



April 15, 2024

Project No. 31406585.016

Mr. Jerry Wick

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 Mr. Wick:

WSP USA Inc. (WSP), on behalf of Union Pacific Railroad Company (UPRR), is pleased to provide this monthly status update for March 2024 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 March 2024 (photographs from the weekly inspections are provided in Attachment A):

- Water levels in NAPL Collection System Sump 1 (B099/B100 stalls), Sump 2 (B103/B104 stalls), and Sump 3 (B107/B108 stalls) were measured at 4, 15 and 15 inches from the tops of the manhole, respectively, for each NAPL Collection System Sump, during the inspection on March 6, 2024 (Photo Nos. 17-19). During the March 13, 2024 inspection, Sumps 1, 2, and 3 were measured at 0, 11, and 11 inches from the top of the manhole, respectively (Photo Nos. 32-34). On March 20, 2024, Sumps 1, 2, and 3 were measured at 0, 7.5, and 7.5 inches from the top of the manhole, respectively (Photo Nos. 43-45). During the March 27, 2024 inspection, Sumps 1, 2, and 3 each had 0, 7, and 6 inches of freeboard measured, respectively (Photo No. 66-68). During the March 2024 inspections, the water in Sump 1 was observed to be light brown in color and the water in Sumps 2 and 3 was observed to be clear. No sheen was observed in the sumps during the March inspections. No odors were reported during the March inspections.
- The NAPL Collection System Sumps 1, 2, and 3 have continued to be checked weekly for DNAPL using an interface probe. No measurable NAPL has been detected within the sumps using the interface probe through

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March 2024. A hoe 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. In Sump 1, 1.5 inches of NAPL was removed during the inspection on March 27th. No DNAPL was encountered or recovered from the Sumps 2 or 3 during March 2024 weekly inspections. 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. Any NAPL recovered from the sumps is placed in a drum for disposal. The drum is staged at the Container Storage Area (CSA). The inflow protector was monitored for NAPL accumulation, and no accumulation was observed through March 2024.

- No new tar-like material seeps were observed along the concrete joint between the NAPL Collection System and the existing concrete at Stall B107 during the March 2024 inspections (Photo Nos. 16, 27, 62, 64).
- For areas outside the NAPL Collection System, a small amount of tar-like material was observed on the concrete or asphalt surface at the following locations during the March 2024 weekly inspections. The tar-like material was recovered from these locations when observed:

| Seep Observations Outside the NAPL Collection System Area | |
|---|--|
| Stall Number | Observation Date(s) |
| A011 | March 6 th (Photo No. 2) |
| A022 | March 6 th (Photo No. 1) |
| B056 | March 6 th and 27 th (Photo Nos. 8 and 78) |
| B096 | March 6 th (Photo No. 13) |
| B100 | March 6 th (Photo No. 14) |
| B102 Joint | March 6 th (Photo No. 10) |
| Track 802 | March 6 th and 27 th (Photo Nos. 15 and 69) |
| RD-14 | March 6 th , 20 th and 27 th (Photo Nos. 20, 63 and 77) |

Note: Seep observed next to Track 802 is approximately 280 feet northwest of the NAPL Collection System. Seep RD-14 is located within the concrete road area (RD-14) about 45 feet north of Track 802 and east of the existing Track 802 seep location.

- A small amount of staining was visible at stall A010 during the March 6th and 13th inspections (Photo Nos. 3 & 28). A small puddle of brown water was present in the depressions between the concrete and asphalt joint in stall A010 during the March 27th inspection (Photo No. 70). UPRR mobilized a remediation contractor pressure wash and/or collect the water in the areas where the brown staining and seeps were observed in early April. This field event will be described in the April 2024 monthly memo.
- During the March 6, 2024 inspection, a small amount of tar like material was observed in stall B096 adjacent to the test pit patch location. No NAPL seeps were observed at the other six July 2020 test pit locations (stalls A010, A021, A098, B013, B057 and B108).

- 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 and test pit evaluation will be provided in the Interim Measures Response Action Completion Report after the activities detailed in the Interim Measure Work Plan (discussed below) are completed.
- 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 submitted the requested Work Plan dated May 17, 2023 to the TCEQ on May 24, 2023. The TCEQ issued a comment letter dated July 5, 2023 on the Work Plan. UPRR submitted responses to the TCEQ comments and a Revised Work Plan on October 20, 2023. TCEQ approved the Revised Work Plan in a letter dated January 9, 2024. UPRR selected a remediation contractor, OMI, to conduct this work, planned to commence the end of April 2024.

Weekly site inspections of the NAPL Collection System and Englewood Intermodal Yard concrete pavement near the collection system will continue to be conducted.

