GOLDER

February 28, 2019

Project No. 30401358

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 – SOIL CAP AND CONCRETE CAP REPAIRS
RESPONSE TO REQUEST FOR INFORMATION – TCEQ LETTER DATED FEBRUARY 6, 2019
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 February 2019 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. Responses to the TCEQ comment letter dated February 6, 2019 are also provided with this letter.

A brief description of the current status of the repairs is provided below:

- Soil Cap – Repairs to the soil cap were conducted on June 12 and 13, 2018. No further actions are necessary to address the soil cap repairs.

- Concrete Cap (Englewood Intermodal Yard) – Installation of the non-aqueous phase liquid (NAPL) Collection System (detailed in the October 31, 2018 monthly status update) to address the tar-like substance seeps within parking slots B100 to B109 (for container trailers) began on January 21, 2019 and was completed on February 12, 2019. Golder is preparing an updated PRACR detailing the construction activities. The updated PRACR will be submitted to the TCEQ by April 1, 2019.

  Golder continues to conduct weekly inspections of the other areas within the Englewood Intermodal Yard (NAPL Collection System and parking slots B13 and B54). As the seasonal temperatures have

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decreased over the last few months, the seep activity has also decreased in the areas outside of the NAPL Collection System. Little to minor amounts of seep activity have been observed during the weekly inspections over the past month.

In the letter dated February 6, 2019, the TCEQ requested additional information in reference to a response to comment letter dated January 9, 2019. Below are the TCEQ comments with corresponding responses:

Comment A. Response to TCEQ Comment No. 2 of the December 6, 2018 letter is unresolved.

UPRR's May 2018-Total Petroleum Hydrocarbon (TPH) soil investigation was very limited because the assessment was only conducted from 0-2 feet, and review of the TCEQ Method TX1005 results indicates the nature and extent of the TPH affected soils was not fully delineated horizontally or vertically in accordance with 30 Texas Administrative Code (TAC) §350.51.

Additional horizontal assessment is needed to the north of soil sample locations SB-06 through SB-08, east of SB-09, SB-18, SB-25 and south of the four (4) TPH Non-aqueous Phase liquid (NAPL) test pits. Additional samples are needed in the vicinity of former two lagoons and three former 55,000-barrel above ground storage tanks (AST) since UPRR describes these units as potential source areas.

The TCEQ also notes, UPRR did not adequately delineate affected soils vertically pursuant to 30 TAC§ 350.5l(d) which requires the vertical extent of affected soils be delineated to the higher of the method quantitation limit (MQL) or background. Review of the TCEQ Method TX1005 results indicates many of the affected soils have TPH concentrations exceeding the Tier 1 soil-to groundwater ($^{GW}Soil_{Ing}$) PCLs. UPRR's CPT/ROST NAPL assessment is useful information in identifying the presence of subsurface NAPL, but the assessment does not identify if affected subsurface soils have impacted groundwater.

UPRR also used the TCEQ TPH calculator to develop PCLs for TPH mixture based on TCEQ Method TX1006 results. At this time, the TCEQ cannot accept the calculated PCL for TPH mixture because assessment using TCEQ Method TX1005 must be completed first. Secondly, the calculated PCLs for the TPH mixture should not be used to screen from further horizontal and vertical assessment. For further information, please refer to TCEQ guidance document RG-366/TRRP-27 Development of Human Health PCLs for Total Petroleum Hydrocarbon Mixtures.

In accordance with Permit Provision VIII.D., submit a schedule for complete characterization and delineation of the extent of affected media containing TPH and identification the TPH source area(s). Investigation results should be submitted in an Affected Property Assessment Report (APAR) in accordance with the requirements of Permit Provisions LE and VIII.D, and 30 TAC §350.51 for TCEQ review and approval.

Response Comment A.

To address the horizontal and vertical assessment for TPH concentrations in soils, UPRR proposes to drill and sample 13 soil boring locations, of which 9 borings will be located encircling the former lagoon and AST area and 4 will be drilled within the former lagoons and AST area. The proposed sample locations are presented on the attached Figure 1. Soil borings will be drilled to the top of the A-TZ (assumed to be approximately 15 feet below ground surface (bgs)). Soil samples will be collected continuously for the total depth of each boring and logged by

field personnel and field screened using an organic vapor meter (OVM). At each boring location, up to two soil samples will be submitted for laboratory analyses for TPH by Method TX1005. Soil samples will be collected from the following intervals:

- A soil sample from the 0 to 5-foot interval (Surface Soil) where the highest OVM reading or visual hydrocarbon staining is observed; or, if no OVM readings or staining observed, a sample from the 2 to 5-foot interval will be collected (below the existing asphalt/concrete); and
- A soil sample from a depth below 5 feet to 15 feet (Subsurface Soil) where the highest OVM reading or visual hydrocarbon staining is observed; or, if no OVM readings or staining observed, a sample from 13-15 feet interval (typically the top of A-TZ).

