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15 March 2019

Mr. Kenneth Shewmake
Task Order Monitor
U.S. Environmental Protection Agency – Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

RE: Response to Comments on the Sampling and Analysis Plan, Revision 00
Remedial Investigation, Lane Plating Works, Inc. Superfund Site
Dallas, Dallas County, Texas
Remedial Action Contract 2
Contract: EP-W-06-004, Task Order: 68HE0618F0309

Dear Mr. Shewmake:

EA Engineering, Science, and Technology, Inc., PBC (EA) has prepared the following memorandum that serves as a response to comments relating to the Sampling and Analysis Plan, Revision 00. The responses are based on comments received from United States Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ) on 11 February 2019, an a teleconference for the site that occurred on 20 February 2019.

Comments from EPA

General Comments:

1. EPA would like to consider an alternative strategy for evaluating groundwater that focuses on high resolution characterization for the unconsolidated alluvium underlying the site. Instead of installing the three monitoring wells identified in the SAP, we would like to consider multi-level vertical profiling of the alluvium using direct push technology. The initial transects should be focused near the potential source and along the eastern and southern property boundaries to evaluate the potential for off-site site migration and the potential for impacts from groundwater to surface water migration. Please see the November 16, 2018 EPA memorandum on technical guides to streamline site cleanup, smart scoping, strategic sampling and data management best practices. EPA would like to have a meeting or call to discuss this alternative and determine if this is practical and how it would alter the cost estimate. We would also need to discuss the appropriate method of revising the Work Plan if we decide to use this alternative strategy.

   EA Response: Per conversations with EPA, the alternative strategy will be further evaluated to be considered during the Phase 2 Remedial Investigation (RI) field activities. As requested by EPA during these conversations, the proposed location of MW-2 has been shifted east of the site, in close proximity to steam 5A2, to confirm

whether or not the groundwater gradient is in a more easterly direction toward the Trinity River.

2. EPA would also like to consider conducting a video log of the two existing water wells on the property to determine the well construction, depth and screen intervals. This information would be used to evaluate possible infiltration of contaminated water through the existing wells.

   EA Response: These are hand-dug wells that are approximately three feet in diameter, and currently assumed to be relatively shallow with no well screen. Due to these circumstances, during the Phase 1 Remedial investigation, EA will gauge the depth to groundwater into the two wells and determine the total depths of the wells. During subsequent phases of the RI, EA will video log the wells, if EPA still thinks this is appropriate.

3. The SAP should consistently use either the term "groundwater" or "ground water" rather that switching back and forth. The preferred term is "groundwater."

   EA Response: Revisions to the Sampling and Analysis Plan have been made so that "groundwater" is used consistently.

4. Due to the potential for cyanide related waste at the Lane Plating site, the frequency of cyanide analysis should be increased from 10% to 100% for groundwater, soil, surface water and sediment sampling.

   EA Response: Tables A-1 through A-4 has been updated to indicate that cyanide will be analyzed for all media at all of the sample locations. The SAP text has also been revised to reflect this.

5. A draft schedule should be included in this plan.

   EA Response: A copy of the Phase 1 Proposed Schedule has been included as part of Appendix A (Sampling Design Matrix).

6. A discussion on background sampling is needed. It is possible LSED-1 and LSED-2 could be considered background sediment values. Additional background sample locations may be needed.

   EA Response: Under Section 2.1, a subsection has been added for background sampling and states: *"Based on data collected during the Phase 1 RI field event, background sampling locations for soil, sediment, and surface water will be evaluated and the background samples will be collected from these areas, as necessary, during subsequent phases of the RI."*

Specific Comments:

7. **Page 3, Section 1.1.1:** The Task Order and Work Plan contain confidential business information and will probably not be released to the public. It may be better to paraphrase the information in these documents rather than cite them. Please describe the phased sampling approach. indicate that additional phases of sampling may be required to produce enough information to develop a ROD.

   EA Response: This section has been revised to read as possible: *"The purpose of this investigation is to conduct an RI at the site to develop a remedy that eliminates, reduces, or controls risk to human health and the environment. The goal is to collect an adequate amount of data necessary to support the selection of an approach for site remediation that can be used to support a Record of Decision (ROD). A phased sampling approach will be used to collect the RI data, and additional phases of RI sampling may be required to produce enough information to develop the ROD."* Reference to these documents has also been removed from other sections of the text as well as the References Section.

