



March 15, 2022

Project No. 19119232

Ms. Maureen Hatfield

Texas Commission on Environmental Quality
MC-127
VCP-CA Section, Team 1, Remediation Division
P.O. Box 13087
Austin, Texas 78711-3087

**Re: MONTHLY STATUS UPDATE – ENGLEWOOD INTERMODAL YARD – NAPL COLLECTION
SYSTEM/CONCRETE CAP REPAIRS
UNION PACIFIC RAILROAD HOUSTON WOOD PRESERVING WORKS FACILITY
4910 LIBERTY ROAD FACILITY, HOUSTON, TEXAS
POST-CLOSURE CARE PERMIT NO. HW-50343; INDUSTRIAL SWR NO. 31547**

Dear Ms. Hatfield:

Golder Associates USA Inc. (Golder), a member of WSP, on behalf of Union Pacific Railroad Company (UPRR), is pleased to provide this monthly status update for February 2022 for inspections conducted at the Englewood Intermodal Yard concrete cap area within the UPRR Houston Wood Preserving Works Facility (the Site). Monthly status updates were requested by the Texas Commission on Environmental Quality (TCEQ) in a letter dated March 20, 2018.

A non-aqueous phase liquid (NAPL) Collection System was installed in the Englewood Intermodal Yard in January 2019 to address the tar-like substance seeps within parking stalls B100 to B109 (for container trailers). The following is a summary of the observations from the weekly inspections of the NAPL Collection System and Englewood Intermodal Yard concrete pavement near the collection system for February 2022 (photographs from the weekly inspections are provided in Attachment A):

- The water levels in NAPL Collection System Sump 1 (B099/B100 stalls), Sump 2 (B103/B104 stalls), and Sump 3 (B107/B108 stalls) fluctuated during the month but showed an overall increase by the last inspection of February. During the February 9, 2022 inspection, the water levels in Sumps 1, 2, and 3 were at 9 inches, 15 inches, and 15 inches below the top of the sumps, respectively. By the February 23, 2022 inspection levels in Sumps 1, 2, and 3 increased to 5.5 inches, 14 inches, and 13.5 inches below the top of the sumps, respectively. Weekly water levels for the sumps are available in Table 1. The water in the sumps was observed as being brown in color. No sheens or odors were reported during the February inspections. Photos of the sumps during the weekly inspections are provided in Attachment A. A pump down event for the sumps is scheduled to occur in March 2022.
- The NAPL Collection System sumps (Sumps 1, 2, and 3) have continued to be checked weekly for DNAPL using an interface probe. No DNAPL was detected with the interface probe during this reporting period. Even though no measurable DNAPL was noted, a dipper tool has continued to be used to further evaluate

the presence of and recover DNAPL, if present, from the bottom of each of the sumps during the weekly inspections. No DNAPL was observed or encountered using the dipper tool during the weekly inspections in February.

- No NAPL seeps were observed near the NAPL Collection System in February 2022. For areas outside the NAPL Collection System, a small amount of tar-like material was observed on the concrete surface at the following location during the February 2022 weekly inspections:

Seep Observations Outside the NAPL Collection System Area	
Stall Number	Observation Date(s)
A011	February 9 th (Photo No. 7)

Tar-like material observed during the inspection events was recovered using a hand tool to scrape up the material. During February, the number of tar-like material seeps observed during inspections and the total amount of material removed from the concrete surface decreased compared to the January weekly inspections. The only active seep location observed during February was the one in stall A011 on February 9, 2022. Less than 0.1 gallons of tar-like material was recovered for the month and placed in a drum for disposal. The drum is staged at the Container Storage Area (CSA).

During September 2021, track marks from a container transport vehicle running over the seep in stall B102 were observed and barricades were set up surrounding the seep location to prevent further tracking. The barricades are checked and reset, as needed, during the weekly inspections. UPRR remediation contractor US Ecology pressure washed the tar-like material tracking in October 2021. Residual track marks were observed during the February inspections (Photos No. 5, 6, and 16); however, no new track marks were observed during the month of February 2022.