The soil investigation will follow a "focused on-site soil assessment" as detailed in the TCEQ Guidance Document Affected Property Assessment Requirements under TRRP, RG-366/TRRP12, Revised May 2010 and 30 Texas Administrative Code (TAC) §350.51(c), which states "*for soils only, the person can focus the horizontal on-site assessment to define the area exceeding the applicable critical PCL (i.e., residential or commercial/industrial).*" Therefore, the soil TPH data will be initially compared to the critical PCL (i.e., Tier 2, Commercial/Industrial, 30-acre source area PCLs, except for the locations along the perimeter of the Site that will be compared to Tier 2, Residential, 30-acre source area PCLs). Following the initial review of the soil data, UPRR will assess if additional sampling is necessary to satisfy the horizontal and vertical delineation requirements detailed in 30 TAC §350.51. The sampling activities and analytical data will be submitted to the TCEQ in an Affected Property Assessment Report (APAR) Addendum.

Proposed Schedule:

The proposed schedule for completing the additional TPH assessment and completion of the requested APAR Addendum is summarized below:

- Additional Soil TPH Assessment Activities: Field activities to be completed within 30 days after receiving TCEQ approval to proceed with the proposed scope of work;
- Preliminary Soil Data Review: Within 14 days of receiving the laboratory analytical reports and validated data, UPRR will contact the TCEQ to discuss the preliminary findings;
- APAR Addendum: If no additional assessment activities are needed to address the TPH concentrations in surface and subsurface soils, the APAR Addendum will be prepared and submitted to the TCEQ within 90 days after TCEQ approval of the proposed scope of work. If additional assessment activities are needed, the proposed schedule will be revised.

Comment B. Response to TCEQ Comment No. 3 of the December 6, 2018 letter was partially addressed.

On January 21, 2019, UPRR formally notified the TCEQ that implementation of the interim response action has begun and is anticipated to be completed within 2 weeks. UPRR also explained that if the interim response action is not effective, UPRR will evaluate and implement alternate response actions as necessary to address the NAPL seeps. However, no alternative response actions were proposed.

At this time, it is premature to propose specific remedial alternatives to address the shallow NAPL and surface seeps. UPRR will continue to monitor the area where the NAPL Collection System was installed to assess if the implemented response action addresses the objective of eliminating NAPL seeps in that area.

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

Sincerely,

Golder Associates Inc.

