016	NS	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 [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.098]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.097]
Aroclor 1221	NS	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 [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.102]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.101]
Aroclor 1232	NS	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 [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.102]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.101]
Aroclor 1242	NS	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 [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.091]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.09]
Aroclor 1248	NS	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 [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.102]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.101]
Aroclor 1254	NS	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]	ND [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.045]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.044]
Aroclor 1260	NS	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 [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.083]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.082]
Aroclor 1262	NS	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 [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.083]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.082]
Aroclor 1268	NS	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 [0.0556]	ND [0.0526]	ND [0.0625]	NT	ND [0.083]	ND [0.51]	ND [0.504]	ND [0.0513]	ND [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.082]
Total PCBs	0.09	ND [0.0513]	0.0805	0.0786	ND [0.0500]	<b>0.0928</b>	ND [0.0588]	ND [0.103]	0.914	0.711	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 [0.0556]	ND [0.0513]	ND [0.0645]	ND [0.101]

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 <sup>(1)</sup>	Test Location and Sample Date																															
		VE 1-2								VE 1-4								VE 2-1								VE 3-1							
		3/27/12	9/12/12	4/2/13	9/25/13	5/27/14	5/20/15	5/17/16	8/2/17	3/27/12	9/12/12	4/2/13	9/25/13	5/27/14	5/20/15	5/18/16	8/2/17	3/28/12	9/12/12	4/2/13	9/24/13	5/28/14	5/20/15	5/18/16	8/3/17	3/27/12	9/11/12	4/2/13	9/25/13	5/28/14	5/19/15	5/18/16	8/3/17
Arsenic	25	ND [10]	ND [4.0]	ND [4.0]	ND [4.0]	ND [4.0]	2.82	4.71	1.57	ND [10]	ND [4.0]	ND [4.0]	ND [4.0]	ND [4.0]	3.5	36.5	1.21	ND [10]	ND [4.0]	ND [4.0]	ND [4.0]	ND [4.0]	0.507 J	0.42 J	0.92 J	ND [10]	4.71	6.03	ND [4.0]	5.62	9.16	16.5	19.1
Chromium	50	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	0.969 J	1.71 JN*	0.85 JN	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	0.796 J	139 N*	1.62 JN	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	0.137 J	0.65 JN*	0.73 JN	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	3.07	5.62 N*	5.35 N
Copper	200	ND [5]	ND [5]	ND [5]	ND [3]	ND [3]	3.21	21.5 N	4.48	ND [5]	ND [5]	ND [5]	ND [3]	ND [3]	10.8	6060 N	48	ND [5]	6.72	5.56	4.70	9.00	4.55	3.5 N	3.48	ND [5]	ND [5]	ND [5]	ND [3]	ND [3]	5.24	6.73 N	9.65
Lead	25	ND [3]	ND [3]	ND [3]	ND [3]	ND [3]	4.34	7.76	1.56*	ND [3]	ND [3]	ND [3]	ND [3]	ND [3]	3.89	1690	14.7*	ND [3]	ND [3]	ND [3]	ND [3]	ND [3]	1.38	0.3 J	0.17 J*	ND [3]	ND [3]	ND [3]	ND [3]	ND [3]	3.77	1.44	2.71 *

Compound	Groundwater Standard or Guidance Value <sup>(1)</sup>	Test Location and Sample Date																						
		VE 4-11									DAY 1									Field Blank				
		3/27/12	9/11/12	11/20/12 DQ	4/2/13	9/24/13	5/27/14	5/19/15	5/17/16	8/2/17	3/27/12	9/11/12	4/2/13	9/24/13	5/27/14	5/19/15	5/17/16	8/2/17	3/28/12	9/12/12	4/2/13	9/25/13	5/20/15	
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 [10]	12.5	ND [4.0]	ND [4.0]	ND [4.0]	10.7	10.6	10.8	ND [10]	ND [4.0]	ND [4.0]	ND [4.0]	ND [1.0]	
Chromium	50	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	1.37 J	0.66 JN*	0.81 JN	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	1.31 J	1.44 JN*	0.95 JN	ND [5]	ND [5]	ND [5]	ND [5]	0.431 J	
Copper	200	7.64	10.1	8.7	ND [5]	13.7	4.44	9.24	9.02 N	7.24	ND [5]	ND [5]	ND [5]	ND [3]	ND [3]	1.34 J	2.77 N	2.99	ND [5]	ND [5]	ND [5]	ND [5]	17.3	80
Lead	25	ND [3]	ND [3]	ND [3]	ND [3]	ND [3]	ND [3]	1.55	0.19 J	0.66 J*	ND [3]	ND [3]	ND [3]	ND [3]	ND [3]	1.75	0.15 J	0.41 J*	ND [3]	ND [3]	ND [3]	ND [3]	1.6	

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**  
**NYSDEC Site #360010**  
**Harmon Yard Waste Water Area**  
**OU II**

**Summary of Perfluorinated Compounds**  
**Groundwater Samples**

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	8/2/17	8/2/17	8/2/17	8/2/17	-
Perfluoroheptanoic acid (PFHpA)	ND [0.79]	7.7	4	3.3	ND [0.81]	5.4	ND [0.67]
Perfluorooctanoic acid (PFOA)	5.2	29	7.7	5.6	ND [0.75]	18	ND [0.62]
Perfluorooxononanoic acid (PFNA)	1.3 J	2.8	2.6	1.1 J	ND [0.66]	2.4	ND [0.54]
Perfluorodecanoic acid (PFDA)	ND [0.43]	ND [0.43]	0.76 J	ND [0.44]	ND [0.44]	ND [0.44]	ND [0.37]
Perfluoroundecanoic acid (PFUnA)	ND [0.73]	ND [0.73]	ND [0.74]	ND [0.75]	ND [0.75]	ND [0.75]	ND [0.62]
Perfluorododecanoic acid (PFDoA)	1.2 J	ND [0.57]	ND [0.58]	ND [0.75]	1.4 J	ND [0.58]	ND [0.49]
Perfluorotridecanoic acid (PFTriA)	ND [0.54]	ND [0.54]	ND [0.54]	ND [0.59]	ND [0.56]	ND [0.55]	ND [0.46]
Perfluorotetradecanoic acid (PFTeA)	ND [0.20]	ND [0.19]	0.27 J B	ND [0.55]	ND [0.20]	ND [0.20]	ND [0.17]
Perfluorohexanesulfonic acid (PFHxS)	7.4	9.7	24	2	39	5.0	ND [0.72]
Perfluoroheptanesulfonic acid (PFHpS)	ND [0.70]	0.77 J	ND [0.70]	ND [0.72]	ND [0.72]	ND [0.71]	ND [0.59]
Perfluorooctanesulfonic acid (PFOS)	37	62	55	14	7.2	16	ND [1.1]
Perfluorodecanesulfonic acid (PFDS)	ND [1.2]	ND [1.2]	ND [1.2]	ND [1.2]	ND [1.2]	ND [1.2]	ND [1.0]
Perfluorooctane Sulfonamide (FOSA)	ND [0.63]	ND [0.62]	3.9 J	ND [0.64]	ND [0.64]	ND [0.64]	ND [0.53]
Perfluorobutanoic acid (PFBA)	ND [22]	ND [22]	54 J B Cl	2200 B Cl	ND [23]	2000 B Cl	ND [0.38]
Perfluoropentanoic acid (PFPeA)	ND [48]	ND [48]	ND [49]	ND [50]	ND [50]	4600 Cl	ND [0.82]
Perfluorohexanoic acid (PFHxA)	ND [39]	ND [38]	ND [39]	ND [39]	ND [40]	ND [39]	ND [0.65]
Perfluorobutanesulfonic acid (PFBS)	ND [45]	ND [45]	ND [45]	ND [46]	ND [46]	ND [46]	ND [0.76]

**Notes:**

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

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

J = Estimated Concentration

B = Compound was found in the blank and samples

Cl = 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 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 sources.