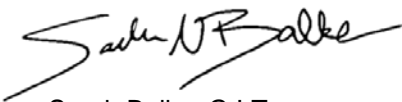
- No brown water surface seeping or staining was observed during February. Residual staining on the asphalt surface following the pressure washing conducted in May 2021 was observed. However, no additional surface staining was observed in February. UPRR will continue to have a remediation contractor pressure wash and/or collect the water in the areas where the brown staining and seeps are observed, as needed.
- Golder, on behalf of UPRR, submitted to the TCEQ the Englewood IM Yard Test Pit Evaluation Report dated June 2, 2021 summarizing the findings from the test pits installed in July 2020, including weekly inspections since the installation. During the weekly inspections through February 2022, no NAPL seeps have been observed at the seven test pit locations (stalls A010, A021, A098, B013, B057, B096, and B108). As discussed in the Test Pit Report, the test pit inspections were to continue through the warmer months (through September 2021). UPRR will prepare a Test Pit Evaluation Report Addendum summarizing the test pit inspections from June through November 2021. During inspections in June and July 2021 the concrete patches covering test pits in stalls A010, A021, B013, B057, B096, and B108 were observed to be damaged. UPRR contractor US Ecology removed the damaged test pit concrete on October 22, 2021 and completed installation of new rebar and concrete on October 25, 2021. The new concrete patches were inspected during the weekly inspections. No seeps were observed around the previous test pits in February.

- A follow-up video camera survey of the stormwater sewer lines in the central area of the Englewood IM Yard was conducted on August 26, 2021 to evaluate the stormwater line near the test pit locations. Details of the follow-up video survey will be provided in the Test Pit Evaluation Report Addendum.
- The TCEQ issued a comment letter dated January 26, 2022 titled "*Comments on Interim Groundwater Monitoring Report (July 2020), dated April 30, 2021 Englewood Intermodal Yard (EIY) Test Pit Evaluation Report, dated June 2, 2021, Corrective Action Monitoring Report, 2021 First Semi-Annual Event, dated July 9, 2021*". In the comment letter, the TCEQ requested UPRR prepare an Interim Measures Work Plan (Work Plan) to address the NAPL seeps in the Englewood Intermodal Yard. The TCEQ requested that the Work Plan include a schedule and plan for implementation of additional interim measures to permanently address the NAPL seeps in the Englewood Intermodal Yard. UPRR is in the process of preparing the requested Work Plan.
- Weekly site inspections of the NAPL Collection System and Englewood Intermodal Yard concrete pavement near the collection system will continue to be conducted. A notation on the presence of NAPL in each sump, tabulation of depth and thickness of NAPL if detected, and a tabulation of total mass of NAPL recovered from each sump is provided on the enclosed Table 1. No measurable NAPL has been detected in the sumps using the interface probe through February 2022.


If you have any questions or need additional information, please feel free to call us at (512) 671-3434 or Mr. Kevin Peterburs of UPRR at (414) 267-4164.

Sincerely,

Golder Associates USA Inc.



Sarah Balke, G.I.T
Consultant, Geologist



Eric C. Matzner, P.G.
Principal / Program Leader

CC: Mr. Kevin Peterburs, UPRR – Milwaukee, WI
Ms. Alma Jefferson, Waste Section Manager, TCEQ Region 12, Houston

Attachment Table 1 – NAPL Measurements – NAPL Collection System
Attachment A – Weekly Inspection Photolog

TABLE

TABLE 1
NAPL Measurements - NAPL Collection System - Englewood Intermodal Yard
UPRR Houston, tx - Wood Preserving Works