If you have any questions or need additional information, please feel free to call us at (512) 517-0628 or Mr. Kevin Peterburs of UPRR at (414) 267-4164.

Sincerely,

WSP USA Inc.



Catherine Mear, GIT
Consultant, Environmental Scientist



Keshab Gyawali, P.E.
Senior Consultant, Environmental Engineer



CC: Kevin Peterburs, UPRR – Milwaukee, WI
Karina Rocha, Waste Section Manager, TCEQ Region 12, Houston

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

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 | |

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 |
|---------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------------|---|
| 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 | |
| 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 | |

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 |
|---------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------------|---|
| 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 | |
| 3/2/2022 | 5.5 | 15 | 14 | Not measurable | |
| 3/9/2022 | 4.5 | 7 | 6 | Not measurable | |
| 3/16/2022 | 48 | 36 | 45 | Not measurable | Sumps 1,2, & 3 pumped down during inspection; less than 0.5 gal of DNAPL recovered B107/B108 sump |
| 3/23/2022 | 6 | 29 | 28 | Not measurable | |
| 3/30/2022 | 5.5 | 28 | 28 | Not measurable | |
| 4/6/2022 | 3.5 | 19 | 18 | Not measurable | |
| 4/13/2022 | 4.5 | 18 | 15 | Not measurable | Sheen visible in B099/B100 sump |
| 4/20/2022 | 5 | 18 | 18 | Not measurable | Sheen visible in B099/B100 sump |
| 4/27/2022 | 4.5 | 12 | 8.5 | Not measurable | |
| 5/4/2022 | 48 | 42 | 45 | Not measurable | Sumps 1,2, & 3 pumped down during inspection; Sheen visible in B099/B100 sump |
| 5/11/2022 | 16 | 44.5 | 44 | Not measurable | Sheen visible in B099/B100, B103/104, and B107/B108 sumps |
| 5/18/2022 | 6.5 | 45 | 45 | Not measurable | |
| 5/25/2022 | 0 | 25 | 24 | Not measurable | |
| 6/1/2022 | 5.5 | 24 | 24 | Not measurable | |
| 6/8/2022 | 5 | 22 | 22 | Not measurable | Sheen visible in B099/B100 and B103/104 sumps |
| 6/15/2022 | 5 | 25 | 24 | Not measurable | |
| 6/22/2022 | 4.5 | 24 | 21 | Not measurable | |
| 6/29/2022 | 6 | 21 | 21 | Not measurable | |
| 7/6/2022 | 5.5 | 13 | 13 | Not measurable | |
| 7/13/2022 | 5 | 15 | 14 | Not measurable | Sheen visible in B099/B100 sump |
| 7/20/2022 | 51.5 | 38 | 43.5 | Not measurable | Sumps 1,2, & 3 pumped down during inspection; less than 0.1 gal of DNAPL recovered B099/B100 sump |
| 7/27/2022 | 4 | 42 | 40 | Not measurable | |
| 8/3/2022 | 5 | 39 | 39 | Not measurable | |
| 8/10/2022 | 5.5 | 38 | 38 | Not measurable | Sheen visible in B107/B108 sump |
| 8/17/2022 | 5.5 | 25.5 | 25 | Not measurable | |
| 8/24/2022 | 0 | 0.5 | 0 | Not measurable | Inspector unable to open B099/B100 and B107/B108 sumps as there was standing water on top of the sumps due to ongoing rain event |
| 8/31/2022 | 52 | 52 | 48 | Not measurable | Sumps 1,2, & 3 pumped down during inspection; sheen visible in B103/B104 sump |
| 9/7/2022 | 3 | 37 | 37 | Not measurable | |
| 9/14/2022 | 1 | 34 | 31 | Not measurable | Sheen visible in B099/B100 sump |
| 9/21/2022 | 2.2 | 31.5 | 27.5 | Not measurable | Sheen visible in B107/B108 sump |
| 9/28/2022 | 3 | 30 | 31 | Not measurable | Sheen visible in B099/B100 and B107/B108 sumps |
| 10/5/2022 | 8 | 33 | 33 | Not measurable | Sheen visible in B099/B100 and B107/B108 sumps |
| 10/12/2022 | 7 | 32 | 32 | Not measurable | Sheen visible in B099/B100 and B107/B108 sumps |
| 10/19/2022 | 48 | 48 | 48 | Not measurable | Sumps 1,2, & 3 pumped down during inspection; less than 0.1 gal of DNAPL recovered from B107/108 sump; small amount of DNAPL visible but not recoverable in B099/B100 sump; sheen visible in B099/B100 and B103/B104 sumps on recharge water after pumpdown |
| 10/26/2022 | 6 | 46 | 45 | Not measurable | Sheen visible in B107/B108 sump |
| 11/2/2022 | 4 | 19 | 19 | Not measurable | |
| 11/9/2022 | 6 | 14 | 13 | Not measurable | |
| 11/16/2022 | 8 | 14 | 12 | Not measurable | |
| 11/22/2022 | 0 | 0 | 0 | Not measurable | |
| 11/30/2022 | 3 | 10 | 9 | Not measurable | Very slight sheen visible in Sumps 1, 2, and 3; less than 0.2 gal of DNAPL recovered from B107/108 sump |
| 12/7/2022 | 4 | 13.5 | 13 | Not measurable | |
| 12/14/2022 | 0 | 0 | 0 | Not measurable | Replaced dipper tool with hoe for NAPL recovery from sumps. Less than 0.4 gal of DNAPL recovered from B099/B100 sump; approximately 0.1 gal of DNAPL recovered from B107/B108 sump |
| 12/21/2022 | 4 | 8 | 7 | Not measurable | |
| 12/28/2022 | 16 | 14 | 14 | Not measurable | |
| 1/4/2023 | 3.5 | 7.5 | 6 | Not measurable | |
