



February 12, 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 January 2021 for the implementation of the cap repairs identified in the Updated Post-Response Action Care Report (PRACR) dated January 16, 2018 for 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 January 2021 (photographs from the weekly inspections are provided in Attachment A):

- No NAPL was visually observed or recovered from Sump 1 (B099/B100 slots), Sump 2 (B103/B104 slots), or Sump 3 (B107/B108 slots) during the month of January. Water continues to accumulate in the NAPL collection sumps.
- All three sumps were pumped down on January 15, 2021 and the recovered water was transferred to the on-site frac tank. After pumping, the water level in Sump 1 returned to the surface by the January 22nd weekly inspection and has remained near the top of the sump through January 29, 2021. In contrast the water levels in Sumps 2 and 3 have recovered to 31 inches and 30 inches below the top of the sumps, respectively, as of January 29, 2021. The water in Sumps 1, 2, and 3 was observed as being brown in color. A sheen was reported on the water in Sump 3 during the weekly inspection on January 22<sup>nd</sup> and again on January 29<sup>th</sup>. No odor was reported during the inspections in the month of

January. The water stored in the frac tank was pumped out by UPRR Contractor National Response Corporation (NRC) on January 15 and January 16, 2021 and transported for disposal at Liquid Environmental Solutions using the waste profile created in February 2020. The final waste manifests for the disposal of the fluid will be provided with the February 2021 monthly update.

- The sumps will no longer be pumped down periodically as there has been no increase in the amount of DNAPL recovered in the sumps since the pump downs were initiated in 2019. The frac tank staged at the Site was removed on January 29, 2021.
- No tar-like NAPL seeps were observed within the NAPL Collection System area during the month of January. For areas outside the NAPL Collection System, a very small amount of tar-like material was observed on the concrete surface once in stalls A022 and B101 during the January 29, 2021 inspection. The overall amount of tar-like material removed from the concrete surface during January 2021 was less than 0.1 gallons.
- No widespread seep water was observed in the paved areas during the January 2021 inspections. UPRR will continue to have USES pressure wash the areas where the brown staining and seeps are observed as needed.
- 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. During the January 2021 weekly inspections, no NAPL seeps have been observed at the test pit locations. The test pit locations will continue to be inspected on a weekly basis, and 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 following the pilot test period as specified in the Initial Draft Permit.
- As indicated in the December 2020 monthly status update, a camera survey was performed on the storm sewer pipes in the Intermodal Yard as part of the Englewood IM Yard Test Pit Evaluation on December 8, 2020. The camera was unable to advance the full length of several drainpipes due to build-up of sediments and deposits (e.g., mud) within the drainpipes. Golder, on behalf of UPRR, coordinated with USES to remove the obstructions within sections of the storm system on December 21 and 22, 2020. Water and material from the obstruction removal effort were placed in two vacuum boxes and stored onsite in stalls C129 and C131 (Photo 34). Used booms from the obstruction removal effort were placed in a 55-gallon drum and stored onsite with the vacuum boxes. Another camera survey was performed on January 8, 2021. The camera was able to advance the full length and/or further than previously in some drainpipes. However, some of the drainpipes still had mud buildup that prevented the camera from advancing the full length of the pipes. Another obstruction removal event is being scheduled for February 2021. Details on the camera and obstruction removal activities will be provided in the Englewood IM Yard Test Pit Evaluation Report indicated above.
- During the last week of January, a second frac tank was staged at parking slot B109 (Photo 33) and a vacuum box was staged near stalls C129 and C131 (Photo 34) containing waste from UPRR activities not related to the Site. These wastes will be disposed of in accordance with state and federal regulations.

Weekly site inspections of the NAPL Collection System and Englewood Intermodal Yard concrete pavement near the collection system will continue to be conducted. In response to the TCEQ letter dated August 9, 2019, 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 January 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  |

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:**  
**Union Pacific Railroad**

**Site Location:**  
Englewood Houston, Texas

**Project No.**  
19119232

**Photo No.**  
**1**

**Date:**  
1/6/2021

**Description:**

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

Lat: 29.7855833,  
Long: -95.318375



**Photo No.**  
**2**

**Date:**  
1/6/2021

**Description:**

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

Lat: 29.785392,  
Long: -95.318655





# PHOTOGRAPHIC LOG

|   |                          |  |                                 |
|---|--------------------------|--|---------------------------------|
| <b>Client Name:</b><br>Union Pacific Railroad   |                          | <b>Site Location:</b><br>Englewood Houston, Texas                                    | <b>Project No.:</b><br>19119232 |
| <b>Photo No.:</b><br>3  | <b>Date:</b><br>1/6/2021 |   |                                 |
| <b>Description:</b><br><br>Slot B057, no tar-like material seeps observed where test pit (July 2020) conducted, looking north.<br><br>Lat: 29.7847472<br>Long: - 95.3195417 |                          |  |                                 |
| <b>Photo No.:</b><br>4  | <b>Date:</b><br>1/6/2021 |  |                                 |
| <b>Description:</b><br><br>Slot B101, no tar-like material seeps observed, looking north.<br><br>Lat: 29.784275<br>Long: - 95.320813  |                          |  |                                 |