**Table 8**  
**NYSDEC Site #360010**  
**Harmon Yard Waste Water Area**

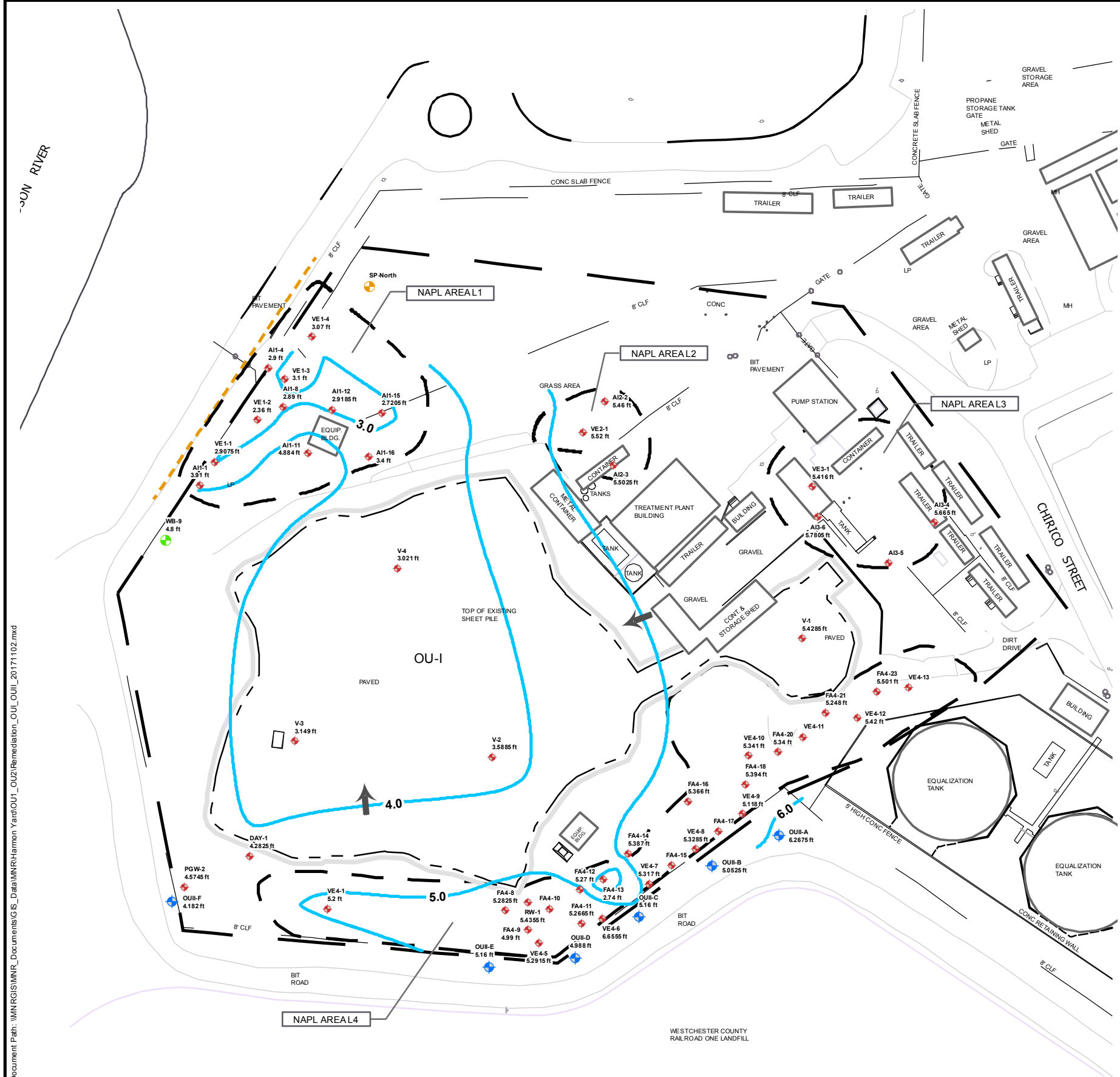
**Off-Site Wells Static Water Levels and Range of Free Product Thickness**

	October 4, 2016 through November 30, 2016		December 1, 2016 through February 28, 2017		March 1, 2017 through May 31, 2017		June 1, 2017 through July 31, 2017		September 1, 2017 through November 30, 2017	
<b>Monitoring Well ID</b>	<b>Static Water Level (ft.amsl)</b>	<b>Range of Free Product Thickness (ft.)</b>	<b>Static Water Level (ft. amsl)</b>	<b>Range of Free Product Thickness (ft.)</b>	<b>Static Water Level (ft. amsl)</b>	<b>Range of Free Product Thickness (ft.)</b>	<b>Static Water Level (ft. amsl)</b>	<b>Range of Free Product Thickness (ft.)</b>	<b>Static Water Level (ft. amsl)</b>	<b>Range of Free Product Thickness (ft.)</b>
OUII-A	4.58-5.04	0.7-3.0	5.53-6.19	0.0-0.55	5.56-6.86	0.0-0.94	5.37-6.28	0.04-1.28	9.36-9.82	0.67-2.01
OUII-B	4.36-5.04	1.3-3.2	5.58-6.11	0.0-0.96	5.46-6.89	0.08-1.97	5.12-6.13	0.68-1.7	9.28-9.84	1.39-2.36
OUII-C	4.58-5.18	0	5.99-6.76	0	5.53-7.45	0.0-1.24	4.82-6.31	0	9.18-9.59	0-1.82
OUII-D	4.40-4.97	1.9-3.0	5.47-5.96	1.65-2.15	5.3-6.77	0.0-1.84	5.19-6.18	0.5-1.85	9.57-9.93	1.78-2.24
OUII-E	4.55-5.05	0	5.56-6.18	0	5.57-6.89	0	5.28-6.26	0	9.44-9.82	0
OUII-F	2.87-5.09	0.0-1.3	5.8-7.02	0-0.93	5.27-8.05	0.0-0.28	4.43-6.69	0-0.26	7.19-7.82	0.40-2.78

Note: 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**

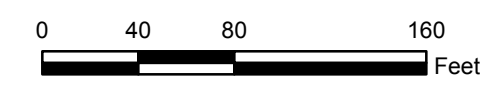


**NOTES:**

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 (6.66 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 November 2017
- Off-site monitoring well installed September 2016
- Existing monitoring well near the southern terminus of the sheet pile wall in NAPL Area L1
- Monitoring well near the northern terminus of the sheet pile 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



DATE	12-2017
PROJECT MANAGER	RLK
DATE DRAWN	12-2017
DRAWN BY	CPS
DATE ISSUED	12-13-2017
SCALE	As Noted

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

**DRAFT**

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

SITE MANAGEMENT PLAN  
Drawing Title

Groundwater Contour Map: November 2017

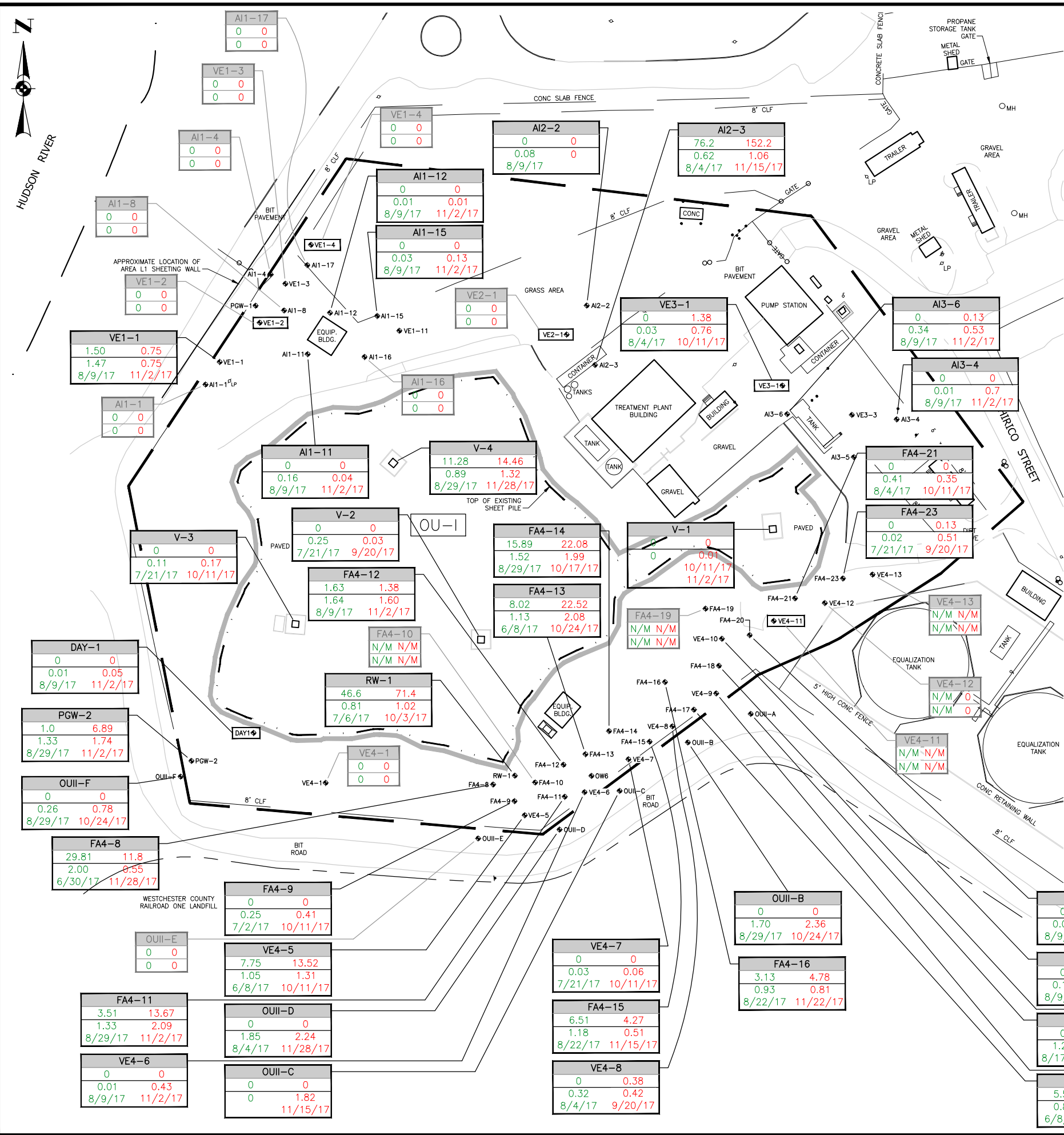
Project No.  
 15-3356M (46)