| 1/11/2023 | 12 | 12 | 3 | Not measurable | |
| 1/18/2023 | 3 | 13 | 13 | Not measurable | |
| 1/25/2023 | 3 | 6 | 5 | Not measurable | |
| 2/1/2023 | <1 | 1 | <1 | 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 |
|---------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------------|---|
| 2/8/2023 | 5 | 13 | 12 | Not measurable | |
| 2/15/2023 | <1 | 2 | 2.5 | Not measurable | Sumps B099/B100, B103/B104, and B107/B108 pumped down during inspection |
| 2/22/2023 | 32 | 42 | 43 | Not measurable | Sheen visible in B099/B100, B103/B104, and B107/B108 sumps; water in B099/B100 noted as brown color with high turbidity |
| 3/1/2023 | 9 | 41 | 40 | Not measurable | Sheen visible in B099/B100, B103/B104, and B107/B108 sumps, water color in sumps noted as brown |
| 3/8/2023 | 5 | 42 | 41 | Not measurable | B099/B100 & B103/B104 light brown color |
| 3/15/2023 | 4 | 42 | 41 | Not measurable | B099/B100 and B103/B104 brown color; B107/B108 very light brown color |
| 3/22/2023 | 8 | 26.5 | 25.5 | Not measurable | B099/B100 light brown color |
| 3/29/2023 | 3 | 24 | 25 | Not measurable | B099/B100 light brown color |
| 4/5/2023 | 2.5 | 25 | 25 | Not measurable | B099/B100 light brown color |
| 4/12/2023 | 4 | 12 | 14 | Not measurable | All three sumps pumped down during inspection, B099/B100 brown color |
| 4/19/2023 | 5 | 42 | 42 | Not measurable | Sheen visible in B107/B108 sump |
| 4/26/2023 | 4 | 31.5 | 31.5 | Not measurable | Sheen visible in B107/B108 sump |
| 5/3/2023 | 3 | 18 | 17.5 | Not measurable | |
| 5/10/2023 | 0 | 1.5 | 0 | Not measurable | Sheen visible in B107/B108 sump |
| 5/17/2023 | 0 | 2 | 0 | Not measurable | Sheen visible in B107/B108 sump |
| 5/24/2023 | 2 | 14 | 13 | Not measurable | Pumpdown and boom swap. |
| 5/31/2023 | 28 | 50 | 49 | Not measurable | B099/B100 water color brown. B103/B104 and B107/B108 water color light brown. |
| 6/7/2023 | 3 | 38 | 37 | Not measurable | Sheen visible in all Sumps. B099/B100 water color brown and, light brown on both B103/B104 and B107/B108. |
| 6/14/2023 | 4 | 38 | 37 | Not measurable | Sheen Visible in B099/B100 & B107/B108. water color brown on B099/B100 & light brown in all other sumps. |
| 6/21/2023 | 3 | 36 | 37 | Not measurable | Sheen Visible in B107/B108. water color brown on B099/B100 & light brown in all other sumps. |
| 6/28/2023 | 3 | 31 | 31 | Not measurable | Sheen Visible in B099/B100 & B107/B108. water color dark brown on B099/B100 & B107/B108, light brown in B103/B104. |
| 7/12/2023 | 3 | 20 | 19 | Not measurable | Sheen Visible in B099/B100 and B107/B108. Water color brown on B099/B100, light brown in B103/B104. |
| 7/19/2023 | 3 | 19 | 19 | Not measurable | Sheen Visible on B099/B100 and B107/B108. Water color brown on B099/B100 and clear on B103/B104 and B107/B108. |
| 7/26/2023 | 3 | 21 | 20 | Not measurable | Sheen Visible on B099/B100 and B107/B108. Water color brown on B099/B100, light brown on B103/B104, and clear on B107/B108. |
| 8/2/2023 | 0 | 16.5 | 15.5 | Not measurable | Sheen Visible on B107/B108. Water color dark brown on B099/B100, light brown on B103/B104, and clear on B107/B108. Pumpdown conducted 8/4/2023. |
| 8/9/2023 | 42 | 47 | 47 | Not measurable | Sheen Visible on B099/B100 and B107/B108. Water color brown on B099/B100, light brown on B103/B104, and clear on B107/B108. |
| 8/16/2023 | 38.5 | 47 | 47 | Not measurable | Sheen Visible on B099/B100 and B107/B108. Water color brown on B099/B100 and light brown on B103/B104 and B107/B108. |
| 8/23/2023 | 33 | 46 | 46 | Not measurable | Sheen visible in all Sumps. B099/B100 water color dark brown and, light brown on both B103/B104 and B107/B108. |
| 8/30/2023 | 33 | 46 | 44 | Not measurable | Sheen visible in all Sumps. B099/B100 water color dark brown and, light brown on both B103/B104 and B107/B108. |
| 9/6/2023 | 1 | 38 | 38 | Not measurable | Sheen visible in all Sumps. B099/B100 water color light brown, and clear on both B103/B104 and B107/B108. |
| 9/13/2023 | 0 | 33 | 33 | Not measurable | Sheen Visible on B099/B100 and B107/B108. Water color brown on B099/B100 and clear on B103/B104 and B107/B108. Pumpdown conducted 9/15/2023. |
| 9/20/2023 | 14 | 41 | 40 | Not measurable | Sheen Visible on B099/B100 and B107/B108. Water color brown on B099/B100 and light brown on B103/B104 and B107/B108. |
| 9/27/2023 | 0.5 | 33 | 34 | Not measurable | Sheen Visible on B099/B100 and B107/B108. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108. |
| 10/4/2023 | 0 | 0 | 0 | Not measurable | No sheen visible in all sumps. Water color brown on B099/B100 and light brown on B103/B104 and B107/B108. Heavy rains all week filled up sumps. |