Measured Date	Sump 1 (B099/B100) Freeboard (in)	Sump 2 (B103/B104) Freeboard (in)	Sump 3 (B107/B108) Freeboard (in)	Depth to DNAPL (in)	Comments
8/14/2019	2.5	28	29	Not measurable	
8/21/2019	0	27.5	26.5	Not measurable	
8/28/2019	44.5	47.9	45	Not measurable	Water from sumps pumped out
9/4/2019	19	42	41.5	Not measurable	
9/13/2019	0	39.5	38	Not measurable	
9/20/2019	0	3	2.5	Not measurable	
9/25/2019	0	42	42.5	Not measurable	Water from sumps pumped out
10/2/2019	2.5	42.5	42	Not measurable	Sheen visible in B107/B108 sump, less than 0.1 gal of DNAPL recovered
10/9/2019	3	42	41.5	Not measurable	Sheen visible in B107/B108 sump, less than 0.1 gal of DNAPL recovered
10/16/2019	0	39.5	39	Not measurable	Less than 0.1 gal of DNAPL recovered from B107/B108 Sump
10/24/2019	3	35	25	Not measurable	Less than 0.1 gal of DNAPL recovered from B107/B108 Sump
10/29/2019	0	24	23	Not measurable	Water from sumps pumped out
10/30/2019	0	40	39	Not measurable	Slight sheen visible in B107/B108 sump
11/6/2019	9	39	38.5	Not measurable	
11/13/2019	7	30	29	Not measurable	Less than 0.1 gal of DNAPL recovered from B107/B108 Sump
11/19/2019	4	26	25.5	Not measurable	
11/27/2019	0	25	23	Not measurable	
12/3/2019	2	25.5	25	Not measurable	Less than 0.1 gal of DNAPL recovered from B107/B108 Sump
12/11/2019	1.5	17	16.54	Not measurable	Less than 0.1 gal of DNAPL recovered from B107/B108 Sump
12/17/2019	5	19.5	17.5	Not measurable	
12/23/2019	10	21	20.5	Not measurable	
1/7/2020	9	13	12.5	Not measurable	
1/8/2020	9	13	12.5	Not measurable	Water from sumps pumped out
1/17/2020	0	32	31.5	Not measurable	
1/21/2020	2.5	26.5	26	Not measurable	
1/28/2020	0	0	0	Not measurable	
2/4/2020	2	11	10.5	Not measurable	
2/12/2020	0	0	0	Not measurable	
2/18/2020	1.5	11.5	10.25	Not measurable	Water from sumps pumped out on 2/20/2020
2/27/2020	2	42	36	Not measurable	
3/6/2020	1	36	36	Not measurable	
3/11/2020	2	36	35.5	Not measurable	
3/18/2020	0	35.5	35	Not measurable	
3/27/2020	0	29	28	Not measurable	
4/3/2020	1.5	29	28.5	Not measurable	
4/8/2020	0	23	22	Not measurable	
4/15/2020	0.5	23	22	Not measurable	
4/21/2020	0	21	21	Not measurable	
4/28/2020	0	23	22	Not measurable	
5/4/2020	-	-	-	Not Measured	Measurements were not taken; the inspector was unable to open the sumps
5/12/2020	0	20	19	Not measurable	
5/19/2020	0	15.75	14.25	Not measurable	Sump 1 pumped down (May 22nd)
5/27/2020	0	14	13	Not measurable	
6/1/2020	0	7	5	Not measurable	
6/10/2020	0	10	9	Not measurable	
6/17/2020	1	12	11	Not measurable	
6/25/2020	0	0	0	Not measurable	
6/30/2020	0	0	0	Not measured	
7/1/2020	48	46	47	Not measurable	Sumps 1, 2, & 3 pumped down
7/8/2020	34	24.5	24	Not measurable	Less than 0.1 gal of DNAPL recovered from B107/B108 Sump
7/15/2020	32	29.5	29	Not measurable	Sheen visible in B99/B100 sump & B107/B108 sump, less than 0.1 gal of DNAPL recovered B107/B108 sump
7/23/2020	0	23	22.5	Not measured	Less than 0.1 gal of DNAPL recovered from B107/B108 Sump
7/31/2020	0	11	10	Not measurable	
8/5/2020	0	7	5	Not measurable	
8/13/2020	1	11	10	Not measurable	
8/19/2020	0	7	6	Not measurable	
8/26/2020	0	10	9	Not measurable	
9/2/2020	43	37	38	Not measurable	Sumps 1, 2, & 3 pumped down (September 1); Sheen visible in B99/B100 sump & B107/B108 sump
9/9/2020	28	37	36	Not measurable	Sheen visible in B107/B108 sump
9/15/2020	1	35	33	Not measurable	
9/23/2020	0	0	0	Not measurable	
9/30/2020	1	10	9	Not measurable	
10/8/2020	4	12	11.5	Not measurable	
10/15/2020	0	11	10.5	Not measurable	Less than 0.1 gal of DNAPL recovered B107/B108 sump
10/21/2020	1	10.5	9.25	Not measurable	
10/28/2020	0	11	10	Not measurable	
11/4/2020	9	13	12	Not measurable	
11/11/2020	0.5	12	11	Not measurable	

