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May 9, 2022

Laurie Gharis,  
Chief Clerk, MC 105  
Texas Commission on Environmental Quality  
PO Box 13087  
Austin TX 78711-3087

**Re: Fifth Set of Public Comments Submitted on Behalf of Fifth Ward Impact and Community Action (“Impact”) and Anna Ortiz Regarding Draft Renewal Permit/Compliance Plan 50343 Authorizing Renewal of Hazardous Waste Permit.**

Lone Star Legal Aid (“LSLA”) submits this fifth set of comments on behalf of its clients, Fifth Ward Impact and Community Action (“Impact”) and Anna Ortiz (collectively, “Commenters”), regarding Union Pacific Railroad Company’s Draft Renewal/Compliance Plan 50343 (“the Draft Permit”). The Union Pacific Railroad Company (“UPRR”) has applied to the Texas Commission on Environmental Quality (“TCEQ”) for a permit renewal with a major amendment to authorize the continuation of the terms and conditions of the Permit and to submit the Response Action Plan (“RAP”) to address the facility-wide and off-site soil and groundwater contamination. Union Pacific owns the Houston Wood Preserving Works Facility (“the Site”) located at 4910 Liberty Road, Houston, Harris County, Texas 77026.

## **I. Request for Contested Case Hearing**

Both Impact and Mrs. Ortiz request that the TCEQ refer the matter to the State Office of Administrative Hearings (“SOAH”) for a Contested Case Hearing (“CCH”). Both Impact and Mrs. Ortiz request that they be designated as affected persons in that same CCH proceeding.

LSLA previously submitted comments on behalf of Commenters on December 11, 2018 (“First Set of Public Comments”) and on January 29, 2021 (“Second Set of Public Comments”) where multiple technical deficiencies with the Draft Permit were signaled for the TCEQ’s consideration. Additionally, Commenters submitted a Request for a Second Public Meeting and Extension to the Comment Period (“Request for Second Public Meeting” or “Third Set of Public Comments”) on June 6, 2021. Commenters last submitted comments on August 17, 2021 (“Fourth Set of Public Comments”) where additional deficiencies were pointed out. Commenters’ First through Fourth Sets of Public Comments are hereinafter referred to as the “Prior Comments.” Impact and Mrs. Ortiz stand behind these Prior Comments and incorporate them into this Fifth Set of comments as if stated in full herein.

Both Impact and Mrs. Ortiz are Affected Persons for the purposes of a CCH. To be designated Affected Persons they must show that they are each one “who has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application.” 30 T.A.C. § 55.103. Additionally, when “determining whether a person is an affected person, all factors shall be considered, including, but not limited to, the following:

(1) whether the interest claimed is one protected by the law under which the application will be considered; (2) distance restrictions or other limitations imposed by law on the affected interest; (3) whether a reasonable relationship exists between the interest claimed and the activity regulated; (4) likely impact of the regulated activity on the health and safety of the person, and on the use of property of the person; (5) likely impact of the regulated activity on use of the impacted natural resource by the person; ... (7) for governmental entities, their statutory authority over or interest in the issues relevant to the application. 30 T.A.C §55. 203(c).

Additionally, for permits filed before September 1, 2015, 30 T.A.C §55. 203(e) refers the Commission to 30 T.A.C §55. 203(d) which allows the Commission to consider the following factors for determining if someone is an Affected Person, to the extent consistent with case law:

(1) the merits of the underlying application and supporting documentation in the commission's administrative record, including whether the application meets the requirements for permit issuance; (2) the analysis and opinions of the executive director; and (3) any other expert reports, affidavits, opinions, or data submitted by the executive director, the applicant, or hearing requestor. 30 T.A.C §55. 203(d).

Finally, in the case of a group like Impact, the group may request a CCH as long as it meets all of the following requirements:

- (1) one or more members of the group or association would otherwise have standing to request a hearing in their own right;
- (2) the interests the group or association seeks to protect are germane to the organization's purpose; and
- (3) neither the claim asserted nor the relief requested requires the participation of the individual members in the case. 30 T.A.C §55. 205(a).

As has already been stated in the Prior Comments, Impact requests a CCH based on the fact that several of its members currently reside on or own property that is recognized by both the TCEQ and UPRR as being affected by subterranean contamination originating at the Site that is undoubtedly the subject of this Draft Permit. As far as Impact can see UPRR has not put forward a remedy that is adequate to address ongoing concerns regarding possible exposure pathways nor the valid concerns for their health and safety and the integrity of their property. Impact is not satisfied that UPRR's remediation plan is adequate in reducing contamination levels in groundwater to residential levels in a reasonable amount of time. What is more, Impact's members are concerned that not enough has been done to address contamination in the soil on residential property. Additionally, Impact asserts that UPRR is not doing enough to aggressively remove both the contaminated groundwater plume and the dense non-aqueous phase liquid ("DNAPL") plume underneath it.