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 |
|---------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------------|--|
| 10/11/2023 | 0 | 0 | 0 | Not measurable | Sheen visible on B103/B104. B099/B100 water color light brown, clear on B103/B104 and B107/B108. Heavy rains in the week filled up sumps. Pumpdown conducted 10/13/2023. |
| 10/18/2023 | 46 | 48 | 47 | Not measurable | Sheen visible on B099/B100 and B107/B108. Water color brown on B099/B100. Water color clear on B103/B104. Water color light brown on B107/B108. |
| 10/25/2023 | 39 | 44 | 43 | Not measurable | Sheen visible on B099/B100 and B107/B108. Water color dark brown on B099/B100 and light brown on B103/B104 and B107/B108. |
| 11/1/2023 | 6.5 | 33 | 33 | Not measurable | Sheen visible on B099/B100 and B107/B108. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108. |
| 11/8/2023 | 12 | 34 | 33 | Not measurable | Sheen visible on B099/B100. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108. |
| 11/15/2023 | 2 | 6 | 5.5 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108. |
| 11/22/2023 | 7 | 13 | 12 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108. |
| 11/29/2023 | 5.5 | 10 | 9.5 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108. |
| 12/6/2023 | 8 | 14 | 14 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108. |
| 12/13/2023 | 5 | 10 | 9.5 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108. |
| 12/20/2023 | 5 | 10 | 9 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108. |
| 12/27/2023 | 6 | 13 | 11 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108. |
| 1/3/2024 | 0 | 0 | 0 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108. |
| 1/10/2024 | 5 | 10 | 9.5 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108. |
| 1/17/2024 | 12 | 15.5 | 15 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108. |
| 1/24/2024 | 0 | 0 | 0 | Not measurable | No sheen observed in any of the sumps. Water color clear in all sumps. |
| 1/31/2024 | 2 | 9.5 | 9 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108. |
| 2/7/2024 | 2 | 18 | 16 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108. |
| 2/14/2024 | 6 | 18 | 18 | Not measurable | No sheen observed in any of the sumps. Water color clear on B099/B100, B103/B104 and B107/B108. |
| 2/21/2024 | 6 | 14 | 13 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108. |
| 2/28/2024 | 4 | 14 | 15 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108. |
| 3/6/2024 | 4 | 15 | 15 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108. |
| 3/13/2024 | 0 | 11 | 11 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108. |
| 3/20/2024 | 0 | 7.5 | 7.5 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108. |
| 3/27/2024 | 0 | 7 | 6 | Not measurable | No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108. Some DNAPL (1.5 inches) was recovered from the bottom of Sump 1. |

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 |
|------------------|---|---|---|------------------------|----------|
|------------------|---|---|---|------------------------|----------|

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 Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.