Eric C. Matzner, P.G.
Senior Consultant / Associate

ECM

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

Attachment Figure 1 – Proposed Soil Boring Location Map – TPH Analysis

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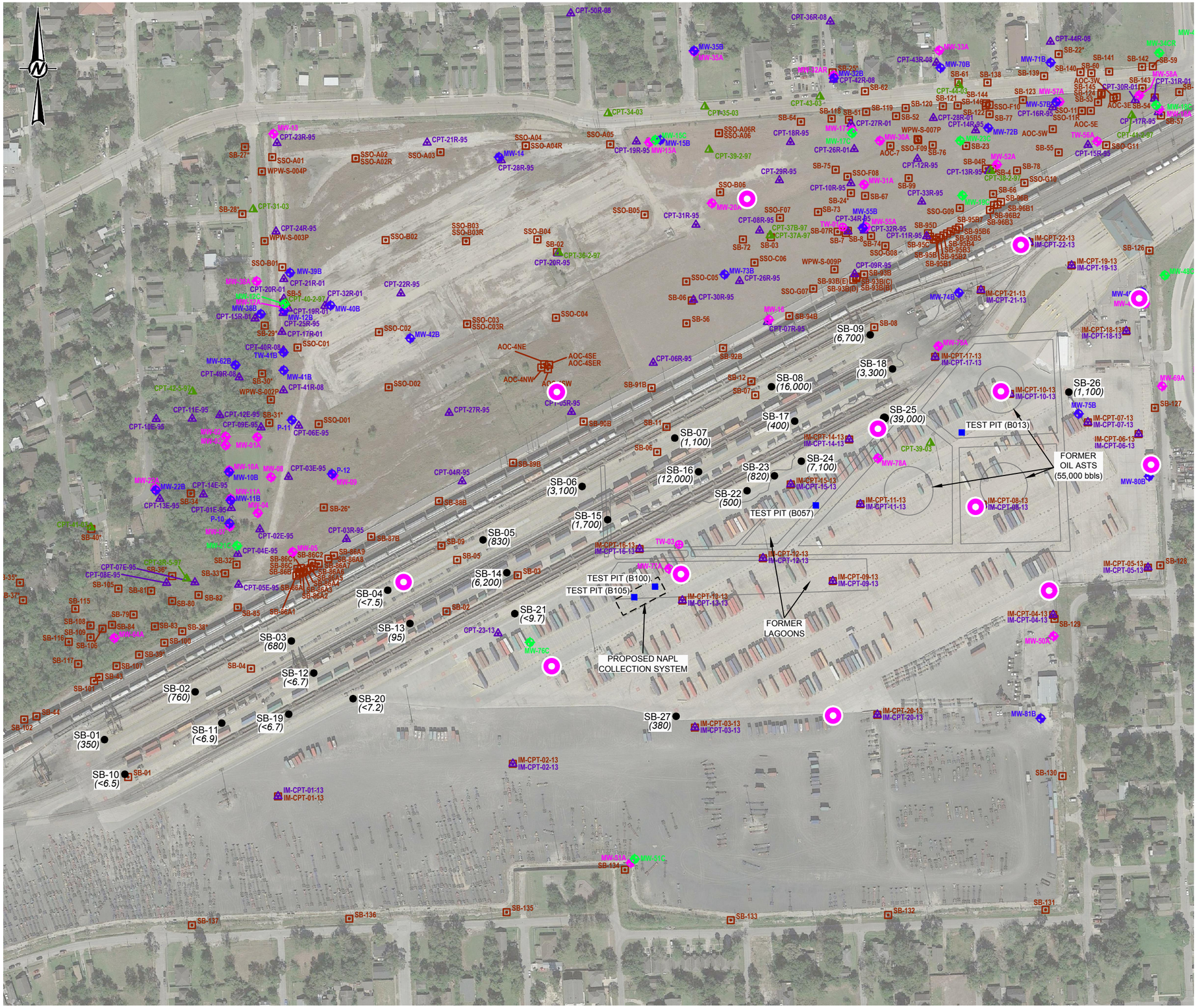
ATTACHMENT



LEGEND

- SOIL BORING LOCATION (MAY 2018)
- TEST PIT LOCATION
- (500) TPH (C_6-C_{35}) CONCENTRATION (mg/Kg)
- A-TZ MONITORING WELL LOCATION
- B-CZ/B-TZ MONITORING WELL LOCATION
- C-TZ MONITORING WELL LOCATION
- D-TZ MONITORING WELL LOCATION
- A-TZ TEMPORARY MONITORING WELL LOCATION
- CPT WITH ROST LOCATION
- CPT LOCATION
- SOIL BORING LOCATION
- PROPOSED SOIL BORING LOCATION - TPH ANALYSIS

REFERENCE(S)

IMAGERY TAKEN FROM GOOGLE EARTH, PHOTOGRAPHY DATED 10/28/17.

0 125 250
1" = 250' FEET

CLIENT
UNION PACIFIC RAILROAD CO.

PROJECT
HOUSTON WOOD PRESERVING WORKS

TITLE
PROPOSED SOIL BORING LOCATION MAP - TPH ANALYSIS

CONSULTANT
GOLDER

YYYY-MM-DD	2019-02-27
DESIGNED	AJD
PREPARED	AJD
REVIEWED	ECM
APPROVED	ECM

PROJECT NO. 30401358 | REV. 0 | FIGURE 1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

Path: \\texarkana\data\Projects - Round Rock\1358-UPRR Wood Preserving Work\2019-2 Feb\ | File Name: FIG 1 - Proposed SB Locations Map-TPH Analysis.dwg | Last Edited By: adlamond Date: 2019-02-27 Time:1:25:24 PM | Printed By: adlamond Date: 2019-02-27 Time:1:25:59 PM