A few members of Impact live above the well-documented, though not fully characterized, groundwater plume which itself lies over a *deeper* creosote/DNAPL plume. Map 1 below (the original made by Golder, UPRR's contractor, showing the extent of the Protective Concentration Level Exceedance ("PCLE") Zone, among other things) presents a bird's-eye view of the affected residential neighborhood, surrounding residential blocks, and indicates the location of some of Impact's members' residences and/or properties. These members include:

1. Sandra Edwards who resides at 2925 Lavender Street, and is the owner of said property, which lies along the western edge of the previously proposed off-site plume management zone (“PMZ”), directly above the PCLE Zone, and less than a tenth of a mile from the UPRR Site. Ms. Edwards was born in 1965 and raised at the home on 2925 Lavender until 1985. She returned to live permanently in her childhood home in 2010. Ms. Chamesha Randall, Ms. Edwards’ daughter, signed a restrictive covenant for this property on March 31, 2015, in the context of UPRR’s attempt to comply with the then proposed remediation plan. Ms. Edward’s property is represented by the red star on Map 1 below. Ms. Edwards is one of the spokeswomen and representatives of Impact and she may be contacted via Impact’s counsel with LSLA, Rodrigo Cantú.

2. Leisa Harris-Glenn is the owner of 2924 Lavender Street, a property inside the previously proposed off-site PMZ, above the PCLE zone and less than a tenth of a mile away from the UPRR Site. She moved to the home in 1984 when she was 27 years old and lived there with her mother and son until about the year 2000. Although she no longer resides in the area she often returns to her old home to visit her brother and nephew who continue to reside at 2924 Lavender. Ms. Harris-Glenn signed a restrictive covenant for this property on June 27, 2015, in the context of UPRR’s attempt to comply with the then proposed remediation plan. Ms. Harris-Glenn’s property is represented by the purple star on the Map below.

3. Mary Hutchins resides at 2938 Lavender, a property inside the previously proposed off-site PMZ, above the PCLE zone and less than a tenth of a mile away from the UPRR Site. She has resided at this address for over 50 years. Ms. Mary Hutchins signed a restrictive covenant for her property on April 7, 2015, in the context of UPRR’s attempt to comply with the then proposed remediation plan. Ms. Hutchins’ property is represented by the gold star on the Map below.

4. Barbara Beal who resides at 2906 Lavender Street and is the owner of said property which is located within the previously proposed off-site PMZ and less than a tenth of a mile from the UPRR Site. She came back to live in her family home in January of 2009 and has lived there ever since. Prior to that, she had lived in the same home off and on since the 1950s. Ms. Beal signed a restrictive covenant for her property on February 19, 2015, in the context of UPRR’s attempt to comply with the then proposed remediation plan. Ms. Beal’s property is represented by the green star on the Map below.



will not reduce contamination in and around their properties to residential levels in a reasonable timeframe. An additional concern of Impact's members is that UPRR should be implementing better remedial plans that would remove greater amounts of DNAPL and contaminated groundwater from underneath and around their properties. Impact's members are concerned about the very real possibility that UPRR's proposed slurry wall could result in off-site impacts to their properties and neighborhood in the form of induced flooding and runoff (described in greater detail below). Thus, the Draft Permit will have a likely impact on the health and safety of these residents, on the use of their property, and their natural resources. 30 T.A.C. § 55.103. Each of these interests have either been fully expounded upon in Prior Comments or are elaborated upon in this Fifth Set of Comments. These justiciable interests would otherwise grant standing to each of these four members individually as these interests will be directly affected by the regulation of UPRR's subterranean waste as called for in the Draft Permit.

Impact is an unincorporated organization based in the Fifth Ward/Kashmere Gardens neighborhoods of Houston that is primarily concerned with issues of environmental justice and public health that affect the residents of these neighborhoods. Advocating on behalf of the residents of these historically African-American communities, Impact's members are involved with environmental issues ranging from legacy contamination, to air quality, and environmental monitoring. Impact and its members originally organized around the issue of UPRR's contamination once they realized that the affected residential neighborhood and the wider community were almost universally unaware of what UPRR meant to accomplish through the permitting process. Impact's mission and focus are to seek a long-term solution to UPRR's creosote/DNAPL contamination. Thus, the interests that Impact seeks to protect are germane to its purpose as an organization. The claims being asserted and the relief that is being sought—namely increased monitoring, more accurate environmental exposure documentation, and greater waste removal, amongst other technical relief—do not require the participation of the individual members of Impact in the case.