1

Inspection Date:

3/6/2024

Description:

Stall A022. Some tar-like material was observed at historical seep location along asphalt crack, material was removed.

Lat: 29.785378

Long: -95.318694



Photo No.

2

Inspection Date:

3/6/2024

Description:

Stall A011. Some tar-like material observed at historical seep location along asphalt crack, material removed.

Lat: 29.785467

Long: -95.318341





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
3

Inspection Date:
3/6/2024

Description:

Stall A010. No tar-like material observed at Test Pit A010 location. Minimal seep water staining present in the cracks of the asphalt.

Lat: 29.785517

Long: -95.31834



Photo No.
4

Inspection Date:
3/6/2024

Description:

Stall A021. No seeps noted at Test Pit A021.

Lat: 29.785387

Long: -95.318654





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
5

Inspection Date:
3/6/2024

Description:

Stall B013. No seeps noted at Test Pit B013.

Lat: 29.78532
Long: -95.31833



Photo No.
6

Inspection Date:
3/6/2024

Description:

Stall B016. No tar-like material observed at historical seep location along asphalt crack.

Lat: 29.785271
Long: -95.31841





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
7

Inspection Date:
3/6/2024

Description:

Stall B042. No new tar-like material observed at historical seep location along asphalt crack.

Lat: 29.784923
Long: -95.319124



Photo No.
8

Inspection Date:
3/6/2024

Description:

Stall B056. Some tar-like material was observed and removed from historical seep location along asphalt crack.

Lat: 29.784751
Long: -95.319532





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
9

Inspection Date:
3/6/2024

Description:

Stall B057 (joint), no tar-like material observed at historical seep location at Test Pit B057.

Lat: 29.784747
Long: -95.319549



Photo No.
10

Inspection Date:
3/6/2024

Description:

Stall B102 (joint) some tar-like material observed at historical seep site along concrete joint, material removed.

Lat: 29.784197
Long: -95.320821





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
11

Inspection Date:
3/6/2024

Description:

Stall B102 (center), no tar-like material observed at seep location along cracks in pavement.

Lat: 29.784233
Long: -95.320847



Photo No.
12

Inspection Date:
3/6/2024

Description:

Stall B105, no new tar-like material observed at the historical seep location along asphalt crack.

Lat: 29.784209
Long: -95.320943





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
13

Inspection Date:
3/6/2024

Description:

Stall B096, some tar-like material observed at historical seep location along concrete joint at Test Pit B096, material removed.

Lat: 29.784276
Long: -95.320651



Photo No.
14

Inspection Date:
3/6/2024

Description:

Stall B100, some tar-like material observed on concrete crack/hole in concrete, material removed.

Lat: 29.784236
Long: -95.320786





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
15

Inspection Date:
3/6/2024

Description:

North side of Track 802, some tar-like material observed at seep location near the edge of the ballast, material removed.

Lat: 29.784947
Long: -95.321214



Photo No.
16

Inspection Date:
3/6/2024

Description:

Stall B107, no new tar-like material observed at seep location on concrete joint along the southern edge of the excavated area.

Lat: 29.784137
Long: -95.32096





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
17

Inspection Date:
3/6/2024

Description:

Sump 1 (B099/B100), 4 inches of freeboard in sump, no odor noted, no sheen observed, water color noted as light brown.

Lat: 29.7844000
Long: - 95.3205861



Photo No.
18

Inspection Date:
3/6/2024

Description:

Sump 2 (B103/B104), 15 inches of freeboard in sump. No odor or sheen observed, color noted as clear.

Lat: 29.7842861
Long: - 95.3208611





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.

19

Inspection Date:

3/6/2024

Description:

Sump 3 (B107/B108), 15 inches of freeboard in sump, no sheen observed, water color noted as clear.

Lat: 29.7844000

Long: - 95.3205861



Photo No.

20

Inspection Date:

3/6/2024

Description:

RD-14 Seep location observed within the concrete road area north of Track 802 (east of existing Track 802 seep location). Some tar-like material observed along a concrete joint, material removed.

Lat: 29.785064

Long: -95.321219





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
21

Inspection Date:
3/13/2024

Description:

Stall B013. No seeps noted at Test Pit B013.