# PHOTOGRAPHIC LOG

|   |   |                                 |
|---|---|---------------------------------|
| <b>Client Name:</b><br>Union Pacific Railroad | <b>Site Location:</b><br>Englewood Houston, Texas | <b>Project No.:</b><br>19119232 |
|---|---|---------------------------------|

|   |                          |
|---|--------------------------|
| <b>Photo No.</b><br>5   | <b>Date:</b><br>1/6/2021 |
| <b>Description:</b><br><br>Slot B102, no tar-like material seeps observed, looking north.<br><br>Lat: 29.7842203<br>Long: - 95.320827 |                          |



|  |                          |
|--|--------------------------|
| <b>Photo No.</b><br>6  | <b>Date:</b><br>1/6/2021 |
| <b>Description:</b><br><br>Slot B105, no tar-like material seeps observed, looking north.<br><br>Lat: 29.7841472<br>Long: - 95.3208777 |                          |





# PHOTOGRAPHIC LOG

**Client Name:**  
**Union Pacific Railroad**

**Site Location:**  
Englewood Houston, Texas

**Project No.**  
19119232

**Photo No.**  
**7**

**Date:**  
1/6/2021

**Description:**

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

Lat: 29.784139  
Long: -95.320964



**Photo No.**  
**8**

**Date:**  
1/6/2021

**Description:**

Slot B108, no tar-like material seeps observed where test pit (July 2020) conducted, looking north.

Lat: 29.784125  
Long: - 95.320989





**Client Name:**  
**Union Pacific Railroad**

**Site Location:**  
Englewood Houston, Texas

**Project No.**  
19119232

**Photo No.**  
**9**

**Date:**  
1/15/2021

**Description:**

Frac tank for storage of pumped down water from NAPL Collection Sumps (in Slot B110), looking north.

Lat: 29.7841028  
Long: - 95.3209833



**Photo No.**  
**10**

**Date:**  
1/15/2021

**Description:**

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

Lat: 29.785217  
Long: - 95.318261





# PHOTOGRAPHIC LOG

|   |   |                                 |
|---|---|---------------------------------|
| <b>Client Name:</b><br>Union Pacific Railroad | <b>Site Location:</b><br>Englewood Houston, Texas | <b>Project No.:</b><br>19119232 |
|---|---|---------------------------------|

|   |                           |
|---|---------------------------|
| <b>Photo No.</b><br>11  | <b>Date:</b><br>1/15/2021 |
| <b>Description:</b><br><br>Slot B096, no tar-like material seeps observed where test pit (July 2020) conducted, looking north.<br><br>Lat: 29.7842528<br>Long: - 95.3206250 |                           |



|                        |                           |
|------------------------|---------------------------|
| <b>Photo No.</b><br>12 | <b>Date:</b><br>1/15/2021 |
|------------------------|---------------------------|

|   |  |
|---|--|
| <b>Description:</b><br><br>Slot B103, view of NAPL Collection System (Sump 103/104 on left). No tar-like material seeps observed, looking north.<br><br>Lat: 29.7841639<br>Long: - 95.3208694 |  |
|---|--|





# PHOTOGRAPHIC LOG

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|---|---|--------------------------------|
| <b>Client Name:</b><br>Union Pacific Railroad | <b>Site Location:</b><br>Englewood Houston, Texas | <b>Project No.</b><br>19119232 |
|---|---|--------------------------------|

|                               |                           |
|-------------------------------|---------------------------|
| <b>Photo No.</b><br><b>13</b> | <b>Date:</b><br>1/15/2021 |
|-------------------------------|---------------------------|

**Description:**

Sump 1 (B099/B100), View of NAPL Collection Sump during a pump down. No NAPL noted in the sump. No sheen or odor noted on water recharge collected in the sump.

Lat: 29.7844000  
Long: - 95.3205861



|                               |                           |
|-------------------------------|---------------------------|
| <b>Photo No.</b><br><b>14</b> | <b>Date:</b><br>1/15/2021 |
|-------------------------------|---------------------------|

**Description:**

Sump 1 (B099/B100), after pump down, 43 inches of freeboard in sump, no sheen or odor noted.