Mrs. Ortiz, who is not a member of Impact, resides at 4605 Lucille Street, just over three and a half blocks from the PCLE zone and under a third of a mile from the Site. In making her individual request for a CCH and designation as an affected person, Mrs. Ortiz is extremely concerned that unless UPRR's Draft Permit is brought into compliance, her health and safety will be endangered, and the integrity of her property will be compromised. As mentioned in Prior

Comments Mrs. Ortiz is concerned that if more aggressive remediation action is not taken then both the creosote/DNAPL plume and the groundwater plume will continue to migrate even farther from their current locations and may even creep underneath her property and come to contaminate it. Such a consequence to Mrs. Ortiz's groundwater—a natural resource—would be unacceptable. And, as the Draft Permit currently stands, UPRR would not be required to conduct testing to verify if volatiles would be present at the surface in the event that either the DNAPL plume, groundwater plume, or both come to rest underneath her home. As stated in the Fourth Set of Comments the groundwater plume continues to migrate slightly to the west over the years from its previously determined location, closer to Mrs. Ortiz's property and home. Mrs. Ortiz is also concerned that UPRR has not done enough environmental monitoring to eliminate possible exposure pathways to Chemicals Of Concern (“COCs”). Specifically, Mrs. Ortiz, like members of Impact, is concerned that not enough testing has been done on the soils of residential properties like her own. Finally, like Impact, Ms. Ortiz is concerned that UPRR's proposed slurry wall may result in induced flooding and runoff from the UPRR site into her neighborhood. Each of these interests have either been fully expounded upon in Prior Comments or are elaborated upon in this Fifth Set of Comments.

## **II. ADDITIONAL DEFICIENCIES IDENTIFIED WITH UPRR'S DRAFT PERMIT SINCE THE FILING OF PRIOR COMMENTS**

As stated in Prior Comments a major deficiency with the Draft Permit is UPRR's less than precise understanding of the subterranean conditions and contaminant transport. UPRR errs in identifying the groundwater plume (as represented by the PCLE Zone) as the only plume. In fact, there is a *creosote/DNAPL plume* that has yet to be fully characterized as it remains mobile since DNAPL moves deeper and deeper into the Earth as time passes by. Above that uncharacterized creosote/DNAPL plume, *a separate and dynamic groundwater plume* exists, one which has been formed, at least partially, by the vapors that rise up from the deeper creosote/DNAPL plume. UPRR chooses to ignore the importance of the uncharacterized, deeper creosote/DNAPL plume in all its reports that make up its RAP and other supporting documents for the Draft Permit.

### COMMENTERS HAVE CONCERNS REGARDING UPRR'S PROPOSED USE OF A SLURRY WALL

UPRR has proposed the use of a slurry wall as a way to control the movement of both the creosote/DNAPL plume *and* the groundwater plume. Specifically, UPRR has stated that the slurry wall will stop or slow the transport of waste from UPRR property to off-site property including the City rights-of-way and underneath residential properties.

First, Commenters' concerns stem from the fact that a, "vertical trench will be excavated...and backfilled with a slurry of native soil and low permeability material such as bentonite." It is not clear that such a wall will accomplish the stated goal of reducing the flow of contaminated groundwater flow through it from UPRR property to offsite properties. UPRR has reported that the hydraulic conductivity of native soils is between  $7.6 \times 10^{-4}$  cm/sec to  $1.10 \times 10^{-7}$  cm/sec and that these values were used in the model simulations of the slurry wall. Bentonite clay—which UPRR has stated it might use—exhibits a hydraulic conductivity of approximately  $1 \times 10^{-6}$  cm/sec. This mixture is not proven to reduce or stop the flow of groundwater through the slurry wall and in fact it might even increase the flow of contaminated groundwater.

What is clear is that the slurry wall *will not stop or slow* the flow of *creosote* across the slurry wall and thus will not stop it from crossing into non UPRR property. In fact, disturbing the substrate and mixing soil will likely have the effect of introducing preferential pathways (secondary porosity) in the soils within the walls. This will allow for the more rapid transport and escape of creosote offsite to the City rights of way and to private residential properties. Stated another way, the offsite residential properties, including those owned by members of Impact, will continue to be subject to mobile creosote/DNAPL and contaminated groundwater plumes despite UPRR's statements that the slurry wall will remedy these conditions.