**FIGURE 1**

Last Date Saved: 13 Dec 2017 Document Path: \\MINROIS\MNR\_Documents\GIS\_Data\MINRH\Harmon\_Yard\OU1\_OU2\Remediation\_OU1\_OU2\_201711102.mxd

Ref1: Xerox432AnsiB-2; 11 x 17  
 Ref2: Layout Name: Layout1  
 Ref3: Pen Setting File: 800psHalfColorBeacon.ctb

Time Plotted: Thursday, December 14, 2017 8:18:38 AM  
 File Name: P:\Drawings\Metro\Harmon\Remediation-46\NAPL Wells Qtr Sept-Nov 2017.dwg



**NOTES:**

1. 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.
2. 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...)
3. NAPL is removed from RW-1 and AI2-3 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
- V-1 OU-I Contingency Vapor Extraction System Wells
- FA4-8 Long-Term Monitoring Well Identification
- NAPL Removed (Gallons) During Quarter
- Maximum NAPL Thickness (Feet) Measured During Quarter With Date Of Measurement
- Measurements Made During The Report Period June 1, 2017 Through August 31, 2017 Shown In Green (Left)
- Measurements Made During The Report Period September 1, 2017 Through November 31, 2017 Shown In Red (Right)
- N/M Well Not Measured

**SITE PLAN**  
 1" = 80'



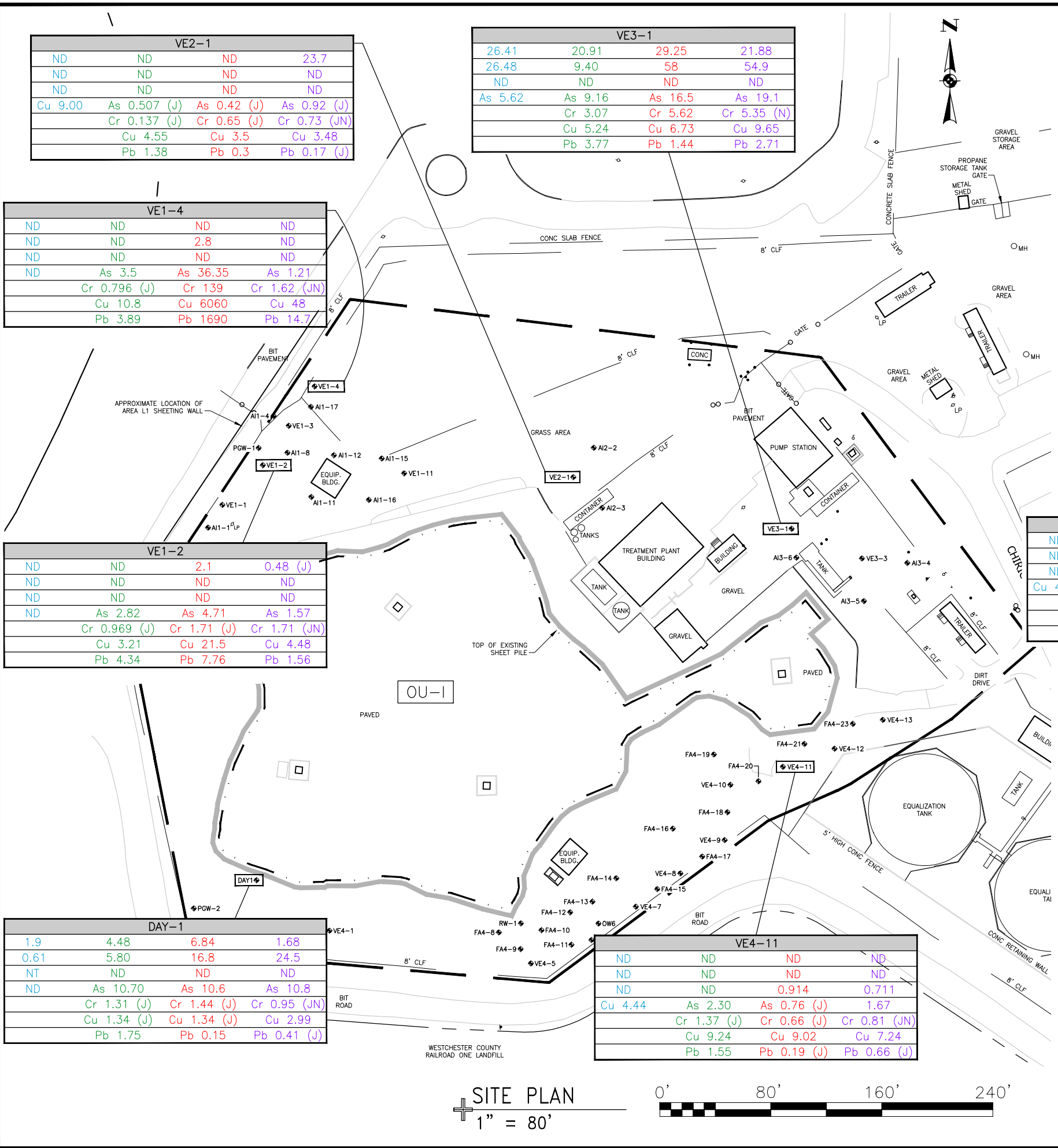
PROJECT MANAGER	HMM
DATE	12/2017
DRAWN BY	RJM/CPS/TW
DATE DRAWN	12/14/2017
SCALE	As Noted
DATE ISSUED	12/14/2017

**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**  
 NYSDC SITE #360010  
 DRAWING TITLE  
**Summary Of NAPL Removal For The Quarters  
 June 2017 - August 2017 & September 2017 - November 2017**  
 PROJECT NO.  
 15-3356M (46)  
**FIGURE 2**



Time Plotted: Friday, September 22, 2017 1:40:44 PM  
 File Name: P:\Drawings\Metro\Harmon\Remediation-46\Treatment Plant Sample Results Aug 2017.dwg  
 Xerox432AnsIB-2; 11 x 17  
 Layout Name: Layout1  
 Pen Setting File: 800psHalfColorBeacon.ctb



**NOTES:**

- This drawing was prepared from a CAD base file provided 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.
- 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...)

**LEGEND:**

- Former Vapor Extraction (VE), Air Inlet (AI), Forced Air Injection (FA), Existing Monitoring Well Or Product Recovery Well (RW) and Designation
- 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

- (J) Estimated Concentration
- (N) Indicates The Spiked Sample Recovery Is Not Within Control Limits
- ND Constituents Not Detected
- NT Not Tested

Long-Term Monitoring Results For Samples Collected On May 27, 2014 And May 28, 2014 Shown In Blue

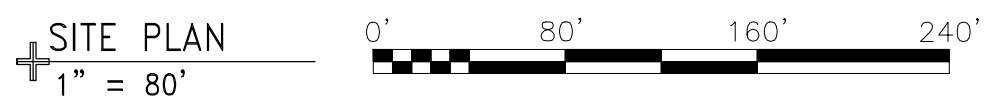
Long-Term Monitoring Results For Samples Collected On May 19, 2015 And May 20, 2015 Shown In Green

Long-Term Monitoring Results For Samples Collected On May 17, 2016 And May 18, 2016 Shown In Red

Long-Term Monitoring Results For Samples Collected On August 2, 2017 And August 3, 2017 Shown In Purple

**NOTES:**

- All results in ug/L or parts per billion.
- If metals were detected specific metal and concentration are identified.