8. **Page 3, second paragraph of section 1.1.2:** The last sentence in the paragraph states there are no schools, churches, or daycare facilities in close proximity to the site. Head start at Sunnyview is 1,500 feet (ft.) (.28 miles) from the site, Maynard Jackson School is 2,184 ft (.41 Miles) from the site, JN Ervin Elementary is 3000ft (.56 miles) from the site. Another two schools are within 4,000 ft of the site. The proximity to churches is not needed for the risk assessment as exposure time is limited. Please expand the search radius to 1 mile and include all potential sensitive receptors such as senior centers, nursing homes, and daycare centers.

   EA Response: The second paragraph has been revised to state, *"There are no daycare facilities, schools, or churches located in the immediate vicinity of the facility. However, as indicated on Figure 2, there are several day care facilities, schools, a college, and other receptors located in the surrounding community."* Figure 2 has also been updated to show the location of these receptors.

9. **Page 12, Table 2, Data Quality Objectives, Step 2:** Under Goals of the Study add the following. Evaluate a limited number of collected samples for VOCs, SVOCs, PCBs, and PFCs to determine if these COPCs are present at the site.

   EA Response: The requested addition has been made to Table 2.

10. **Page 13, Table 2, Data Quality Objectives, Step 3:** Please change the last sentence of the first bullet from "risks to human health and the environment can be assessed" to risk to human and ecological receptors can be assessed.

    EA Response: The requested revision has been made.

11. **Page 14, Table 2, Data Quality Objectives, Step 5:** Which specific "screening levels" will be used as the comparison values for groundwater, soil, surface water and sediment? Please list the screening levels selected and refer to the appropriate screening value tables. (Table D-1A to D-4B).

    EA Response: EA added text to Table 2, Step 5, which references the Appendix D Tables that list the screening values. A note is included at the bottom of each of the tables that explains how the Project Screening Level is determined for each analyte associated with each media.

12. **Page 24, Groundwater Sampling:** Will groundwater samples be filtered? Please describe any special requirements needed to collect samples for PFC analysis.

    EA Response: A sentence has been added that states "*The groundwater samples collected for dissolved metals will be filtered during sample collection. PFC sampling requires special handling, and will be performed using EA SOP 073, which documents proper sampling procedures*".

13. **Page 24, Groundwater Sampling:** The current plan for groundwater sampling in Phase one will include sampling five wells. This makes the approach of sampling 10% of wells for full suite impractical. Please change this to 20%. This change will need to be made throughout this document. If the alternative approach outlined in general comment #1 is implemented this number may be revised.

    EA Response: The text has been revised to indicate 20% of the collected groundwater samples will be analyzed for full suite analyses during the Phase 1 RI field activities.

14. **Page 24, Monitoring Well Instillation:** We need to make sure the materials used in construction of the well will not interfere with PFC analysis.

    EA Response: When scoping the well installation activities, EA will require the drilling subcontractors to price well materials that are certified to not contain PFCs, and will require they submit proof as part of the bid process, as well as when brining the materials on site for use.

15. **Page 32, Table 7. Frequency of Field Quality Control Samples**: Matrix spike/matrix spike duplicate samples are being collected for organic and inorganic chemicals, not just organics (Sections 2.3.12 and 2.3.13).

    EA Response: Matrix Spike and Matrix Duplicates are collected and submitted for inorganic analyses at a frequency of 1 per 10 samples (or per U.S. Environmental Protection Agency Region 6 Laboratory requirements). Table 7 has been updated to show this.

16. **Page 33, Section 2.3.2.1, Soil Borings:** The last paragraph on page 33 has two typos. "Appendix A contains the Sampling Design Matrix for soil samples….As indicated on this stable (typo, should be table), the following intervals of surface and subsurface soil will sampled (missing "be") from the soil borings and …..analyses"

    EA Response: The typo errors have been corrected as suggested.

17. **Page 47, Section 2.5.1 Field Analytical Methods:** Dissolved oxygen (DO) content should be monitored in groundwater and surface water. DO could become biologically significant in the surface water analysis.

    EA Response: The suggested revision has been made.

18. **Figure 1:** Please change the TOM to Kenneth Shewmake. The former Superfund QA officer Walt Helmick has retired, please change this to Sala Senkayi.

    EA Response: The suggested revisions have been made to Figure 1.

19. **Appendix A (Sampling Design Matrix), Tables A-1 through Table A-4:** Due to the potential for cyanide related waste at the Lane Plating site, the frequency of cyanide analysis should be increased from 10% to potentially 100%.

