May 14, 2021 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 Inc. (Golder), on behalf of Union Pacific Railroad Company (UPRR), is pleased to provide this monthly status update for April 2021 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.

The 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 slots 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 April 2021 (photographs from the weekly inspections are provided in Attachment A):

- Water continues to accumulate in the NAPL collection sumps. The water appears to be related to rainfall where some of the storm water enters from the surface through the covers for the sumps. As indicated in the January 2021 monthly update, UPRR proposed to cease the sporadic pump down events that removed the water in the sumps. The pump downs had been performed to evaluate if removing the accumulated storm water had any effects on the NAPL accumulation in the sumps. From 2019 through January 2021, the sporadic pump down events do not appear to affect the amount of DNAPL recovered in the sumps. The sumps have continued to be checked for DNAPL using an interface probe every week. Even though no measurable DNAPL has been noted, a dipper tool has continued to be used in an attempt to recover DNAPL from the bottom of each of the sumps during the weekly inspections. Less than 0.1 gallons of DNAPL was recovered from Sump 3 (B107/B108 slots) on

Golder Associates Inc.
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April 14, 2021. No DNAPL was visually observed or recovered from Sump 1 (B099/B100 slots) or Sump 2 (B103/B104 slots) during the month of April.

In a letter to UPRR dated April 5, 2021 the TCEQ requested that the pump downs of water from the sumps be continued due to a potential concern that water might overflow from the sumps if full. Data and observations from the weekly inspections of the sumps performed since installation in January 2019 have not indicated any evidence of water overflowing from the sumps. However, pursuant to the TCEQ request in the April 5, 2021 letter, UPRR will continue periodic pump down events of the water that accumulates in the sumps once a quarter for the next year (i.e., through May 2022) and will continue to assess the need for the pump downs. The sump pump downs will resume in May 2021.

- After the pump down in January 2021, the water level in Sump 1 returned to the top of the sump by the January 22nd weekly inspection and has remained near the top of the sump through April 28, 2021. Water levels in Sumps 2 and 3 continue to fluctuate between rainfall events. The water level in Sumps 2 and 3 were at 7.5 and 7 inches from the top of the sumps, respectively, on April 8, 2021. Over the course of the month the water levels fluctuated within 2 inches of the April 8th inspection levels in Sumps 2 and 3, then receded to 8.5 and 8 inches respectively by April 28, 2021. The water in Sumps 1, 2, and 3 was observed as being brown in color. A sheen was observed on the water in Sumps 2 and 3 during the April 14th inspection. No odor was reported during the inspections in the month of April.
- No tar-like NAPL seeps were observed within the NAPL Collection System area during the month of April. For areas outside the NAPL Collection System, a very small amount of tar-like material was observed on the concrete surface in stalls A022, B057, B101, and B102 during at least one weekly inspection event in April with more seeps observed during the last two inspections of the month (April 21, 2021 and April 28, 2021). Tar-like material observed during the inspection events was recovered using a tool to scrape up the material. During April, the number of tar-like material seeps observed during inspections and the total amount of material removed from the concrete surface increased as daily outdoor temperatures increased, but a total of less than 0.5 gallons of tar-like material was recovered for the month.
- No widespread seep water was observed in the paved areas during the April 2021 inspections. Standing water from a recent rain event was observed to have some discoloration in certain discrete areas (e.g., Slots B096-B001 and B057) during the April 14th inspection. No sheen was observed on the water.
- During the week of July 13, 2020, Golder, on behalf of UPRR, coordinated with USES to excavate seven test pits in areas where historical NAPL seeps (slots A010, A021, A098, B013, B057, B096, and B108) had been observed in the Englewood Intermodal (IM) Yard. Following the test pit activities, Golder inspects the repaired concrete areas where the test pits were excavated to assess if the NAPL seeps return as part of the pilot study to evaluate the effectiveness of conducting the test pits to address the seeps. During the April 2021 weekly inspections, no NAPL seeps have been observed at the test pit locations. The seep observed in slot B057 during the April 21st inspection is located at an asphalt crack near the western edge of the slot. Golder proposes to extend the test pit pilot study observation period through the end of July to evaluate the potential for NAPL seeps to develop at these locations as ambient temperatures rise during the summer months. The test pit locations will continue to be inspected on a weekly basis as part of the pilot study. Golder, on behalf of UPRR, will prepare the Englewood IM Yard Test Pit Evaluation Report of the test pit findings including weekly inspections for submittal to the TCEQ as specified in the Initial Draft Permit.