PROJECT MANAGER	HMM	DATE	9-2017
DRAWN BY	RJM	DATE DRAWN	9-22-2017
SCALE	As Noted	DATE ISSUED	9-22-2017

**day**  
 DAY ENGINEERING, P.C.  
 ENVIRONMENTAL ENGINEERING CONSULTANTS  
 ROCHESTER, NEW YORK 14606  
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**PROJECT TITLE**  
 METRO-NORTH RAILROAD  
 HARMON YARD OPERABLE UNITS OU-I AND OU-II  
 CROTON-ON-HUDSON, NEW YORK  
 NYSDC SITE #360010

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

**PROJECT NO.**  
 15-3356M (46)

**FIGURE 3**

**ATTACHMENT A**

**Well Monitoring Logs and Free Product Removal Records  
September 1, 2017 through November 30, 2017**

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
11/2/2017	0	14.51	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
11/2/2017	0	14.02	0	0	

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
Not recorded					

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
11/2/2017	0	14.62	0	0	

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
11/2/2017	0	14.74	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
11/2/2017	0	0.00	0	0	blocked



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
11/2/2017	0	14.65	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
11/2/2017	0	14.31	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
11/2/2017	0	14.32	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
11/2/2017	14.24	14.25	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
9/20/2017	0	16.54	0	0	
10/10/2017	16.83	16.84	0.01	0	
11/2/2017	17	17.01	0.01	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
9/20/2017	17.54	17.57	0.03	0	
10/11/2017	17.57	17.58	0.01	0	
11/2/2017	17.59	17.6	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
9/20/2017	17.43	17.51	0.08	0	
10/11/2017	17.69	17.86	0.17	0	
11/2/2017	17.71	17.85	0.14	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
9/5/2017	16.68	17.6	0.92	1.25	
9/15/2017	16.6	17.41	0.81	0.35	
9/20/2017	16.61	17.54	0.93	1	
9/28/2017	16.68	17.59	0.91	1.5	
10/3/2017	16.83	18.02	1.19	1.25	
10/11/2017	16.89	18.08	1.19	1.5	
10/17/2017	16.92	18.2	1.28	1.38	
10/24/2017	16.94	18.01	1.07	1.75	
11/2/2017	16.87	17.73	0.86	0.88	
11/8/2017	16.78	17.61	0.83	0.88	
11/15/2017	16.81	17.69	0.88	1	
11/22/2017	16.84	17.77	0.93	0.22	
11/28/2017	17.04	18.36	1.32	1.5	



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
11/2/2017	0	11.70	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
11/2/2017	0	11.12	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
11/2/2017	0	14.19	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
11/2/2017	16.11	16.15	0.04	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
11/2/2017	17.82	17.83	0.01	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
11/2/2017	19.62	19.75	0.13	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
11/2/2017	0	14.49	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
11/2/2017	0	0.00	0	0	dry 12.60 ft.



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
9/5/2017	0	10.61	0	0	
9/15/2017	0	10.21	0	0	
9/20/2017	0	10.13	0	0	
9/28/2017	0	10.23	0	0	
10/3/2017	0	10.34	0	0	
10/11/2017	0	10.41	0	0	
10/17/2017	0	10.48	0	0	
10/24/2017	0	10.51	0	0	
11/2/2017	0	10.28	0	0	
11/2/2017	0	10.4	0	0	
11/8/2017	0	10.28	0	0	
11/15/2017	0	10.45	0	0	
11/22/2017	0	10.57	0	0	
11/28/2017	0	10.67	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
11/2/2017	9.45	10.20	0.75	0.75	

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
11/2/2017	0	11.05	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
11/2/2017	0	9.40	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
11/2/2017	0	10.98	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
11/2/2017	0	9.13	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
11/2/2017	0.00	15.73	0.00	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*
9/5/2017	15.91	15.92	0.01	0	drum 1.71 ft
9/15/2017	15.81	15.84	0.03	0	drum full 2.28 ft. Started new drum
9/20/2017	15.88	15.92	0.04	0	drum 0.26 ft
9/28/2017	15.96	15.97	0.01	0	drum 0.78 ft
10/3/2017	16	16.14	0.14	0	drum 1.12 ft
10/11/2017	16.13	16.14	0.01	0	drum 1.84 ft
10/17/2017	16.19	16.21	0.02	0	drum 2.49 ft
10/24/2017	16.14	16.21	0.07	0	drum 0.14 ft
11/2/2017	15.99	16.04	0.05	0	drum 1.33 ft
11/8/2017	16.04	16.08	0.04	0	drum 1.93 ft
11/15/2017	15.97	17.03	1.06	0	drum 2.6 ft (full)
11/22/2017	16.18	16.2	0.02	0	drum 0.91 ft
11/28/2017	16.26	16.29	0.03	0	drum 1.55 ft

\*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 8/29/2017 stated 'drum 1.31 ft'. Total amount of Free Product Recovered = 152.2 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
11/2/2017	0	11.81	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
11/2/2017	11.30	12.00	0.70	0	

Metro-North Railroad Free Product Recovery Report					
Metro-North Yard: Harmon (OU I) Well ID: A13-5 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
11/2/2017	17.42	17.95	0.53	0.13	

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
9/20/2017	11.88	12.57	0.69	0.25	
10/11/2017	12.11	12.87	0.76	0.63	
11/2/2017	12.05	12.61	0.56	0.5	

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
11/2/2017	17.38	17.43	0.05	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*
9/5/2017	17.25	17.27	0.02	0	drum 0.92 ft
9/15/2017	17.14	17.17	0.03	0	drum 0.99 ft
9/20/2017	17.13	17.42	0.29	0	drum 1.03 ft
9/28/2017	17.03	17.04	0.01	0	drum 1.09 ft
10/3/2017	17.27	17.46	0.19	0	drum 1.12 ft
10/11/2017	17.45	17.58	0.13	0	drum 0.09 ft
10/17/2017	17.4	17.5	0.1	0	drum 0.1 ft
10/24/2017	17.43	17.72	0.29	0	drum 0.14 ft
11/2/2017	17.3	17.35	0.05	0	drum 0.2 ft
11/8/2017	17.39	17.43	0.04	0	drum 0.23 ft
11/15/2017	17.27	17.57	0.3	0	drum 0.28 ft
11/22/2017	17.41	17.45	0.04	0	drum 0.30 ft
11/28/2017	17.48	18.03	0.55	0	drum 0.33 ft

\*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 8/29/2017 stated 'drum 0.89 ft'. Total amount of Free Product Recovered = 11.8 gallons

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
9/20/2017	9.07	9.42	0.35	0	
10/11/2017	9.4	9.81	0.41	0	
11/2/2017	9.3	9.7	0.4	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
9/5/2017	11.94	13.35	1.41	1.63	
9/15/2017	11.88	13.47	1.59	1.25	
9/20/2017	11.91	13.36	1.45	0.25	
9/28/2017	12.01	13.56	1.55	1.5	
10/3/2017	12.04	13.73	1.69	1.25	
10/11/2017	12.11	14	1.89	1.5	
10/17/2017	12.1	14.1	2	1.25	
10/24/2017	12.11	14.06	1.95	0.44	
11/2/2017	12	14.09	2.09	0.47	
11/8/2017	12.06	13.84	1.78	1.25	
11/15/2017	12.03	13.76	1.73	1.38	
11/28/2017	12.22	14.29	2.07	1.5	

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
11/2/2017	14.95	16.55	1.60	1.38	

**Metro-North Railroad Free Product Recovery Report**

Metro-North Yard: Harmon (OU I) Well ID: FA4-13R Diameter: 4 in.

<b>Date</b>	<b>Depth to Free Product (ft)</b>	<b>Depth to Water (ft)</b>	<b>Free Product Thickness (ft)</b>	<b>Free Product Recovered (gal)</b>	<b>Comments</b>
9/5/2017	11.29	12.26	0.97	1.38	
9/15/2017	11.24	12.46	1.22	1.13	
9/20/2017	11.28	12.46	1.18	1.25	
9/28/2017	11.31	12.65	1.34	1.38	
10/3/2017	11.37	12.91	1.54	1.5	
10/11/2017	11.45	13.3	1.85	2.25	
10/17/2017	11.45	13.39	1.94	2.25	
10/24/2017	11.45	13.53	2.08	2.25	
11/2/2017	11.39	12.99	1.6	1.88	
11/8/2017	11.4	13.13	1.73	0.5	
11/15/2017	11.38	13.24	1.86	2	
11/22/2017	11.43	13.47	2.04	2.25	
11/28/2017	11.53	13.58	2.05	2.5	

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
9/5/2017	13.8	15.21	1.41	1.75	
9/15/2017	13.72	15.38	1.66	2	
9/20/2017	13.79	15.34	1.55	1.88	
9/28/2017	13.81	13.83	0.02	0	
10/3/2017	13.88	15.74	1.86	2.25	
10/11/2017	13.91	13.92	0.01	0	
10/17/2017	13.96	15.95	1.99	2.25	
10/24/2017	13.97	16.07	2.1	2.25	
11/2/2017	13.93	14.95	1.02	2	
11/8/2017	13.94	15.65	1.71	1.93	
11/15/2017	13.91	15.73	1.82	2	
11/22/2017	13.96	15.92	1.96	2.25	
11/28/2017	14.06	15.87	1.81	1.5	

**Metro-North Railroad Free Product Recovery Report**

Metro-North Yard: Harmon (OU I) Well ID: FA4-15R Diameter: 4 in.