    EA Response: Tables A-1 through A-4 have been updated to indicate that cyanide will be analyzed for all media at all of the sample locations. The SAP text has also been revised to reflect this.

20. **Tables A-1 through A-5:** The tables associated with sample location figures are not listed in the index.

    EA Response: The list of Appendices and the Appendices cover sheet for Appendices A and D have been revised to include the Figures and/or Tables included in them in order to allow the reader easier access to them.

21. **Figure A-3, Figure A-4:** These figures do not show any sample locations near the large pond or in the seasonal creeks north of LSED-11. In addition to this the small pond needs to be sampled. We should consider moving 3 sediment and surface water sample locations to cover these areas or evaluate the cost of adding 3 additional sediment and surface water locations.

    EA Response: Per recent discussions with EPA as well as the 20 February 2019 phone call, Phase 1 RI sample locations LSED/LSW-1, LSED/LSW-2, and LSED/LSW-3 have been shifted in order to address sampling the two ponds located east of the site, as well as the seasonal drainage features located between the ponds and north of LSED/LSW-11. If samples LSED/LSW-4 and/or LSED/LSW-5 indicate the presence of site-related COPCs, further sample locations will be considered upstream (west) in the unnamed stream during the Phase 2 RI sampling event. This approach will also allow extra time to obtain site access to the unnamed stream (if needed), as well as allowing further

evaluation of surface water flow/sediment transport behavior of the unnamed creek located south of the site. If further sampling in the upstream portion of the unnamed creek is warranted, a portion of these samples may also be used to evaluate background conditions for sediment and surface water in this drainage feature.

22. **Table D-1A:** Please list TCEQ PCL values on this table. The primary human health screening values should be EPA RSLs but the TCEQ PCL values should also be listed. The TCEQ ecological screening values can be used instead of the RAIS screening values. The TCEQ PCL values are listed on Table D-1B.

    EA Response: The suggested revision has been made.

Comments from Ms. Rebecca Storms, P.G., TCEQ Project Manager

1. **Section 1.1.4.1, last paragraph** – TCEQ recommends adding a statement from the Conceptual Site Model Technical Memorandum (CSMTM) (October 2018), Section 4.2, last sentence, that indicates "The list of COPCs will be refined as the investigation progresses, which may result in identification of additional COPCs."

    EA Response: The suggested revision has been made.

2. **Section 1.3.2.1, last paragraph and Section 2.6.l, sixth paragraph** – The report specifies Matrix spike/Matrix spike duplicates (MS/MSDs) samples are generated for organic analytes or methods. TCEQ notes that in Table 3, MS/MSDs are listed for both organic and inorganic analyses and Laboratory control sample/Laboratory control sample duplicates (LCS/LCSDs) are listed for organic analyses only.

    EA Response: Sections 1.3.2.1 and 2.6.l, as well as Table 3 have been updated to address the above comment. There are different QC samples depending on whether the samples are analyzed at the EPA Houston Laboratory or one of EPA's CLP laboratories, versus if it is sent to a private laboratory for analyses. And confirmation of which EPA CLP laboratory will analyze the samples is generally not received until a few days before the scheduled sampling event, As such, Table 3 generally groups all QC methods together and includes all of the QC for all methods since it is not known which laboratory will be doing the analyses at the time the SAP is being prepared.

3. **Section 1.5.4**, last bullet – TCEQ recommends including sample location maps as the minimum required figures as part of the Data Evaluation Summary Report.

    EA Response: The suggested revision has been made.

4. **Section 2.1, Phase 1 investigation elements for ground water, soil, and surface water and sediment sampling –**

   a. TCEQ notes that cyanide is one of the additional analyses planned for sample subsets (10 percent) of ground water, soil, and surface water and sediment samples collected during Phase 1. The TCEQ recommends increasing the percentage of sample subsets that will include cyanide analysis for all media as cyanide is identified as a site contaminant of potential concern (COPC) in Section 1.1.4.1 of the report.

      EA Response: Tables A-1 through A-4 has been updated to indicate that cyanide will be analyzed for all media at all of the sample locations. The SAP text has also been revised to reflect this.

   b. TCEQ notes the current total petroleum hydrocarbon (TPH) analysis planned is by method TX1005. The TCEQ requests clarification of the EPA's intended use of TPH data collection. If EPA anticipates using fractionated TPH data for future risk calculations, the TCEQ recommends running additional analysis of TPH by TX1006 on samples with detected concentrations of TPH by TX1005 to determine risk-based cleanup levels for each identified TPH source type.