Lat: 29.78532
Long: -95.31833



Photo No.
22

Inspection Date:
3/13/2024

Description:

Stall B056. No new tar-like material observed at historical seep location along asphalt crack.

Lat: 29.7847472
Long: -95.3195417





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
23

Inspection Date:
3/13/2024

Description:

North side of Track 802, no new tar-like material observed at seep location near the edge of the ballast.

Lat: 29.784947
Long: -95.321214



Photo No.
24

Inspection Date:
3/13/2024

Description:

Stall A022. No new tar-like material observed at historical seep location along asphalt crack.

Lat: 29.785378
Long: -95.318694





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
25

Inspection Date:
3/13/2024

Description:

Stall B057, no new tar-like material observed along asphalt crack.

Lat: 29.784769

Long: -95.3195798



Photo No.
26

Inspection Date:
3/13/2024

Description:

Stall A011. No tar-like material observed at historical seep location along asphalt crack.

Lat: 29.785467

Long: -95.318341





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
27

Inspection Date:
3/13/2024

Description:

Stall B107, no new tar-like material observed at seep location on concrete joint along the southern edge of the excavated area.

Lat: 29.784137

Long: -95.32096



Photo No.
28

Inspection Date:
3/13/2024

Description:

Stall A010. No tar-like material observed at Test Pit A010 location.

Lat: 29.785517

Long: -95.31834





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
29

Inspection Date:
3/13/2024

Description:

Stall B096, no new tar-like material observed at historical seep location along concrete joint.

Lat: 29.7842528
Long: -95.3206250



Photo No.
30

Inspection Date:
3/13/2024

Description:

Stall B100, no new tar-like material observed at seep location along asphalt crack/ hole in the asphalt.

Lat: 29.7842528
Long: -95.3206250





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
31

Inspection Date:
3/13/2024

Description:

Stall B105, no new tar-like material observed at the historical seep location along asphalt crack.

Lat: 29.784209

Long: -95.32092



Photo No.
32

Inspection Date:
3/13/2024

Description:

Sump 1 (B099/B100), 0 inches of freeboard in sump, no sheen observed, water color noted as light brown.

Lat: 29.7844000

Long: - 95.3205861





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
33

Inspection Date:
3/13/2024

Description:

Sump 2 (B103/B104), 11 inches of freeboard in sump. No odor or sheen observed, color noted as clear.

Lat: 29.7842861

Long: - 95.3208611



Photo No.
34

Inspection Date:
3/13/2024

Description:

Sump 3 (B107/B108), 11 inches of freeboard in sump, no sheen observed, water color noted as clear.

Lat: 29.7844000

Long: - 95.3205861





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
35

Inspection Date:
3/13/2024

Description:

RD-14 Seep location observed within the concrete road area (RD-14) north of Track 802 (east of existing Track 802 seep location), no new tar-like material observed along a concrete joint.

Lat: 29.785064
Long: -95.321219



Photo No.
36

Inspection Date:
3/13/2024

Description:

Stall B042. No new tar-like material observed at historical seep location along concrete crack.

Lat: 29.784923
Long: -95.3191





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
37

Inspection Date:
3/13/2024

Description:

Stalls A060 - A070, some residual staining previously observed along cracks in pavement. No new water seeps observed. Viewing southwest.

Lat: 29.784858

Long: -95.319733



Photo No.
38

Inspection Date:
3/13/2024

Description:

Stall B102 (center), no tar-like material observed at seep location along cracks in pavement.

Lat: 29.784233

Long: -95.320847





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
39

Inspection Date:
3/13/2024

Description:

Stall B016. No tar-like material observed at historical seep location along asphalt crack.

Lat: 29.785271
Long: -95.31841



TX 77020

Photo No.
40

Inspection Date:
3/13/2024

Description:

Stall B102 (joint) no new tar-like material observed at historical seep site along concrete joint.

Lat: 29.784197
Long: -95.320821



020



PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
41

Inspection Date:
3/13/2024

Description:

Stall A021. No seeps noted at Test Pit A021.

Lat: 29.78543

Long: -95.31868



Photo No.
42

Inspection Date:
3/20/2024

Description:

RD-14 Seep location observed within the concrete road area (RD-14) north of Track 802 (east of existing Track 802 seep location), some tar-like material observed along a concrete joint. The material was removed.

Lat: 29.785064

Long: -95.321219





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
43

Inspection Date:
3/20/2024

Description:

Sump 1 (B099/B100), 0 inches of freeboard in sump, no sheen observed, water color noted as light brown.