TABLE 1
NAPL Measurements - NAPL Collection System - Englewood Intermodal Yard
UPRR Houston, tx - Wood Preserving Works



Measured Date	Sump 1 (B099/B100) Freeboard (in)	Sump 2 (B103/B104) Freeboard (in)	Sump 3 (B107/B108) Freeboard (in)	Depth to DNAPL (in)	Comments
11/18/2020	3.5	13	12	Not measurable	
11/24/2020	7	14	13.5	Not measurable	
11/30/2020	2	7	6	Not measurable	
12/10/2020	5	10.5	10	Not measurable	
12/18/2020	4	10	9	Not measurable	
12/23/2020	1	9	7.5	Not measurable	
12/31/2020	0	4	3.5	Not measurable	
1/6/2021	4	10.5	9	Not measurable	
1/15/2021	43	39	37.5	Not measurable	Sumps 1, 2, & 3 pumped down
1/22/2021	0	34	33	Not measurable	Sheen visible in B107/B108 sump
1/29/2021	2	31	30	Not measurable	Sheen visible in B107/B108 sump
2/4/2021	4	30	29.5	Not measurable	Sheen visible in B099/B100 sump
2/10/2021	0	27	25.5	Not measurable	
2/17/2021	0	0	0	Not measurable	
2/24/2021	2	10	9.5	Not measurable	
3/2/2021	0	0	0	Not measurable	
3/10/2021	0	10	9.75	Not measurable	
3/17/2021	0	2	1	Not measurable	
3/24/2021	0	3.5	2	Not measurable	
3/31/2021	0	6.5	7	Not measurable	
4/8/2021	0	7.5	7	Not measurable	
4/14/2021	0	6.5	6	Not measurable	Less than 0.1 gal of DNAPL recovered B107/B108 sump; Sheen visible in B103/104 and B107/B108 sumps
4/21/2021	0.5	9	8.5	Not measurable	
4/28/2021	0	8.5	8	Not measurable	
5/5/2021	0	7.5	7	Not measurable	
5/12/2021	0	8	7.5	Not measurable	
5/19/2021	0	0	0	Not measurable	
5/26/2021	0	2	0.5	Not measurable	
5/27/2021	41	32	26	Not measurable	Sumps 1,2, & 3 pumped down
6/2/2021	0	40	38	Not measurable	Sheen visible in B107/108 sump
6/9/2021	0	30	28.5	Not measurable	
6/16/2021	0	24	25	Not measurable	
6/23/2021	0	12	13	Not measurable	
6/30/2021	0	3	1	Not measurable	
7/7/2021	0	0	0	Not measurable	
7/14/2021	0	0	0	Not measurable	Sumps 1,2, & 3 pumped down (July 15)
7/21/2021	0	39	37	Not measurable	
7/29/2021	0	37	35.5	Not measurable	
8/4/2021	0	36	34	Not measurable	Sheen visible in B103/104 and B107/B108 sumps
8/11/2021	0	33	32	Not Measured	Depth to DNAPL measurements were not taken; the interface probe was not functioning properly
8/18/2021	0	25	23	Not measurable	
8/25/2021	0	20	22	Not measurable	
9/1/2021	0	20	17	Not measurable	
9/8/2021	3	14	11	Not measurable	
9/15/2021	0	3	4	Not measurable	Sumps 1,2, & 3 pumped down (September 17)
9/22/2021	31.5	46	46	Not measurable	Sheen visible in B107/B108 sump
9/29/2021	0	29	30.75	Not measurable	Sheen visible in B103/104 and B107/B108 sumps
10/7/2021	6	18	17.5	Not measurable	
10/13/2021	3.6	10.56	9.72	Not measurable	Sheen visible in B103/104 and B107/B108 sumps; brown discoloration and slight odor noted B099/B100 sump
10/20/2021	0	13.94	12.6	Not measurable	Sumps 1,2, & 3 pumped down (October 21)
10/27/2021	0	22	21	Not measurable	Sheen visible in B099/B100 sump
11/3/2021	10	20	21	Not measurable	
11/10/2021	12	16	15	Not measurable	
11/17/2021	8	16	15	Not measurable	
11/24/2021	7	14	13	Not measurable	
12/1/2021	7	15	14	Not measurable	
12/8/2021	6	12.5	12	Not measurable	
12/15/2021	7	15	15	Not measurable	
12/22/2021	-	-	-	Not Measured	Partial site inspection conducted 12/22/21; Sump measurements were not taken
12/29/2021	0	11.5	11	Not measurable	
1/5/2022	8.75	13.5	12.25	Not measurable	
1/12/2022	6	12	12	Not measurable	
1/19/2022	13.5	17	16	Not measurable	Sheen visible in B099/B100 sump
1/27/2022	3	9	9	Not measurable	
2/2/2022	-	-	-	Not Measured	Measurements were not taken; the inspector was unable to open the sumps
2/9/2022	9	15	15	Not measurable	
2/16/2022	8.5	17	16	Not measurable	
2/23/2022	5.5	14	13.5	Not measurable	