- As indicated in previous monthly status updates, camera surveys were performed on the storm sewer pipes in the Intermodal Yard as part of the Englewood IM Yard Test Pit Evaluation in December 2020 and January and February 2021. Details on the camera survey activities will be provided in the Englewood IM Yard Test Pit Evaluation Report indicated above.

- The two frac tanks and vacuum box that were staged at the Englewood Intermodal Yard which contained waste from UPRR activities not related to the Site, noted in the March 2021 monthly update, have been removed.

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 April 2021.

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 Inc.

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

Eric Pastor, P.E.
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 Sumps
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

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
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	
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	

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

ATTACHMENT A

Weekly Inspection Photolog

PHOTOGRAPHIC LOG

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

Photo No.	Date:
1	4/8/2021

Description:

Slot A010, no tar-like material seeps observed where test pit conducted (July 2020), pavement wet from a recent rain event, looking southeast.

Lat: 29.7855833,
Long: -95.318375

Photo No.	Date:
2	4/8/2021

Description:

Slot A021, no tar-like material seeps observed where test pit conducted (July 2020), pavement wet from a recent rain event, looking southeast.

Lat: 29.785392,
Long: -95.318655

PHOTOGRAPHIC LOG

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

Photo No.	Date:
3	4/8/2021

Description:

Slot A022, very small amount of tar-like material seeping at asphalt crack, material was removed.

Lat: 29.785392,
Long: -95.318655

Photo No.	Date:
4	4/8/2021

Description:

Slot B013, no tar-like material seeps observed where test pit conducted (July 2020), pavement wet from a recent rain event, looking northwest.

Lat: 29.785217
Long: - 95.318261

PHOTOGRAPHIC LOG

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

Photo No.	Date:
5	4/8/2021

Description:

Slot B057, no tar-like material seeps observed where test pit conducted (July 2020), pavement wet from a recent rain event, looking northwest.

Lat: 29.7847472
Long: - 95.3195417

Photo No.	Date:
6	4/8/2021

Description:

Slot B096, no tar-like material seeps observed where test pit conducted (July 2020), pavement wet from a recent rain event, looking northwest.

Lat: 29.7842528
Long: - 95.3206250

PHOTOGRAPHIC LOG

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

Photo No.	Date:
7	4/8/2021

Description:

Sump 1 (B099/B100), pavement wet from a recent rain event, looking northwest.

Lat: 29.7844000
Long: - 95.3205861

Photo No.	Date:
8	4/8/2021

Description:

Slot B101, very small amount of tar-like material seeping at asphalt crack, material was removed.

Lat: 29.784275
Long: - 95.320813

PHOTOGRAPHIC LOG

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

Photo No.	Date:
9	4/14/2021

Description:

Slots B096-B001, pavement wet from recent rain event, some discoloring observed, no sheen observed, looking northeast.

Lat: 29.7842528
Long: - 95.3206250

Photo No.	Date:
10	4/14/2021

Description:

Slot B057, discolored standing water from recent rain event observed, no sheen observed, no tar-like material seeps observed where test pit conducted (July 2020), looking northwest.

Lat: 29.7847472
Long: - 95.3195417

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

Photo No. 11	Date: 4/14/2021

Description:

Slots B096-B110, no tar-like material seeps observed where test pit conducted (July 2020), pavement wet from recent rain event, looking southwest.

Lat: 29.7842528
Long: - 95.3206250

Photo No. 12	Date: 4/14/2021

Description:

Slot B101, very small amount of tar-like material seeping at asphalt crack, material was removed, discolored standing water from recent rain event observed

Lat: 29.784275
Long: - 95.320813

PHOTOGRAPHIC LOG

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

Photo No.	Date:
13	4/14/2021

Description:

Sump 2 (B103/B104), 6.5 inches of freeboard in sump, sheen observed, no odors noted.