Lat: 29.7844000  
Long: - 95.3205861





# PHOTOGRAPHIC LOG

|   |   |                                 |
|---|---|---------------------------------|
| <b>Client Name:</b><br>Union Pacific Railroad | <b>Site Location:</b><br>Englewood Houston, Texas | <b>Project No.:</b><br>19119232 |
|---|---|---------------------------------|

|                               |                           |
|-------------------------------|---------------------------|
| <b>Photo No.</b><br><b>15</b> | <b>Date:</b><br>1/15/2021 |
|-------------------------------|---------------------------|

**Description:**

Sump 2 (B103/B104), View of NAPL Collection Sump during a pump down. No NAPL noted in the sump. No sheen or odor noted on water recharge collected in the sump.

Lat: 29.7842861  
Long: - 95.3208611



|                               |                           |
|-------------------------------|---------------------------|
| <b>Photo No.</b><br><b>16</b> | <b>Date:</b><br>1/15/2021 |
|-------------------------------|---------------------------|

**Description:**

Sump 2 (B103/B104), after pump down, 39 inches of freeboard in sump, no sheen or odors noted.

Lat: 29.7842861  
Long: - 95.3208611





**Client Name:**  
**Union Pacific Railroad**

**Site Location:**  
Englewood Houston, Texas

**Project No.**  
19119232

**Photo No.**  
**17**

**Date:**  
1/15/2021

**Description:**

Sump 3 (B107/B108), View of NAPL Collection Sump during a pump down. No NAPL noted in the sump. No sheen or odor noted on water recharge collected in the sump.

Lat: 29.7842861  
Long: - 95.3208611



**Photo No.**  
**18**

**Date:**  
1/15/2021

**Description:**

Sump 3 (B107/B108), after pump down, 37.5 inches of freeboard in sump. No sheen, odor or tar-like material observed.

Lat: 29.7842861  
Long: - 95.3208611





**Client Name:**  
**Union Pacific Railroad**

**Site Location:**  
Englewood Houston, Texas

**Project No.**  
19119232

**Photo No.**  
**19**

**Date:**  
1/22/2021

**Description:**

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

Lat: 29.7855833,  
Long: -95.318375



**Photo No.**  
**20**

**Date:**  
1/22/2021

**Description:**

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

Lat: 29.785392,  
Long: -95.318655





# PHOTOGRAPHIC LOG

|   |   |                                 |
|---|---|---------------------------------|
| <b>Client Name:</b><br>Union Pacific Railroad | <b>Site Location:</b><br>Englewood Houston, Texas | <b>Project No.:</b><br>19119232 |
|---|---|---------------------------------|

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|--|---------------------------|
| <b>Photo No.</b><br><b>21</b>  | <b>Date:</b><br>1/22/2021 |
| <b>Description:</b><br><br>Slot B013, no tar-like material seeps observed where test pit (July 2020) conducted, pavement wet from recent rain, looking north.<br><br>Lat: 29.785217<br>Long: - 95.318261 |                           |



|  |                           |
|--|---------------------------|
| <b>Photo No.</b><br><b>22</b>  | <b>Date:</b><br>1/22/2021 |
| <b>Description:</b><br><br>Slot B057, no tar-like material seeps observed where test pit (July 2020) conducted, pavement wet from recent rain, looking north.<br><br>Lat: 29.7847472<br>Long: - 95.3195417 |                           |





## PHOTOGRAPHIC LOG

|  |                           |  |                                 |
|--|---------------------------|--|---------------------------------|
| <b>Client Name:</b><br>Union Pacific Railroad  |                           | <b>Site Location:</b><br>Englewood Houston, Texas                                    | <b>Project No.:</b><br>19119232 |
| <b>Photo No.:</b><br>23  | <b>Date:</b><br>1/22/2021 |   |                                 |
| <b>Description:</b><br><br>Slot B096, no tar-like material seeps observed where test pit (July 2020) conducted, pavement wet from recent rain, looking north.<br><br>Lat: 29.7842528<br>Long: - 95.3206250                                       |                           |  |                                 |
| <b>Photo No.:</b><br>24  | <b>Date:</b><br>1/22/2021 |  |                                 |
| <b>Description:</b><br><br>Slot B099, view of NAPL Collection System (Sump 099/100 in background). No tar-like material seeps observed, standing water on pavement from recent rain, looking north.<br><br>Lat: 29.7842472<br>Long: - 95.3206944 |                           |  |                                 |



# PHOTOGRAPHIC LOG

|   |   |                                 |
|---|---|---------------------------------|
| <b>Client Name:</b><br>Union Pacific Railroad | <b>Site Location:</b><br>Englewood Houston, Texas | <b>Project No.:</b><br>19119232 |
|---|---|---------------------------------|

|                         |                           |
|-------------------------|---------------------------|
| <b>Photo No.:</b><br>25 | <b>Date:</b><br>1/22/2021 |
|-------------------------|---------------------------|

**Description**

Sump 1 (B099/B100), 0 inches of freeboard in sump, no sheen or odor noted. Pavement wet from recent rain.