Note:
Freeboard in sumps is measured as depth to water from top rim of sump, measured in inches



ATTACHMENT A

Weekly Inspection Photolog

Client Name: Union Pacific Railroad		Site Location: Englewood Houston, Texas	Project No. 19119232
Photo No. 1	Inspection Date: 2/2/2022		
Description: Slots A010, no tar-like material observed, July 2020 test pit pavement repaired, pavement wet from recent rain event, looking southwest. Lat: 29.785392, Long: -95.318655			
Photo No. 2	Inspection Date: 2/2/2022		
Description: Slot A011, no tar-like material seeps observed, pavement wet from recent rain event. Lat: 29.785467 Long: -95.318347			

Client Name: Union Pacific Railroad		Site Location: Englewood Houston, Texas	Project No. 19119232
Photo No. 3	Inspection Date: 2/2/2022	<p>Description:</p> <p>Slot B013, no tar-like material seeps observed where test pit conducted (July 2020), test pit pavement repaired, standing water from recent rain event, looking northeast.</p> <p>Lat: 29.785217 Long: - 95.318261</p>	
<p>Photo No. 4</p> <p>Inspection Date: 2/2/2022</p> <p>Description:</p> <p>Slot B057, no active tar-like material seeps observed at historical seep location or where test pit conducted (July 2020).</p> <p>Lat: 29.7847472 Long: - 95.3195417</p>			
			

Client Name: Union Pacific Railroad		Site Location: Englewood Houston, Texas	Project No. 19119232
--	--	---	--------------------------------

Photo No. 5	Inspection Date: 2/2/2022
Description:	
<p>View of A and B rows, no new staining observed, residual tracking from B102 seep visible, no active tar-like seeps noted, looking northeast from Slot B099.</p> <p>Lat: 29.7842528 Long: - 95.3206250</p>	




Photo No. 6	Inspection Date: 2/2/2022	
Description: Slot B102, no active tar-like material seeps observed, residual staining noted. Lat: 29.7842203 Long: - 95.320827		

Client Name: Union Pacific Railroad		Site Location: Englewood Houston, Texas	Project No. 19119232
--	--	---	--------------------------------

Photo No. 7	Inspection Date: 2/9/2022
------------------------------	-------------------------------------

Description:

Slot A011, very small amount of tar-like material seeping at asphalt crack, material was removed.

Lat: 29.785467
Long: -95.318347



Photo No. 8	Inspection Date: 2/9/2022
------------------------------	-------------------------------------

Description:

Slot B057, no active tar-like material seeps observed at historical seep location or where test pit conducted (July 2020).

Lat: 29.7847472
Long: - 95.3195417



Client Name: Union Pacific Railroad	Site Location: Englewood Houston, Texas	Project No. 19119232
--	---	--------------------------------

Photo No. 9	Inspection Date: 2/9/2022
------------------------------	-------------------------------------

Description:

Slot B096, no tar-like material seeps observed where test pit conducted (July 2020), test pit pavement repaired, looking northwest.

Lat: 29.7842528
Long: - 95.3206250





Photo No. 10	Inspection Date: 2/9/2022
-------------------------------	-------------------------------------



Description:

Sump 1 (B099/B100), 9 inches of freeboard in sump, no sheen or odor noted.