      EA Response: TPH is currently not an anticipated site-related COPC. However, because 10% of the samples will undergo a full suite of laboratory analyses during the Phase 1 RI field event, 10% of the collected samples will undergo TPH analyses by TX1005. If TPH is identified as a COPC based on the Phase 1 data, the Phase 2 RI sampling program will be expanded to include additional samples that are analyzed by both TX1005 and TX1006.

5. **Section 2.1**, Phase 1 investigation element for surface water and sediment sampling, last paragraph, first sentence, Section 2.3.4.3, first paragraph, first sentence, and Appendix A, Figures A-3 and A-4 - the report indicates surface water and sediment samples collected under Phase 1 will include the closest stock pond situated east of the site; however, the TCEQ notes that Figures A-3 and A-4 do not show Phase 1 sediment or surface water samples located in either of the stock ponds. Please update Figures A-3 and A-4 to reflect the proposed sampling of the closest, smaller stock pond during Phase I Additionally, the TCEQ acknowledges that the second, larger stock pond sampling may wait until Phase 2, if needed.

   EA Response: Per recent discussions with EPA as well as the 20 February 2019 phone call, Phase 1 RI sample locations LSED/LSW-1, LSED/LSW-2, and LSED/LSW-3 have been shifted in order to address sampling the two ponds located east of the site, as well as the seasonal drainage features located between the ponds and north of LSED/LSW-11. If samples LSED/LSW-4 and/or LSED/LSW-5 indicate the presence of site-related COPCs, further sample locations will be considered upstream (west) in the unnamed stream during the Phase 2 RI sampling event. This approach will also allow extra time to obtain site access to the unnamed stream (if

needed), as well as allowing further evaluation of surface water flow/sediment transport behavior of the unnamed creek located south of the site. If further sampling in the upstream portion of the unnamed creek is warranted, a portion of these samples may also be used to evaluate background conditions for sediment and surface water in this drainage feature.

6. **Section 2.3.1, first paragraph** – TCEQ requests clarification on whether ground water samples collected for dissolved metals analysis will be field-filtered using a 0.45-micron disposable filter, as described for surface water samples in Section 2.3.4.1. Additionally, the report and Standard Operating Procedures (SOPs) do not indicate if water samples for total metals analysis will be field-filtered should turbidity readings remain above 10 nephelometric turbidity units (NTUs).

   EA Response: This paragraph has been revised to include *"Groundwater samples collected for dissolved metals will be field-filtered using 0.45-micron disposable filters"*. To clarify, EA's Standard Operating Procedures do not include field filtering water samples undergoing total metal analyses.

7. **Sections 2.3.2.1 and 2.3.3**

   a. TCEQ notes that the soil sampling methodology in this report specifies grab samples collected from discrete locations and differs from the methodology used in the EPA Removal Action, which used composite 5-point soil sampling from a grid system. The TCEQ recommends future reports that include both datasets provide a statement to explain how they are comparable.

      EA Response: This recommendation is noted.

   b. Paragraphs four and two of Sections 2.3.2.1 and 2.3.3, respectively, indicate surface soil samples will be collected from the 0.0 to 0.5 foot (ft.) and 0.5 to 2.0 ft. intervals. TCEQ considers direct contact exposure pathways for soil to a depth of 5 feet below ground surface (ft. bgs.) for Commercial/Industrial land use and a depth of 15 ft. bgs. for residential land use (30 TAC 350.4(a)(88) in the Texas Risk Reduction Program (TRRP) rule (TCEQ 2009)). The TCEQ recommends collecting additional soil samples in Phase1 if there are field indicators of contamination below 2 ft. bgs. and in Phase 2 if Phase 1 soil sampling does not delineate contamination to 2 ft. bgs. TCEQ will not be able to concur on unrestricted land use if the 2 ft. sample intervals exceed screening levels protective of direct contact in soils.

      EA Response: Per the 20 February 2019 call, it was agreed that the intervals for a portion of the soil boring locations would be shifted from the total depth interval (15 feet or refusal) to the 2 to 5 feet interval for soil boring locations suspected to be location within/in close proximity to suspected source areas. And the more distal soil boring locations would still be sampled at 0.0 – 0.5 feet, 0.5 – 2.0 feet, and (15 feet or refusal) as originally planned, in order to better determine is site COPCs have migrated by way of shallow groundwater flow. Based on the results of the Phase 1

soil sampling, the Phase 2 soil sampling event would be expanded as necessary to address data gaps, including additional soil boring locations, and /or deeper depth intervals at some of the existing locations if the deepest Phase 1 interval still had screening level exceedances.