Lat: 29.7844000
Long: - 95.3205861



Photo No.
44

Inspection Date:
3/20/2024

Description:

Sump 2 (B103/B104), 7.5 inches of freeboard in sump. No odor or sheen observed, color noted as clear.

Lat: 29.7842861
Long: - 95.3208611





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
45

Inspection Date:
3/20/2024

Description:

Sump 3 (B107/B108), 7.5 inches of freeboard in sump, no sheen observed, water color noted as clear.

Lat: 29.7844000
Long: - 95.3205861



Photo No.
46

Inspection Date:
3/20/2024

Description:

Stall A010. No seeps noted at Test Pit A010.

Lat: 29.785517
Long: -95.31834





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
47

Inspection Date:
3/20/2024

Description:

Stall A011. No new tar-like material observed at historical seep location along asphalt crack.

Lat: 29.785467
Long: -95.318341



Photo No.
48

Inspection Date:
3/20/2024

Description:

Stall A021. No seeps noted at Test Pit A021.

Lat: 29.785387
Long: -95.31871





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
49

Inspection Date:
3/20/2024

Description:

Stall A022, no new tar-like material observed at the seep location along the edge.

Lat: 29.78537
Long: - 95.31869



Photo No.
50

Inspection Date:
3/20/2024

Description:

Stall B013. No seeps noted at Test Pit B013.

Lat: 29.78532
Long:-95.31833





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
51

Inspection Date:
3/20/2024

Description:

Stall B016. No tar-like material observed at historical seep location along asphalt crack.

Lat: 29.785271
Long: -95.31841



n 3.20.24
7 AM
837
Houston, TX 77020

Photo No.
52

Inspection Date:
3/20/2024

Description:

Stall B042. No new tar-like material observed at historical seep location along asphalt crack.

Lat: 29.784923
Long: -95.31913



ection 3.20.24
10:52 AM
95.31913
us St, Houston, TX 77020



PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
53

Inspection Date:
3/20/2024

Description:

North side of Track 802, no new tar-like material observed at seep location near the edge of the ballast.

Lat: 29.784947
Long: -95.321214



Photo No.
54

Inspection Date:
3/20/2024

Description:

Stall B056. No new tar-like material observed at historical seep location along asphalt crack.

Lat: 29.7847472
Long: -95.3195417





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
55

Inspection Date:
3/20/2024

Description:

Stall B057, no new tar-like material observed and removed at seep location along asphalt crack.

Lat: 29.784769

Long: -95.3195798



Photo No.
56

Inspection Date:
3/20/2024

Description:

Stalls A060 - A070, some residual staining previously observed along cracks in pavement. No new water seeps observed. Viewing southwest.

Lat: 29.78496

Long: -95.31969





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
57

Inspection Date:
3/20/2024

Description:

Stall B096, no new tar-like material observed at historical seep location along concrete joint.

Lat: 29.7842528
Long: -95.3206250



Photo No.
58

Inspection Date:
3/20/2024

Description:

Stall B100, no new tar-like material observed at seep location along asphalt crack/ hole in the asphalt.

Lat: 29.7842528
Long: -95.3206250





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
59

Inspection Date:
3/20/2024

Description:

Stall B102 Joint, no new tar-like material observed at seep location along stall joint.

Lat: 29.7842203
Long: - 95.320827



Photo No.
60

Inspection Date:
3/20/2024

Description:

Stall B102 (center), no tar-like material observed at seep location where pavement is cracked.

Lat: 29.784769
Long: -95.3195798





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
61

Inspection Date:
3/20/2024

Description:

Stall B105, no new tar-like material observed at the historical seep location along asphalt crack.

Lat: 29.784209

Long: -95.32083



Photo No.
62

Inspection Date:
3/20/2024

Description:

Stalls B107, no new tar-like material observed at seep location on concrete joint along the southern edge of the excavated area.

Lat: 29.784156

Long: -95.320953





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
63

Inspection Date:
3/20/2024

Description:

RD-14 Seep location observed within the concrete road area north of Track 802 (east of existing Track 802 seep location), some new tar-like material observed along a concrete joint. Material was removed.

Lat: 29.785064

Long: - 95.321219



Photo No.
64

Inspection Date:
3/27/2024

Description:

Stalls B107, no new tar-like material observed at seep location on concrete joint along the southern edge of the excavated area.

Lat: 29.784156

Long: -95.320953





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
65

Inspection Date:
3/27/2024

Description:

Stall B057 (joint), no new tar-like material observed at historical seep location at Test Pit B057.

Lat: 29.784747
Long: -95.319549



Photo No.
66

Inspection Date:
3/27/2024

Description:

Sump 1 (B099/B100), 0 inches of freeboard in sump, no sheen observed, water color noted as light brown. Some NAPL was scraped from the bottom of the sump during the inspection.