Lat: 29.7844000
Long: - 95.3205861



Client Name: Union Pacific Railroad		Site Location: Englewood Houston, Texas	Project No. 19119232
Photo No. 11	Inspection Date: 2/9/2022		
Description: Sump 2 (B103/B104), 15 inches of freeboard in sump. No sheen or odor noted. Lat: 29.7842861 Long: - 95.3208611			
Photo No. 12	Inspection Date: 2/9/2022		
Description: Sump 3 (B107/B108), 15 inches of freeboard in sump. No sheen or odor noted. No tar-like material recovered. Lat: 29.784172 Long: -95.320998			

Client Name: Union Pacific Railroad		Site Location: Englewood Houston, Texas	Project No. 19119232
Photo No. 13	Inspection Date: 2/16/2022		
Description: Slots A010, no tar-like material observed, July 2020 test pit pavement repaired, looking southwest. Lat: 29.785392, Long: -95.318655			
Photo No. 14	Inspection Date: 2/16/2022		
Description: Slot A021, no tar-like material seeps observed where test pit conducted (July 2020), test pit pavement repaired, looking southwest. Lat: 29.785392, Long: -95.318655			

Client Name: Union Pacific Railroad	Site Location: Englewood Houston, Texas	Project No. 19119232
--	---	--------------------------------

Photo No. 15	Inspection Date: 2/16/2022
-------------------------------	--------------------------------------

Description:

View of A and B rows from slot A011, no new staining or active tar-like material seeps observed, residual staining noted, looking southwest.

Lat: 29.785467
Long: -95.318347



Photo No. 16	Inspection Date: 2/16/2022
-------------------------------	--------------------------------------

Description:

Slot B102, no active tar-like material seeps observed, residual staining noted.

Lat: 29.7842203
Long: - 95.320827



Client Name: Union Pacific Railroad		Site Location: Englewood Houston, Texas	Project No. 19119232
--	--	---	--------------------------------

Photo No. 17	Inspection Date: 2/16/2022
-------------------------------	--------------------------------------

Description:

Sump 1 (B099/B100), 8.5 inches of freeboard in sump. No sheen or odor noted.

Lat: 29.7844000
 Long: - 95.3205861





Photo No. 18	Inspection Date: 2/16/2022
-------------------------------	--------------------------------------



Description:



Sump 3 (B107/B108), 16 inches of freeboard in sump. No sheen or odor noted. No tar-like material recovered.

Lat: 29.784172
 Long: -95.320998



Client Name: Union Pacific Railroad		Site Location: Englewood Houston, Texas	Project No. 19119232
Photo No. 19	Inspection Date: 2/23/2022		
Description: Slot B013, no tar-like material seeps observed where test pit conducted (July 2020), test pit pavement repaired, looking northeast. Lat: 29.785217 Long: - 95.318261			
Photo No. 20	Inspection Date: 2/23/2022		
Description: Slot B057, no active tar-like material seeps observed at historical seep location or where test pit conducted (July 2020). Lat: 29.7847472 Long: - 95.3195417			

Client Name: Union Pacific Railroad		Site Location: Englewood Houston, Texas	Project No. 19119232
Photo No. 21	Inspection Date: 2/23/2022		
Description: Slot B096, no tar-like material seeps observed where test pit conducted (July 2020), test pit pavement repaired, looking southwest. Lat: 29.7842528 Long: - 95.3206250			
Photo No. 22	Inspection Date: 2/23/2022		
Description: Sump 1 (B099/B100), 5.5 inches of freeboard in sump. No sheen or odor noted. Lat: 29.7844000 Long: - 95.3205861			

Client Name: Union Pacific Railroad		Site Location: Englewood Houston, Texas	Project No. 19119232
Photo No. 23	Inspection Date: 2/23/2022		
Description: Sump 2 (B103/B104), 14 inches of freeboard in sump. No sheen or odor noted. Lat: 29.7842861 Long: - 95.3208611			
Photo No. 24	Inspection Date: 2/23/2022		
Description: Sump 3 (B107/B108), 13.5 inches of freeboard in sump. No sheen or odor noted. No tar-like material recovered. Lat: 29.784172 Long: -95.320998			