Lat: 29.7844000  
Long: - 95.3205861



|                         |                           |
|-------------------------|---------------------------|
| <b>Photo No.:</b><br>26 | <b>Date:</b><br>1/22/2021 |
|-------------------------|---------------------------|

**Description:**

Sump 3 (B107/B108), 33 inches of freeboard in sump. Sheen noted on water in sump. No odor or tar-like material observed. Pavement wet from recent rain.

Lat: 29.7842861  
Long: - 95.3208611





# PHOTOGRAPHIC LOG

|   |   |                                 |
|---|---|---------------------------------|
| <b>Client Name:</b><br>Union Pacific Railroad | <b>Site Location:</b><br>Englewood Houston, Texas | <b>Project No.:</b><br>19119232 |
|---|---|---------------------------------|

|   |                           |
|---|---------------------------|
| <b>Photo No.</b><br><b>27</b>   | <b>Date:</b><br>1/29/2021 |
| <b>Description:</b><br><br>Slot A022, very small amount of tar-like material seeping at asphalt crack, material was removed.<br><br>Lat: 29.785392,<br>Long: -95.318655 |                           |



|   |                           |
|---|---------------------------|
| <b>Photo No.</b><br><b>28</b>   | <b>Date:</b><br>1/29/2021 |
| <b>Description:</b><br><br>Slot B101, very small amount of tar-like material seeping at asphalt crack, material was removed.<br><br>Lat: 29.784275<br>Long: - 95.320813 |                           |





# PHOTOGRAPHIC LOG

|   |   |                                 |
|---|---|---------------------------------|
| <b>Client Name:</b><br>Union Pacific Railroad | <b>Site Location:</b><br>Englewood Houston, Texas | <b>Project No.:</b><br>19119232 |
|---|---|---------------------------------|

|   |                           |
|---|---------------------------|
| <b>Photo No.</b><br><b>29</b>   | <b>Date:</b><br>1/29/2021 |
| <b>Description:</b><br><br>Slot B102, no tar-like material seeps observed, looking north.<br><br>Lat: 29.7842203<br>Long: - 95.320827 |                           |



|  |                           |
|--|---------------------------|
| <b>Photo No.</b><br><b>30</b>  | <b>Date:</b><br>1/29/2021 |
| <b>Description:</b><br><br>Slot B105, no tar-like material seeps observed, looking north.<br><br>Lat: 29.7841472<br>Long: - 95.3208777 |                           |





# PHOTOGRAPHIC LOG

|   |   |                                 |
|---|---|---------------------------------|
| <b>Client Name:</b><br>Union Pacific Railroad | <b>Site Location:</b><br>Englewood Houston, Texas | <b>Project No.:</b><br>19119232 |
|---|---|---------------------------------|

|  |                           |
|--|---------------------------|
| <b>Photo No.</b><br><b>31</b>  | <b>Date:</b><br>1/29/2021 |
| <b>Description:</b><br><br>Sump 3 (B107/B108), 30 inches of freeboard in sump. Sheen noted on water in sump. No odor or tar-like material observed.<br><br>Lat: 29.7842861<br>Long: - 95.3208611 |                           |



|   |                           |
|---|---------------------------|
| <b>Photo No.</b><br><b>32</b>   | <b>Date:</b><br>1/29/2021 |
| <b>Description:</b><br><br>Slots B108-B097, NAPL collection system visible in background, residual brown staining observed along the crack in the asphalt, looking northeast.<br><br>Lat: 29.784116<br>Long: -95.321022 |                           |





# PHOTOGRAPHIC LOG

|   |   |                                 |
|---|---|---------------------------------|
| <b>Client Name:</b><br>Union Pacific Railroad | <b>Site Location:</b><br>Englewood Houston, Texas | <b>Project No.:</b><br>19119232 |
|---|---|---------------------------------|

|                         |                           |
|-------------------------|---------------------------|
| <b>Photo No.:</b><br>33 | <b>Date:</b><br>1/29/2021 |
|-------------------------|---------------------------|

**Description:**

Frac tank for storage of pumped down water from NAPL Collection Sumps (in slot B110), looking northwest. Frac tank staged in slot B109 is from other UPRR activities and not related to Site activities.

Frac tank for storage of pumped down water from NAPL Collection Sumps was taken off-site on 1/29/2021 (after photo was taken).

Lat: 29.7841028  
Long: - 95.3209833



|                         |                           |
|-------------------------|---------------------------|
| <b>Photo No.:</b><br>34 | <b>Date:</b><br>1/29/2021 |
|-------------------------|---------------------------|

**Description:**

Slots C127-C131, the two red vacuum boxes containing water from storm sewer obstruction removal activities, looking south. The green vacuum box contains waste not related to site activities (other UPRR activities).

Lat: 29.783922  
Long: -95.321122