<b>Date</b>	<b>Depth to Free Product (ft)</b>	<b>Depth to Water (ft)</b>	<b>Free Product Thickness (ft)</b>	<b>Free Product Recovered (gal)</b>	<b>Comments</b>
9/5/2017	10.85	10.98	0.13	0	
9/15/2017	10.79	11.23	0.44	0.5	
9/20/2017	10.88	11.1	0.22	0	
9/28/2017	10.92	11.3	0.38	0	
10/3/2017	10.96	11.4	0.44	0.63	
10/11/2017	11.05	11.38	0.33	0	
10/17/2017	11.1	11.56	0.46	0.63	
10/24/2017	11.11	11.46	0.35	0.5	
11/2/2017	11	11.42	0.42	0.5	
11/8/2017	10.98	11.46	0.48	0.5	
11/15/2017	10.98	11.49	0.51	0.63	
11/22/2017	11.08	11.51	0.43	0.38	
11/28/2017	11.21	11.53	0.32	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
9/5/2017	14.99	15.31	0.32	0.13	
9/15/2017	14.94	15.22	0.28	0	
9/20/2017	14.97	15.33	0.36	0.63	
9/28/2017	15.06	15.26	0.2	0	
10/3/2017	15.12	15.38	0.26	0	
10/11/2017	15.19	15.72	0.53	0.5	
10/17/2017	15.23	15.65	0.42	0.25	
10/24/2017	15.23	15.71	0.48	0.5	
11/2/2017	15.1	15.86	0.76	0.63	
11/8/2017	15.11	15.81	0.7	0.38	
11/15/2017	15.12	15.75	0.63	0.63	
11/22/2017	15.18	15.99	0.81	0.63	
11/28/2017	15.31	15.89	0.58	0.5	

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
9/5/2017	11.06	11.21	0.15	0	
9/15/2017	10.98	11.26	0.28	0	
9/20/2017	11.06	11.38	0.32	0.25	
9/28/2017	11.15	11.28	0.13	0	
10/3/2017	11.19	11.28	0.09	0	
10/11/2017	11.32	11.33	0.01	0	drum 0.05 ft
10/17/2017	11.38	11.39	0.01	0	drum 0.07 ft
10/24/2017	11.37	11.39	0.02	0	drum 0.04 ft
11/2/2017	11.25	11.26	0.01	0	drum 0.05 ft
11/8/2017	11.26	11.28	0.02	0	drum 0.05 ft
11/15/2017	11.26	11.28	0.02	0	drum 0.07 ft
11/22/2017	11.33	11.35	0.02	0	drum 0.07 ft
11/28/2017	11.43	11.47	0.04	0	drum 0.06 ft

\*Measured height of Free Product accumulated in drum. Height of drum is assumed to be 2.5 ft and equal to approximately 50 gallons. Total amount of Free Product Recovered = 26.2 gallons



**Metro-North Railroad Free Product Recovery Report**

Metro-North Yard: Harmon (OU I)    Well ID: FA4-18    Diameter: 4 in.

<b>Date</b>	<b>Depth to Free Product (ft)</b>	<b>Depth to Water (ft)</b>	<b>Free Product Thickness (ft)</b>	<b>Free Product Recovered (gal)</b>	<b>Comments</b>
9/5/2017	13.45	13.95	0.5	0.13	
9/15/2017	13.37	14.08	0.71	0.5	
9/20/2017	13.44	14.01	0.57	0.5	
9/28/2017	13.5	14.09	0.59	0.75	
10/3/2017	13.57	13.96	0.39	0.38	
10/11/2017	13.65	14.18	0.53	0.13	
10/17/2017	13.7	14.22	0.52	0.75	
10/24/2017	13.7	14.33	0.63	0.5	
11/2/2017	13.55	14.39	0.84	0.5	
11/8/2017	13.59	14.2	0.61	0.75	
11/15/2017	13.59	14.16	0.57	0.63	
11/22/2017	13.67	14.28	0.61	0.75	
11/28/2017	13.78	14.48	0.7	0.75	

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
11/2/2017	12.71	12.91	0.20	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
9/20/2017	14.27	14.54	0.27	0	
10/11/2017	14.52	14.87	0.35	0	
11/2/2017	14.42	14.7	0.28	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
9/20/2017	13.55	14.06	0.51	0.13	
10/11/2017	13.72	13.98	0.26	0	
11/2/2017	13.71	13.97	0.26	0	

**Metro-North Railroad Free Product Recovery Report**

Metro-North Yard: Harmon (OU I)    Well ID: PGW-2    Diameter: 2 in.

<b>Date</b>	<b>Depth to Free Product (ft)</b>	<b>Depth to Water (ft)</b>	<b>Free Product Thickness (ft)</b>	<b>Free Product Recovered (gal)</b>	<b>Comments</b>
9/5/2017	7.65	8.75	1.1	0.25	
9/15/2017	7.54	8.77	1.23	0.5	
9/20/2017	7.62	8.91	1.29	0.63	
9/28/2017	7.72	8.76	1.04	0.63	
10/3/2017	7.78	8.86	1.08	0.25	
10/11/2017	7.89	9.3	1.41	0.75	
10/17/2017	7.91	9.55	1.64	0.5	
10/24/2017	7.93	9.67	1.74	0.75	
11/2/2017	7.52	8.89	1.37	0.63	
11/8/2017	7.67	8.76	1.09	0.5	
11/15/2017	7.72	8.89	1.17	0.5	
11/22/2017	7.87	9.08	1.21	0.5	
11/28/2017	7.97	9.3	1.33	0.5	

**Metro-North Railroad Free Product Recovery Report**

Metro-North Yard: Harmon (OU I)    Well ID: RW-1    Diameter: 6 in.

<b>Date</b>	<b>Depth to Free Product (ft)</b>	<b>Depth to Water (ft)</b>	<b>Free Product Thickness (ft)</b>	<b>Free Product Recovered (gal)</b>	<b>Comments*</b>
9/5/2017	15.35	15.36	0.01	0	drum 1.11 ft
9/15/2017	15.26	15.3	0.04	0	drum 1.63 ft
9/20/2017	15.36	15.39	0.03	0	drum 1.86 ft
9/28/2017	15.4	15.41	0.01	0	drum 2.30 ft
10/3/2017	15.29	16.31	1.02	0	drum full 2.38 ft
10/11/2017	15.58	15.59	0.01	0	drum 0.42 ft
10/17/2017	15.55	15.57	0.02	0	drum 0.67 ft
10/24/2017	15.57	15.59	0.02	0	drum 0.91 ft
11/2/2017	15.42	15.45	0.03	0	drum 1.2 ft
11/8/2017	15.49	15.58	0.09	0	drum 1.38 ft
11/15/2017	15.46	15.58	0.12	0	drum 1.64 ft
11/22/2017	15.55	15.56	0.01	0	drum 1.85 ft
11/28/2017	15.66	15.68	0.02	0	drum 1.95 ft

\*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 8/29/2017 stated 'drum 0.75 ft'. Total amount of Free Product Recovered = 71.4 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
11/2/2017	0	10.12	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
9/5/2017	10.16	11.02	0.86	0.88	
9/15/2017	10.04	11.22	1.18	1	
9/20/2017	10.12	10.92	0.8	0.63	
9/28/2017	10.2	10.32	0.12	1.38	
10/3/2017	10.23	11.09	0.86	0.75	
10/11/2017	10.36	11.67	1.31	1.25	
10/17/2017	10.35	11.43	1.08	1	
10/24/2017	10.36	11.54	1.18	0.75	
11/2/2017	10.22	11.41	1.19	1.13	
11/8/2017	10.28	11.37	1.09	1	
11/15/2017	10.23	11.35	1.12	1	
11/22/2017	10.33	11.51	1.18	1.5	
11/28/2017	10.46	11.43	0.97	1.25	

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
11/2/2017	7.7	8.13	0.43	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
9/20/2017	8.43	8.45	0.02	0	
10/11/2017	8.6	8.66	0.06	0	
11/2/2017	8.61	8.63	0.02	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
9/20/2017	8.69	9.11	0.42	0.38	
10/11/2017	8.95	9.01	0.06	0	
11/2/2017	8.91	9.12	0.21	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
9/20/2017	8.93	9.53	0.6	0.5	
10/11/2017	9.14	9.89	0.75	0.75	
11/2/2017	9.31	9.99	0.68	0.63	

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
11/2/2017	13.13	13.99	0.86	0.75	