Lat: 29.7842861
Long: - 95.3208611

Photo No.	Date:
14	4/14/2021

Description:

Slot B108, view of NAPL Collection System (Sump B107/B108 and test pit in background). No tar-like material seeps observed where test pit conducted (July 2020), pavement wet from recent rain event looking northwest.

Lat: 29.784125
Long: - 95.320989

PHOTOGRAPHIC LOG

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

Photo No.	Date:
15	4/14/2021

Description:

Sump 3 (B107/B108), 6 inches of freeboard in sump. Sheen observed and approximately 1.5 oz of tar-like material recovered. No odors noted.

Lat: 29.7842861
Long: - 95.3208611

Photo No.	Date:
16	4/14/2021

Description:

Sump 3 (B107/B108), approximately 1.5 oz of tar-like material recovered from sump.

Lat: 29.7842861
Long: - 95.3208611

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

Photo No.	Date:
17	4/21/2021

Description:

Slot A010, no tar-like material seeps observed where test pit conducted (July 2020).

Lat: 29.7855833,
Long: -95.318375

Photo No.	Date:
18	4/21/2021

Description:

Slot A022, small amount of tar-like material seeping at asphalt crack, material was removed.

Lat: 29.785392,
Long: -95.318655

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

Photo No. 19	Date: 4/21/2021

Description:

Slot B013, no tar-like material seeps observed where test pit conducted (July 2020).

Lat: 29.785217
Long: - 95.318261

Photo No. 20	Date: 4/21/2021

Description:

Slot B057, very small amount of tar-like material seeping at asphalt crack (not at July 2020 test pit), material was removed.

Lat: 29.7847472
Long: - 95.3195417

PHOTOGRAPHIC LOG

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

Photo No.	Date:
21	4/21/2021

Description:

Sump 1 (B099/B100), 0.5 inches of freeboard in sump, no sheen or odor noted.

Lat: 29.7844000
Long: - 95.3205861

Photo No.	Date:
22	4/21/2021

Description:

Slot B101, very small amount of tar-like material seeping at asphalt crack, material was removed.

Lat: 29.784275
Long: - 95.320813

PHOTOGRAPHIC LOG

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

Photo No.	Date:
23	4/21/2021

Description:

Slot B102, small amount of tar-like material seeping at joint, material was removed.

Lat: 29.7842203
Long: - 95.320827

Photo No.	Date:
24	4/21/2021

Description:

Slots B109-B097, NAPL collection system visible in background, looking northeast.

Lat: 29.784116
Long: -95.321022

PHOTOGRAPHIC LOG

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

Photo No.	Date:
25	4/28/2021

Description

Slot A021, no tar-like material seeps observed where test pit conducted (July 2020).

Lat: 29.785392,
Long: -95.318655

Photo No.	Date:
26	4/28/2021

Description:

Slot A022, very small amount of tar-like material seeping at asphalt crack, material was removed.

Lat: 29.785392,
Long: -95.318655

PHOTOGRAPHIC LOG

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

Photo No.	Date:
27	4/28/2021

Description:

Slot B098, no tar-like material seeps observed, residual brown staining along asphalt cracks, looking northwest.

Lat: 29.7842587
Long: - 95.3206699

Photo No.	Date:
28	4/28/2021

Description:

Slot B101, very small amount of tar-like material seeping at asphalt crack, material was removed.

Lat: 29.784275
Long: - 95.320813

PHOTOGRAPHIC LOG

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

Photo No.	Date:
29	4/28/2021

Description:

Slot B102, small amount of tar-like material seeping at joint, material was removed.

Lat: 29.7842203
Long: - 95.320827

Photo No.	Date:
30	4/28/2021

Description:

Slot B105, no tar-like material seeps observed, looking northwest.

Lat: 29.7841472
Long: - 95.3208777

PHOTOGRAPHIC LOG

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

Photo No.	Date:
31	4/28/2021

Description:

Slot B108, view of NAPL Collection System (Sump B107/B108 and test pit in background). No tar-like material seeps observed where test pit (July 2020) conducted, looking north.

Lat: 29.784125
Long: - 95.320989

Photo No.	Date:
32	4/28/2021

Description:

Slot C126, 55-gallon drum containing booms from the storm sewer camera survey activities.

Lat: 29.783922
Long: -95.321122