Additionally, UPRR has not provided any evidence that there is any impermeable subsurface layer on which it will attach or "key" this slurry wall. Such an impermeable surface or layer is necessary for the proper functioning of a slurry wall—without it, the slurry wall will not be successful. Specifically, the creosote/DNAPL will simply pass *underneath* the slurry wall because of the way the DNAPL is known to behave in the substrate. The slurry wall is proposed to be constructed down to a depth of 75 feet—where it will terminate immediately beneath a transmissive zone that is known to be saturated with creosote. How can such a wall be expected



to contain the creosote/DNAPL on-site when it goes to a depth only slightly deeper than said creosote/DNAPL? DNAPL obeys gravity, and travels deeper and deeper and deeper over time. The DNAPL will simply continue to sink farther down and will eventually encounter preferential pathways that allow it to also travel horizontally, underneath, and past the slurry wall.

Finally, UPRR is on record as saying that the slurry wall may induce mounding and flooding at the Site. Specifically, RAP Worksheet 2.0 states that, “Depending on site-specific hydrology, mounding of shallow groundwater on the upgradient side of a slurry wall can occur. If mounding occurs and creates surface wetting over-topping the slurry wall or induces groundwater flow around the slurry wall, modest upgradient extraction can be used.” Commenters express their sincere worry that “mounding of shallow groundwater on the upgradient side of a slurry wall” could result in induced flooding or runoff from the Site and into the residential neighborhood where Mrs. Ortiz and some of Impact’s members live. This will directly affect whether their neighborhood’s streets and even their property are subjected to runoff from UPRR’s facility. By UPRR’s own admission this is a possibility.

It is not clear what other alternatives UPRR has considered in the place of a slurry wall. Without that information, Commenters cannot be sure that UPRR plans to use the best technology to slow, stop, capture and remove all the readily recoverable DNAPL. Additionally, without that information, Commenters are not assured that UPRR’s slurry wall will result in diminishing concentrations of dissolved contaminants in the groundwater plume beneath their homes. Commenters have a justiciable interest in determining whether or not the slurry wall will achieve the goals that UPRR represents it will achieve.

**UPRR SHOULD CONSIDER THE INSTALLATION OF COMBINATION WELLS AS AN ALTERNATIVE  
REMEDIAL MEASURE TO SLOW CONTAMINANT TRANSPORT AND MAXIMIZE THE RECOVERY OF  
DNAPL**

UPRR claims that it has the removal and contamination of DNAPL under control. Specifically, UPRR has stated that, “offsite DNAPL is no longer recoverable.”<sup>1</sup> The DNAPL extraction data provided to TCEQ shows that this is not true.

Currently, UPRR plans to use what it calls Multi-Phase Extraction (“MPE”) to remove DNAPL from existing wells and from new wells to be installed. MPE has the capability of

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<sup>1</sup> Additional Information for the TCEQ Initial Draft Permit (letter dated January 15, 2021 from Kevin Peterburs to Karen Scott) Post-Response Action Care, RAP Worksheet 5.0, pg. 1 of 6.

removing both DNAPL and contaminated groundwater, which Commenters support. However, UPRR should be installing a single well in each spot, one that is more efficient at accomplishing the same goal of groundwater and DNAPL extraction. As currently proposed by UPRR the MPE's will not efficiently develop a cone of influence around each well. UPRR should be utilizing extraction technology that allows for a fully saturated thickness so that when a pump is activated the well doesn't immediately go dry.

UPRR should consider the use of combination wells ("combo wells") which could result in greater extraction of DNAPL *and* greater extraction of contaminated groundwater. These types of wells need to be of a wider diameter than what UPRR calls for, as this will allow for greater removal of both contaminated groundwater and DNAPL. The wider diameter is also required for the two pumps that are necessary and benefits the drainage of the parts of the substrate that are transmissive.

These combo wells are called such because of their ability to remove multi-phase contaminants from the subsurface like groundwater in addition to DNAPL/LNAPL. These combo wells would come with solid casing along the shallower depths (sanitary casing required by the state of Texas) and then would have screened casing all along the remainder of the length of the well to its deepest depth. There would be a fully penetrating screen to the final depth of the well. At the bottom of the well there would be a pump for DNAPL removal. Somewhere along the depth of this combo well there would be a pump for groundwater removal. Because of their design and capabilities combo wells have the potential to be more effective in removing the creosote/DNAPL and groundwater that contains the COCs, than what is currently proposed by UPRR. These are the types of wells that should be installed by UPRR and required by the Draft Permit.