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
Not measured					

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
11/2/2017	0	14.48	0	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
9/5/2017	9.35	10.12	0.77	0	
9/15/2017	9.26	9.93	0.67	0	
9/20/2017	9.28	10.23	0.95	0	
9/28/2017	9.36	10.33	0.97	0	
10/3/2017	9.38	10.66	1.28	0	
10/11/2017	9.51	10.95	1.44	0	
10/17/2017	9.49	11.14	1.65	0	
10/24/2017	9.51	11.26	1.75	0	
11/2/2017	9.43	10.58	1.15	0	
11/8/2017	9.39	10.68	1.29	0	
11/15/2017	9.54	10.81	1.27	0	
11/22/2017	9.52	11.27	1.75	0	
11/28/2017	9.52	11.53	2.01	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
9/5/2017	9.08	10.78	1.7	0	
9/15/2017	9.07	10.46	1.39	0	
9/20/2017	9.07	10.58	1.51	0	
9/28/2017	9.13	10.97	1.84	0	
10/3/2017	9.17	11.04	1.87	0	
10/11/2017	9.4	11.59	2.19	0	
10/17/2017	9.43	11.68	2.25	0	
10/24/2017	9.23	11.59	2.36	0	
11/2/2017	9.21	11.06	1.85	0	
11/8/2017	9.21	11.06	1.85	0	
11/22/2017	9.28	11.33	2.05	0	
11/28/2017	9.49	11.84	2.35	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
9/5/2017	0	9.19	0	0	
9/15/2017	0	9.18	0	0	
9/20/2017	0	9.2	0	0	
9/28/2017	0	9.24	0	0	
10/3/2017	0	9.31	0	0	
10/11/2017	0	9.56	0	0	
10/17/2017	0	9.59	0	0	
10/24/2017	0	9.44	0	0	
11/2/2017	0	9.32	0	0	
11/2/2017	0	9.32	0	0	
11/8/2017	0	9.37	0	0	
11/15/2017	9.22	11.04	1.82	0	
11/15/2017	0	9.43	0	0	
11/22/2017	0	9.47	0	0	
11/28/2017	0	9.52	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
9/5/2017	9.33	11.25	1.92	0	
9/15/2017	9.28	11.24	1.96	0	
9/20/2017	9.29	11.16	1.87	0	
9/28/2017	9.33	11.29	1.96	0	
10/3/2017	9.43	11.21	1.78	0	
10/11/2017	9.5	11.5	2	0	
10/17/2017	9.62	11.7	2.08	0	
10/24/2017	9.43	11.47	2.04	0	
11/2/2017	9.44	11.32	1.88	0	
11/2/2017	9.47	11.28	1.81	0	
11/8/2017	9.44	11.32	1.88	0	
11/15/2017	9.44	11.37	1.93	0	
11/22/2017	9.54	11.74	2.2	0	
11/28/2017	9.58	11.82	2.24	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
9/5/2017	0	9.45	0	0	
9/15/2017	0	9.49	0	0	
9/20/2017	0	9.44	0	0	
9/28/2017	0	9.52	0	0	
10/3/2017	0	9.54	0	0	
10/11/2017	0	9.72	0	0	
10/17/2017	0	9.69	0	0	
10/24/2017	0	9.61	0	0	
11/2/2017	0	9.67	0	0	
11/2/2017	0	9.59	0	0	
11/8/2017	0	9.67	0	0	
11/15/2017	0	9.62	0	0	
11/22/2017	0	9.82	0	0	
11/28/2017	0	9.78	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
9/5/2017	7.16	7.56	0.4	0	
9/15/2017	6.95	8.58	1.63	0	
9/20/2017	6.98	8.45	1.47	0	
9/28/2017	7.04	9.02	1.98	0	
10/3/2017	7.56	9.27	1.71	0	
10/11/2017	7.21	9.82	2.61	0	
10/17/2017	7.24	9.99	2.75	0	
10/24/2017	7.14	9.92	2.78	0	
11/2/2017	6.93	9.45	2.52	0	
11/8/2017	6.93	9.45	2.52	0	
11/15/2017	7.1	8.56	1.46	0	
11/22/2017	7.28	8.71	1.43	0	
11/28/2017	7.3	9.41	2.11	0	



**ATTACHMENT B**

**Inspection Form: October 11, 2017**

**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?
<b><u>OU-I Asphalt Cover</u></b>			
Are there any cracks in the asphalt cover?		x	
Any geotextile observed?		x	
Is there any surface water ponding on the asphalt cover?		X	
Is there any evidence of settlement?		X	
Is there any elevation difference at the grouted manhole covers?		x	
Settlement or erosion in the area of the perimeter sheet pile wall?		x	

Specify the Recommended Corrective Actions and Other Relevant Observations:  
Paving of small area of settlement north of OUI catch basin completed August 2017.  
 \_\_\_\_\_  
 \_\_\_\_\_

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

Specify the Recommended Corrective Actions and Other Relevant Observations:  
Significant removal of scrap items on top of the capped area. Work on-going.  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**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:

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Yes	No	Corrective Action Needed?
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**OU-I/OU-II Waste Accumulation Drums and Tank**

Is the 500-gallon waste oil disposal AST full? **REMOVED – N/A**

	X
	X
	X


Are the 55-gallon waste oil disposal drums full?

Is the 55-gallon NRD disposal drum full?

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

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.

8 Drums sampled 10/4/17 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:

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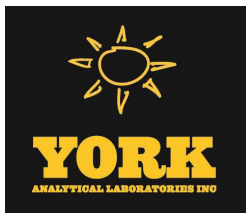
Date of Inspection: 10/11/17

Inspection Completed By: S. Gianazza

cc: Metro-North Department of Environmental Compliance and Services

**ATTACHMENT C**

**Laboratory Reports: Oil Drum Samples**



# Technical Report

prepared for:

## **Metro North Commuter Railroad**

525 North Broadway  
White Plains NY, 10603  
**Attention: Karen L. Timko**

Report Date: 10/13/2017

**Client Project ID: OUII Misc Oil Recovery Sample**

York Project (SDG) No.: 17J0353

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  
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STRATFORD, CT 06615  
(203) 325-1371

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

RICHMOND HILL, NY 11418  
ClientServices@yorklab.com

Report Date: 10/13/2017  
Client Project ID: OUII Misc Oil Recovery Sample  
York Project (SDG) No.: 17J0353

**Metro North Commuter Railroad**  
525 North Broadway  
White Plains NY, 10603  
Attention: Karen L. Timko

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## 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 October 10, 2017 and listed below. The project was identified as your project: **OUII Misc Oil Recovery Sample**.

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>
17J0353-01	OUII Misc Oil Recovery	Oil	09/26/2017	10/10/2017

## **General Notes for York Project (SDG) No.: 17J0353**

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:** 10/13/2017





### Sample Information

**Client Sample ID:** OUII Misc Oil Recovery

**York Sample ID:** 17J0353-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17J0353	OUII Misc Oil Recovery Sample	Oil	September 26, 2017 1:00 pm	10/10/2017

**Polychlorinated Biphenyls (PCB)**

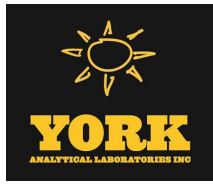
**Log-in Notes:**

**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	HT-01	mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 18:54	LAB
11104-28-2	Aroclor 1221	ND	HT-01	mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 18:54	LAB
11141-16-5	Aroclor 1232	ND	HT-01	mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 18:54	LAB
53469-21-9	Aroclor 1242	ND	HT-01	mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 18:54	LAB
12672-29-6	Aroclor 1248	ND	HT-01	mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 18:54	LAB
11097-69-1	<b>Aroclor 1254</b>	<b>16.8</b>	HT-01	mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 18:54	LAB
11096-82-5	Aroclor 1260	ND	HT-01	mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 18:54	LAB
1336-36-3	<b>* Total PCBs</b>	<b>16.8</b>	HT-01	mg/kg	5.00	1	EPA 8082A Certifications:	10/10/2017 16:28	10/11/2017 18:54	LAB
<b>Surrogate Recoveries</b>		<b>Result</b>			<b>Acceptance Range</b>					
877-09-8	Surrogate: Tetrachloro-m-xylene	74.5 %	HT-01		30-150					
2051-24-3	Surrogate: Decachlorobiphenyl	75.5 %	HT-01		30-150					







## Sample and Data Qualifiers Relating to This Work Order

- S-GC Two surrogates are used for this analysis. One surrogate recovered within control limits therefore the analysis is acceptable.
- HT-01 This result was reported from an analysis conducted outside of the EPA recommended holding time.

### 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.

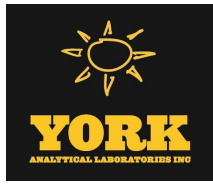
If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For 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.

---



YORK ANALYTICAL LABORATORIES  
120 RESEARCH DR.  
STRATFORD, CT 06615  
(203) 325-1371  
FAX (203) 357-0166

# Field Chain-of-Custody Record

Page \_\_\_ of \_\_\_

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.