Lat: 29.7844000
Long: - 95.3205861





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
67

Inspection Date:
3/27/2024

Description:

Sump 2 (B103/B104), 7 inches of freeboard in sump. No odor or sheen observed, color noted as clear.

Lat: 29.7842861
Long: - 95.3208611



Photo No.
68

Inspection Date:
3/27/2024

Description:

Sump 3 (B107/B108), 6 inches of freeboard in sump, no sheen observed, water color noted as clear.

Lat: 29.7844000
Long: - 95.32103





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
69

Inspection Date:
3/27/2024

Description:

North side of Track 802, some new tar-like material observed at seep location near the edge of the ballast, material removed

Lat: 29.784947
Long: -95.321214



Photo No.
70

Inspection Date:
3/27/2024

Description:

Stall A010. No seeps noted at Test Pit A010.

Lat: 29.78556
Long: -95.31839





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
71

Inspection Date:
3/27/2024

Description:

Stall A011. No new tar-like material observed at historical seep location along asphalt crack. Some staining observed along cracks in pavement.

Lat: 29.785467
Long: -95.318341



Photo No.
72

Inspection Date:
3/27/2024

Description:

Stall B013. No seeps noted at Test Pit B013.

Lat: 29.78532
Long:-95.31833





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.

73

Inspection Date:

3/27/2024

Description:

Stall B016. No tar-like material observed at historical seep location along asphalt crack.

Lat: 29.785271

Long: -95.31841



Photo No.

74

Inspection Date:

3/27/2024

Description:

Stall A022, no new tar-like material observed at the seep location along the edge.

Lat: 29.785381

Long: - 95.318619





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
75

Inspection Date:
3/27/2024

Description:

Stall A021. No seeps noted at Test Pit A021.

Lat: 29.785387
Long: -95.318654



tion 3/27/24
17 AM
31867
St, Houston, TX 77020

Photo No.
76

Inspection Date:
3/27/2024

Description:

Stall B042. No new tar-like material observed at historical seep location along concrete joint.



Lat: 29.784923
Long: -95.319124



27/24
VI
Houston, TX 77020



PHOTOGRAPHIC LOG

| | | | |
|---|--------------------------------------|--|------------------------------------|
| Client Name: Union Pacific Railroad | | Site Location: Englewood Intermodal Yard, Houston, Texas | Project No. 31406585.016 |
| Photo No. 77 | Inspection Date: 3/27/2024 | <p>Description:</p> <p>RD-14 Seep location observed within the concrete road area north of Track 802 (east of existing Track 802 seep location), some new tar-like material observed along a concrete joint. Material was removed.</p> <p>Lat: 29.785064 Long: - 95.32381</p> | |
| <p>Photo No. 78</p> <p>Description:</p> <p>Stall B056. Some tar-like material observed at historical seep location along asphalt crack, material removed.</p> <p>Lat: 29.7847472 Long: -95.3195417</p> | |  <p>Inspection 3/27/24 4 12:23 PM -95.32381</p> | |
| <p>Photo No. 78</p> <p>Description:</p> <p>Stall B056. Some tar-like material observed at historical seep location along asphalt crack, material removed.</p> <p>Lat: 29.7847472 Long: -95.3195417</p> | |  <p>Inspection 3/27/24 22 AM 1967 Rd, Houston, TX 77020</p> | |



PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
79

Inspection Date:
3/27/2024

Description:

Stall B105, no new tar-like material observed at the historical seep location along asphalt crack.

Lat: 29.784209
Long: -95.320943



Photo No.
80

Inspection Date:
3/27/2024

Description:

Stalls A060 - A070, some residual staining previously observed along cracks in pavement. No new water seeps observed. Viewing southwest.

Lat: 29.784858
Long: -95.31969





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
81

Inspection Date:
3/27/2024

Description:

Stall B096, no new tar-like material observed at historical seep location along concrete joint next to Test Pit B096.

Lat: 29.7842528
Long: -95.3206250



Photo No.
82

Inspection Date:
3/27/2024

Description:

Stall B100, no new tar-like material observed at seep location along asphalt crack/ hole in the asphalt.

Lat: 29.7842528
Long: -95.32066





PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
83

Inspection Date:
3/27/2024

Description:

Stall B102 Joint, no new tar-like material observed at seep location along stall joint.

Lat: 29.7842203
Long: - 95.320827



Photo No.
84

Inspection Date:
3/27/2024

Description:

Stall B102 (center), no seep observed.

Lat: 29.784769
Long: -95.3195798