#### **COMMENTERS HAVE GENERAL CONCERNS AND QUESTIONS REGARDING THE DRAFT PERMIT**

##### Arsenic

UPRR's Response Action Plan Executive Summary Revision 5 (dated Aug 31, 2020) states that the geochemical parameters of arsenic are to be determined in annual groundwater monitoring for 2021 and that, generally, UPRR believes arsenic to be naturally occurring. UPRR does state that this naturally occurring arsenate may be converted to more soluble arsenite species due to reducing conditions resulting from the degradation of petroleum hydrocarbons (that is, creosote related COCs) from the Site. However, UPRR did not provide a definitive

conclusion on whether or not that is the case. Commenters request that UPRR and TCEQ explain how UPRR's RAP is going to address the arsenic PCLE zones. To the extent UPRR has not determined if its waste is contributing at all to arsenic and to the extent that the Draft Permit does not address its remediation, then the Draft Permit is deficient and must be remedied.

### Stockpiling of Soils

Impact and Mrs. Ortiz are also concerned about the best management practices regarding stockpiles that are mentioned in a September 3, 2021 letter to Maureen Hatfield of the TCEQ titled, "Response to TCEQ Comment Letter Dated August 10, 2021." The TCEQ has apparently recommended the use of plastic sheeting for the stockpiles in order to manage contact water issues. Commenters are worried that plastic sheeting is not adequate to ensure that exposure to contaminated soils and runoff will not occur and urge both the TCEQ and UPRR to consider alternative options.

### North Bypass Construction Plan

According to the TCEQ UPRR has requested to include details about its North Bypass Construction Project. Commenters request that UPRR and the TCEQ lay out the legal sufficiency for including that project as part of the Draft Permit Materials. Comments are also concerned that the air monitoring, stormwater monitoring, and waste management plans addressed in this plan are not sufficient to protect the health of nearby residents.

### Compliance Issues 2022

On April 13, 2022, a violation at the Site was posted to TCEQ's Central Registry as having been resolved. The allegation was that the "facility failed to maintain monitoring wells to ensure the integrity of the groundwater and to prevent surface runoff infiltration until they are plugged." Impact and Mrs. Ortiz point to this incidence as an example of UPRR's need to implement measures that ensure that the monitoring wells are functioning properly. Infiltration of a monitoring well by otherwise un-contaminated surface water has the potential to skew the results of samples taken from that same monitoring well. TCEQ and UPRR must ensure the integrity of monitoring wells as they are fundamental to tracking the movement of waste, the

concentration of the dissolved phase contaminants, and determining whether concentrations are either decreasing or increasing in the subsurface over time.

### **III. Conclusion and Request for Relief**

For the reasons stated in these comments and the Prior Comments, UPRR has failed to demonstrate that its Permit Renewal/Modification No. 50343 will comply with relevant regulations. Both Impact and Mrs. Ortiz have demonstrated that they meet the affected person status for the purposes of adjudicating the legal sufficiency of the Draft Permit in a Contested Case Hearing proceeding. Through the present and Prior Comments Impact and Mrs. Ortiz have pointed out numerous deficiencies, irregularities, inconsistencies, and misunderstandings on the part of UPRR when assembling the various documents that make up its Draft Permit. These shortcomings of the Draft Permit, in addition to not complying with relevant regulations and law, will have deleterious effects on members of Impact and Mrs. Ortiz for each of the reasons expounded upon in these and in the Prior Comments.

Further, Impact and Mrs. Anna Ortiz request that the TCEQ refer the matter to SOAH for a Contested Case Hearing and that each of them be granted party status. Please feel free to contact the undersigned counsel with any questions.

Respectfully submitted,

*Rodrigo Cantu*

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**Sent:** Monday, May 9, 2022 4:46 PM  
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**REGULATED ENTITY NAME** UNION PACIFIC RAILROAD HOUSTON WOOD PRESERVING WORKS

**RN NUMBER:** RN100674613

**PERMIT NUMBER:** 50343

**DOCKET NUMBER:**

**COUNTY:** HARRIS

**PRINCIPAL NAME:** UNION PACIFIC RAILROAD COMPANY

**CN NUMBER:** CN600131098

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**COMMENTS:** Please see the attached PDF with comments. 12 pages in total.

*Based on TCEQ rule Section 1.10(h), the TCEQ General Counsel has waived the filing requirements of Section 1.10(c) to allow the filing of comments, requests, or withdrawals using this online system. The General Counsel also has waived the requirements of Section 1.10(e) so that the time of filing your electronic comments or requests is the time this online system receives your comments or requests. Comments or requests are considered timely if received by 5:00 p.m. CST on the due date.*