York Project No. 17J0357

<b>YOUR Information</b> Company: <u>mnr</u> Address: <u>Tom Raszak</u> Phone No. _____ Attention: _____ E-Mail Address: _____		<b>Report To:</b> Company: <u>Karen Timko</u> Address: _____ Phone No. _____ Attention: _____ E-Mail Address: <u>Joe Antonio</u>		<b>Invoice To:</b> Company: <u>mnr</u> Address: _____ Phone No. _____ Attention: _____ E-Mail Address: _____		<b>YOUR Project ID</b> <u>OVI misc oil</u> <u>Recovery Sample</u> <b>Purchase Order No.</b> _____		<b>Turn-Around Time</b> <input type="checkbox"/> RUSH - Same Day <input type="checkbox"/> RUSH - Next Day <input type="checkbox"/> RUSH - Two Day <input type="checkbox"/> RUSH - Three Day <input type="checkbox"/> RUSH - Four Day <b>Standard (5-7 Days)</b> <input type="checkbox"/>		<b>Report Type</b> Summary Report Summary w/ QA Summary CT RCP Package CTCRP DQ/DUE Pkg NY ASP A Package NY ASP B Package NJ DEP Red. Deliv. <u>Electronic Data Deliverables (EDD)</u> Simple Excel NYSDEC EQulS ✓ EQulS (std) EZ-EDD (EQulS) NJDEP SRP HazSite EDD GIS/KEY (std) Other _____ York Regulatory Comparison Excel Spreadsheet <small>Compare to the following Regs. (please fill in):</small>	
<b>Volatiles</b> 8260 full TICs Site Spec. STARS list Nassau Co. BTEX MTBE Ketones Oxygenates TCLP list TAGM list CT RCP list Arom. only Halog. only App. IX list 8021B list		<b>Semi-Vols.</b> 8270 or 625 STARS list BN Only Acids Only PAH list TAGM list CT RCP list TCLP list NJDEP list App. IX TCLP BNA SPLP/TCLP		<b>Metals</b> RCRA8 PP13 list TAL CT15 list TAGM list NJDEP list Total Dissolved SPLP/TCLP Herb Chloridane 608 Pest SPLP/TCLP		<b>Misc. Org.</b> TPH GRO TPH DRO CT ETPH NY 310-13 TPH 1664 Air TO14A Air TO15 Air STARS Air VPH Air TICs Methane Helium		<b>Full Lists</b> Pri. Poll. TCL Cagens TAL MetCN Full TCLP Full App. IX Part 360-Reuse Part 360-Boat Part 360-Boat/No. Inland Waters Part 360-Boat/Residential NYDCP/Sever NYSDEC/Sever TAGM		<b>Misc.</b> Corrosivity Reactivity Ignitability Flash Point Sieve Anal. Heterotrophs TOX BTU/lb. Aquatic Tox. TOC NYSDEC/Sever Silica	

**Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.**

Samples Collected/Authorized By (Signature)  
Justin Jamison  
Name (printed)

Sample Identification	Date/Time Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
OVI misc	9/26/17	PCBS		1 LTR Amber
oil Recovery	1:00			unpreserved

4°C \_\_\_\_\_ Frozen \_\_\_\_\_ HCl \_\_\_\_\_ MeOH \_\_\_\_\_ NaOH \_\_\_\_\_  
 ZnAc \_\_\_\_\_ Ascorbic Acid \_\_\_\_\_ HNO<sub>3</sub> \_\_\_\_\_ Other \_\_\_\_\_

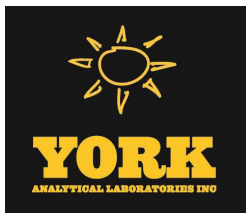
Preservation Check those Applicable  
 Special Instructions  
 Field Filtered   
 Lab to Filter

Comments Email To: mbo@mnr.org  
melt@daymail  
oseph@mnr.org

Samples Relinquished By OUTSIDE Date/Time 10-10-17  
 Samples Relinquished By Chic Date/Time 10-10-17 12:25

Samples Received in LAB by Chic Date/Time 10/17/17 15:40  
 Samples Received in LAB by \_\_\_\_\_ Date/Time \_\_\_\_\_

Temperature on Receipt 0.9 °C



# Technical Report

prepared for:

## **Metro North Commuter Railroad**

525 North Broadway  
White Plains NY, 10603  
**Attention: Karen L. Timko**

Report Date: 10/13/2017  
**Client Project ID: OUII FA4-8**  
York Project (SDG) No.: 17J0355

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

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(203) 325-1371

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

RICHMOND HILL, NY 11418  
ClientServices@yorklab.com

Report Date: 10/13/2017  
Client Project ID: OUII FA4-8  
York Project (SDG) No.: 17J0355

**Metro North Commuter Railroad**  
525 North Broadway  
White Plains NY, 10603  
Attention: Karen L. Timko

---

## 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 October 10, 2017 and listed below. The project was identified as your project: **OUII FA4-8**.

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>
17J0355-01	OUII FA4-8 Oil Recovery	Oil	10/06/2017	10/10/2017

## **General Notes for York Project (SDG) No.: 17J0355**

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:** 10/13/2017





### Sample Information

**Client Sample ID:** OUII FA4-8 Oil Recovery

**York Sample ID:** 17J0355-01

<u>York Project (SDG) No.</u>	<u>Client Project ID</u>	<u>Matrix</u>	<u>Collection Date/Time</u>	<u>Date Received</u>
17J0355	OUII FA4-8	Oil	October 6, 2017 7:40 am	10/10/2017

**Polychlorinated Biphenyls (PCB)**

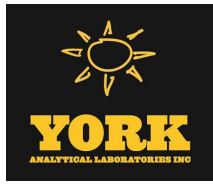
**Log-in Notes:**

**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-CT	10/10/2017 16:28	10/11/2017 19:10	LAB
11104-28-2	Aroclor 1221	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 19:10	LAB
11141-16-5	Aroclor 1232	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 19:10	LAB
53469-21-9	Aroclor 1242	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 19:10	LAB
12672-29-6	Aroclor 1248	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 19:10	LAB
11097-69-1	<b>Aroclor 1254</b>	<b>14.0</b>		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 19:10	LAB
11096-82-5	Aroclor 1260	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 19:10	LAB
1336-36-3	<b>* Total PCBs</b>	<b>14.0</b>		mg/kg	5.00	1	EPA 8082A Certifications:	10/10/2017 16:28	10/11/2017 19:10	LAB
<b>Surrogate Recoveries</b>		<b>Result</b>	<b>Acceptance Range</b>							
877-09-8	Surrogate: Tetrachloro-m-xylene	79.0 %	30-150							
2051-24-3	Surrogate: Decachlorobiphenyl	74.5 %	30-150							







## Sample and Data Qualifiers Relating to This Work Order

S-GC Two surrogates are used for this analysis. One surrogate recovered within control limits therefore the analysis is acceptable.

### 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.



**YORK**  
ANALYTICAL LABORATORIES INC

York Analytical Laboratories, Inc.  
120 Research Drive  
Stratford, CT 06615  
clientservices@yorklab.com  
www.yorklab.com

# Field Chain-of-Custody Record

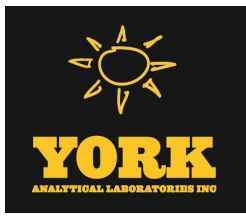
YORK Project No.

17J0355

Page      of     

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document. This document serves as your written authorization for YORK to proceed with the analyses requested below. Your signature binds you to YORK's Standard Terms & Conditions.

YOUR INFORMATION		Report To:		Invoice To:		YOUR Project Number		Turn-Around Time			
Company: <u>mnr</u>	Address: <u>Karen Timko</u>	Company: <u>mnr</u>	Address: <u>    </u>	Company: <u>    </u>	Address: <u>    </u>	<u>OUT FA 4-8</u>		RUSH - Next Day	<u>    </u>		
Phone: <u>    </u>	Contact: <u>Tom Roszak</u>	Phone: <u>    </u>	Contact: <u>    </u>	Phone: <u>    </u>	Contact: <u>    </u>	YOUR Project Name		RUSH - Two Day	<u>    </u>		
Contact: <u>    </u>	E-mail: <u>    </u>	Contact: <u>Joe Antonio</u>	E-mail: <u>    </u>	Contact: <u>    </u>	E-mail: <u>    </u>	YOUR PO#:		RUSH - Three Day	<u>    </u>		
E-mail: <u>    </u>		E-mail: <u>    </u>		E-mail: <u>    </u>				RUSH - Four Day	<u>    </u>		
								Standard (5-7 Day)	<u>    </u>		
<b>Matrix Codes</b> S - soil / solid GW - groundwater DW - drinking water WW - wastewater O - Oil ; Other		<b>Matrix Codes</b> <input checked="" type="checkbox"/> New York <input type="checkbox"/> New Jersey <input type="checkbox"/> Connecticut <input type="checkbox"/> Pennsylvania <input type="checkbox"/> Other		<b>Report / EDD Type (circle selections)</b> Summary Report QA Report NY ASP A Package NY ASP B Package		Standard Excel EDD EQUIS (Standard) <u>NYSDEC EQUIS</u> NJDEP SRP HazSite Other:		<b>YORK Reg. Comp.</b> Compared to the following Regulation(s): (please fill in)		<b>Container Description</b> <u>1LTR Amber unpreserved</u>	
<b>Sample Identification</b> <u>OUT FA 4-8</u> <u>oil Recovery</u>		<b>Sample Matrix</b> <u>PCBS</u>		<b>Date/Time Sampled</b> <u>10/6/17</u> <u>07:40</u>		<b>Analysis Requested</b>					
<b>Comments: Email To:</b> <u>Timko@mr.org</u> <u>csmelt@daymail</u>		<b>Preservation: (check all that apply)</b> HCl ___ MeOH ___ HNO3 ___ H2SO4 ___ NaOH ___ ZnAc ___ Ascorbic Acid ___ Other: ___		<b>Special Instruction</b> Field Filtered Lab to Filter ___							
<b>Samples Relinquished by / Company</b> <u>OUTS Inc</u> Date/Time: <u>    </u>		<b>Samples Relinquished by / Company</b> <u>ajoseph@mr.org</u> Date/Time: <u>10-10-17</u>		<b>Samples Relinquished by / Company</b> <u>Chic</u> Date/Time: <u>10-10-17</u>		<b>Samples Relinquished by / Company</b> Date/Time: <u>    </u>		<b>Samples Relinquished by / Company</b> Date/Time: <u>    </u>			
<b>Samples Received by / Company</b> Date/Time: <u>    </u>		<b>Samples Received by / Company</b> Date/Time: <u>    </u>		<b>Samples Received by / Company</b> Date/Time: <u>    </u>		<b>Samples Received by / Company</b> Date/Time: <u>    </u>		<b>Samples Received by / Company</b> Date/Time: <u>    </u>			
<b>Samples Relinquished by / Company</b> Date/Time: <u>    </u>		<b>Samples Relinquished by / Company</b> Date/Time: <u>    </u>		<b>Samples Relinquished by / Company</b> Date/Time: <u>    </u>		<b>Samples Relinquished by / Company</b> Date/Time: <u>    </u>		<b>Samples Relinquished by / Company</b> Date/Time: <u>    </u>			
<b>Temp. Received at Lab</b> <u>0.9</u>											



