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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

November 14, 2013

Mr. Gary Miller, Remedial Project Manager
U.S. Environmental Protection Agency, Region 6
Superfund Division (6SF-RA)
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Re: *Draft Feasibility Study Report*, dated August 2013
San Jacinto River Waste Pits Federal Superfund Site - Comments
Harris County, Texas

Dear Mr. Miller:

The Texas Commission on Environmental Quality (TCEQ) Remediation Division, Superfund Section has completed the review of the *Draft Feasibility Study Report* (FS) dated August 2013 and received on September 3, 2013. The Draft FS was prepared by Anchor QEA, LLC (Anchor). The TCEQ comments are provided below. The "Critical Comments" section focuses on issues which must be resolved to avoid delays during the Record of Decision phase of the project.

Critical Comments:

1. The intent of the TCRA was to remove the immediate risk of exposure to contaminants until the final remedial action is performed. On behalf of the EPA, Anchor provided engineering services for the construction of this cap. These engineering services must be certified by a professional engineer (PE) with an active license in the State of Texas. Please note that our approval of the final remedy will be contingent upon the PE certification of the engineering work performed for the TCRA cap by Anchor.

2. Section 2.5.3, page 13, states: "Technologies used to withstand forces sustained by the river must be structurally sufficient to withstand a storm event with a return period of 100-years...." However, the TCRA cap was breached within a year of its construction, apparently by a routine storm event, exposing the underlying geomembrane. The FS does not sufficiently demonstrate that an enhanced version of the same technology (the preferred remedy) would be able to withstand a 100-year storm.

3. The sampling data used to evaluate the southern impoundment indicate that the distribution of contaminants in the subsurface is non-homogenous. Samples in the southern impoundment have been obtained at approximately 1 (boring/sampling

location) per acre, an insufficient density to properly characterize this soil given the pockets of highly contaminated soil previously discovered. The FS recommends institutional controls be placed only in the four exposure areas within the southern impoundment in which depth-weighted concentrations from the single soil boring within each exposure area exceeded the action level protective for the construction worker exposure pathway. The TCEQ does not consider this to be sufficiently protective given the non-homogeneous contaminant distribution, insufficient investigation of potential hot spots, and uncertainty in predicting the exposure and use patterns of future construction workers at the site. Therefore, to ensure protectiveness of the construction worker exposure pathway, the TCEQ requests that institutional controls in the form of a restrictive covenant be placed over the entire area within the identified boundaries of the southern impoundment, excluding the areas to the north and east of Market Street.

Additionally, the TCEQ requires that potential risk of exposure to contaminated soils to commercial or industrial workers, including construction workers, be evaluated over the 0-5 foot depth interval. The TCEQ has previously expressed concerns that averaging concentrations over the 0-10 foot depth interval could result in a lower average concentration not representative of the actual exposure to workers. The placement of institutional controls over entire southern impoundment, as recommended above, would also address this issue.

4. Table 3-1 provides a summary of potential ARARs. The FS should specifically consider compliance with the Texas Surface Water Quality Standards. The human health water quality standard (i.e. 30 TAC 307.6 (d)(5)(D)) for dioxin/furans (as TCDD equivalents) is 4x10-4 ug/kg (or 4x10-7 mg/kg) as fish tissue (wet weight). Looking at table 5-3 of the Baseline Human Health Risk Assessment (Integral, 2013), all of the hardhead catfish fillet exposure point concentrations for the reasonable maximum exposure and central tendency exposure exceed this threshold. Additionally, all of the exposure point concentrations for edible clam tissue and some of the results for the crab tissue (fish collection area 1 only) exceed this threshold.

5. The cost estimate for Alternative 3 in Appendix C includes long-term cap monitoring and long-term natural recovery monitoring. The TCEQ recommends the development of a list of potential failures, inspection check lists to identify these failures, and triggers that prompt additional actions. For example, what if TCDD recovery rates are lower than expected? What would be the recommended threshold value that prompts additional action such as re-evaluation of the remediation approach?

<u>General Questions and Comments</u>

a. Section 2.2, page 5: Please provide detail regarding land uses north of the site which "may result in releases of dioxins and furans" into the San Jacinto River.

b. Section 3.3, page 27: For the engineering services, PE certification and standard industry practices should be identified as "action-specific ARARs".

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c. Section 4.4, page 40, states that the raw material for solidification and stabilization includes fly ash or bottom ash. These ashes could contain elevated levels of metals. Also, 40 CFR § 423.12(b)(4) identified oil, grease and total suspended solids as contaminants in the transport water associated with these wastes. The TCEQ requests additional information demonstrating how the risks of introducing these contaminants into the river will be mitigated or minimized.

d. Section 5.3.1, page 52, 5th bullet: How will the proposed remedy prevent damage associated with anchoring within the footprint of the permanent cap?

e. Will dredging limitations be imposed to insure that the upland sand separation area will not be disturbed?

f. Section 5.3.2, page 54: What is the timeline for ongoing monitoring mentioned in the last paragraph of this section?

g. Section 6.7, page 74 says that Alternatives 4, 5, and 6 provide no predicted benefit and significantly increase the risk. But stabilization or removal always provide better protection over the long term. The report should acknowledge this.

h. Appendix B, Section 3.2, page 6: At the site "the limited water depth prohibits large vessels from operating close to the cap." This is not true at the northwest corner closest to barge traffic associated with San Jacinto River Fleet operations. This area has been deemed by the RP's consultants as too deep to feasibly fill. Storm events or human error will continue to pose a danger of barge contact with the cap.

i. Please provide a Gantt chart reflecting the updated project schedule.

If you have any questions, please contact me at (512) 239-5337.

Sincerely,

Stephen Ellis

Stephen Ellis, Project Manager
Superfund Section,
Remediation Division
Texas Commission on Environmental Quality

SE/cw

cc: Valmichael Leos, Remedial Project Manager, U.S. EPA, Region 6, Superfund Division (6SF-RA), 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202-2733
Satya Dwivedula, Remediation Division, TCEQ
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