# Technical Report

prepared for:

## **Metro North Commuter Railroad**

525 North Broadway  
White Plains NY, 10603  
**Attention: Karen L. Timko**

Report Date: 10/13/2017

**Client Project ID: OUII RW1 Recovery Sample**

York Project (SDG) No.: 17J0356

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

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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: 10/13/2017  
Client Project ID: OUII RW1 Recovery Sample  
York Project (SDG) No.: 17J0356

**Metro North Commuter Railroad**  
525 North Broadway  
White Plains NY, 10603  
Attention: Karen L. Timko

---

## 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 October 10, 2017 and listed below. The project was identified as your project: **OUII RW1 Recovery Sample**.

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>
17J0356-01	OUII RW1 Oil Recovery	Oil	10/06/2017	10/10/2017

## **General Notes for York Project (SDG) No.: 17J0356**

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.

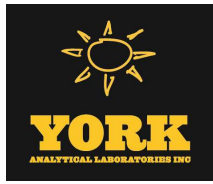
**Approved By:**



**Benjamin Gulizia**  
Laboratory Director

**Date:** 10/13/2017





### Sample Information

**Client Sample ID:** OUII RW1 Oil Recovery

**York Sample ID:** 17J0356-01

<u>York Project (SDG) No.</u>	<u>Client Project ID</u>	<u>Matrix</u>	<u>Collection Date/Time</u>	<u>Date Received</u>
17J0356	OUII RW1 Recovery Sample	Oil	October 6, 2017 7:45 am	10/10/2017

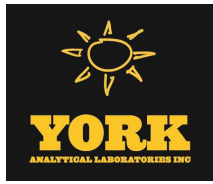
**Polychlorinated Biphenyls (PCB)**

**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-CT	10/10/2017 16:28	10/11/2017 19:43	LAB
11104-28-2	Aroclor 1221	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 19:43	LAB
11141-16-5	Aroclor 1232	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 19:43	LAB
53469-21-9	Aroclor 1242	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 19:43	LAB
12672-29-6	Aroclor 1248	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 19:43	LAB
11097-69-1	<b>Aroclor 1254</b>	<b>6.20</b>		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 19:43	LAB
11096-82-5	Aroclor 1260	ND		mg/kg	5.00	1	EPA 8082A Certifications: CTDOH,NELAC-NY10854-CT	10/10/2017 16:28	10/11/2017 19:43	LAB
1336-36-3	<b>* Total PCBs</b>	<b>6.20</b>		mg/kg	5.00	1	EPA 8082A Certifications:	10/10/2017 16:28	10/11/2017 19:43	LAB
<b>Surrogate Recoveries</b>		<b>Result</b>	<b>Acceptance Range</b>							
877-09-8	Surrogate: Tetrachloro-m-xylene	79.5 %	30-150							
2051-24-3	Surrogate: Decachlorobiphenyl	72.5 %	30-150							







## Sample and Data Qualifiers Relating to This Work Order

S-GC Two surrogates are used for this analysis. One surrogate recovered within control limits therefore the analysis is acceptable.

### 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.



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# Field Chain-of-Custody Record

Page      of     

**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.

York Project No. 17J0356

## YOUR INFORMATION

Company: mnr  
Address: \_\_\_\_\_  
Phone No. \_\_\_\_\_  
Contact Person: \_\_\_\_\_  
E-Mail Address: \_\_\_\_\_

## Report To:

Company: Karen Timko  
Address: \_\_\_\_\_  
Phone No. \_\_\_\_\_  
Attention: Joe Antonio  
E-Mail Address: \_\_\_\_\_

## Invoice To:

Company: mnr  
Address: \_\_\_\_\_  
Phone No. \_\_\_\_\_  
Attention: \_\_\_\_\_  
E-Mail Address: \_\_\_\_\_

## YOUR PROJECT ID

OUI RW1  
Recovery Sample  
Purchase Order No.

## Turn-Around Time

RUSH - Same Day  
 RUSH - Next Day  
 RUSH - Two Day  
 RUSH - Three Day  
 RUSH - Four Day  
 Standard(5-7 Days)

## Report Type

Summary Report  
Summary w/ QA Summary  
CT RCP Package  
CTRCP DQA/DUE Pkg  
NY ASP A Package  
NY ASP B Package  
NJDEP Red. Deliv.  
Electronic Data Deliverables (EDD)  
Simple Excel  
NYSDEC EQUS  
EQUS (std)  
EZ-EDD (EQUS)  
NJDEP SRP HazSite EDD  
GIS/KEY (std)  
Other  
York Regulatory Comparison  
Excel Spreadsheet  
Compare to the following Regs. (please fill in):

**Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.**

Matrix Codes  
S - soil  
Other - specify (oil, etc.)  
WW - wastewater  
GW - groundwater  
DW - drinking water  
Air-A - ambient air  
Air-SV - soil vapor  
Samples Collected/Authorized By (Signature)  
Justin Jamison  
Name (printed)

8260 full	TICs	Volatiles	8270 or 625	Semi-Vols. / Post/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
624	Site Spec.	TAGM list	STARS list	RCKA8	TPH GRO	TPH DRO	TPH DRO	Corrosivity
STARS list	Naassau Co.	TCLP list	BN Only	PP13 list	CT ETPH	TAL MatCN	TAL MatCN	Reactivity
BTEX	Suffolk Co.	CT RCP list	Acids Only	TAL	NY 310-13	Full TCLP	Full TCLP	Ignitability
MTBE	Ketones	App. IX	PAH list	CT RCP	TPH 1664	Full App. IX	Full App. IX	Flash Point
TCL list	Oxygenates	Site Spec.	TAGM list	App. IX	Air TO14A	Part 360-Rout	Part 360-Rout	Sieve Anal.
TAGM list	TCLP list	CT RCP list	CT RCP list	Site Spec.	Air TO15	Part 360-Rout	Part 360-Rout	Heteroatoms
CT RCP list	524.2	TCLP list	TCL list	TCLP Herb	Air STARS	Part 360-Rout	Part 360-Rout	TOX
Arom. only	502.2	NJDEP list	NJDEP list	TCLP Herb	Air STARS	Part 360-Rout	Part 360-Rout	BTU/lb.
Halog. only	NJDEP list	App. IX	App. IX	Chloridane	Air VPH	NYCDEP Sewer	NYCDEP Sewer	Aquatic Tox.
App. IX list	SPLP or TCLP	8021B list	SPLP or TCLP	608 Pest	Methane	NYSDDEC Sewer	NYSDDEC Sewer	Asbestos
					Helium	TAGM	TAGM	Silica

## Choose Analyses Needed from the Menu Above and Enter Below

Sample Identification	Date/Time Sampled	Sample Matrix	Container Description(s)
<u>OUI RW1</u>	<u>10/6/17</u>	<u>PCBs</u>	<u>1 LTR Amber</u>
<u>oil Recovery</u>	<u>07:45</u>		<u>unpreserved</u>

Comments Email To:  
mnr@mnr.org  
smelt@daymail  
joseph@mnr.org

Preservation  
 Check those Applicable  
Special Instructions  
 Field Filtered  
 Lab to Filter

4°C \_\_\_\_\_ Frozen \_\_\_\_\_ HCl \_\_\_\_\_ MeOH \_\_\_\_\_ HNO<sub>3</sub> \_\_\_\_\_  
ZnAc \_\_\_\_\_ Ascorbic Acid \_\_\_\_\_ Other \_\_\_\_\_ NaOH \_\_\_\_\_  
OUTSIDE 10-10-17 10-10-17 12:15  
Samples Relinquished By ag/bk Date/Time 10/19/17 1540  
Samples Relinquished By \_\_\_\_\_ Date/Time \_\_\_\_\_  
Temperature on Receipt 0.9 °C