Additional TCEQ comments were received on 8 March 2019, and per Additional TCEQ Comment 1, the Phase 1 Soil Sampling Design Matrix (Appendix A) and SAP text has been revised, and a summary of the depth interval adjustments is presented below:

Boring Identification	Total Depth	Soil Sample Intervals (feet)			
		0.0–0.5	0.5–2.0	2.0–5.0	Total Depth of 15 (or refusal)
DSB-1	15	X	X		X
DSB-2	15	X	X	X	X
DSB-3	15	X	X		X
DSB-4	15	X	X		X
DSB-5	15	X	X	X	X
DSB-6	15	X	X		X
DSB-7	15	X	X	X	X
DSB-8	15	X	X	X	X
DSB-9	15	X	X	X	X
JSB-1	15	X	X	X	X
JSB-2	15	X	X	X	X
JSB-3	15	X	X	X	X
JSB-4	15	X	X	X	X

8. **Section 2.3.4.3, first paragraph, second sentence** – TCEQ requests clarification of the definition of potential point of entry (PPE) in this report versus the HRS. The HRS identifies four PPE locations, none of which are planned sampling locations in this report. The HRS additionally indicates that the PPEs represent focal points of entry of the sheet-flow pattern into surface water bodies and any point on the segment of Stream 5A2, the small stock pond, the unnamed stream, or the wetland layer that is intersected by overland flow from the site could be considered a PPE.

   EA Response: In response to other comments concerning sediment and surface water sample locations, sample locations LSED/LSW-1, LSED/LSW-2, and LSED/LSW-3 have been shifted. This will allow these samples locations to be used for sampling the two ponds located east of the site, the seasonal drainage features located between the ponds and north of LSED/LSW-11, and the PPEs associated with this area. Prior TCEQ sample locations SE-03/SW-04 was collected in the vicinity of PPE3, while SE/SW-04, and SE/SW-05 were sampled on prior occasion in association with PPE 2. Sample location LSED/LSW-01 will be collected from the small pond to further evaluate this PPE 1, and LDED/LSW-2 has been shifted to evaluate PPE4 as well as conditions in the intermittent drainage system downstream of PPE 3, and sample location LSED/LSW has been shifted to the large pond to address whether or not this surface water feature has been impacted downstream of PPE 3.

These areas, as well as the area associated with PPE 1 will be evaluated further, as needed, based on the results of the Phase 1 RI sampling event.

9. **Section 2.3.4.3, first paragraph, last sentence** – TCEQ notes that Phase 1 sampling is not scoped to include sample collection from Five Mile Creek located south of the site drainage system. As the CSMTM recognizes, Five Mile Creek may connect to the site drainage system during flood events. Although a connection was not observed during the SI, the TCEQ recommends EPA consider sampling Five Mile Creek during future RI sampling if contamination is confirmed present in the site drainage system.

   EA Response: This recommendation is noted and will be considered during future phases of the RI investigation.

10. Section 2.3.4.3, second paragraph, second bullet, "All sediment samples will be collected from 0.0-0.5 ft bgs" – TCEQ requests justification for the selected sediment sampling depth. The sediment sampling depth interval should account for the known biologically active zone as well as any potential for resuspension/exposure of COPCs that may be found at greater depths. Additionally, TRRP defines the sediment point of exposure (POE) for human health as the upper one foot of sediment (30 TAC 350.37(k)). Therefore, samples collected for evaluation of human health pathways may be inappropriate for ecological risk assessments. Field observations of sediment characteristics (color intervals, texture and consistency, and biological inclusions) and physical mechanisms (deposition and erosion) should also be accounted for when selecting the sampling interval. For more information, please see Sections 3.1.3 and 3.2.3.1 of TRRP-15eco (TCEQ 2013), and Section 2.8 of RG-263 (TCEQ 2018).

    EA Response: During the Phase 1 RI, the interval for sediment sample collection will be 0.0 to 0.5 feet. Based on the results of the Phase 1 sediment sampling event, additional sediment samples may be collected from 0.5 to 1.0 feet in the locations at Phase 1 locations where COPCs exceed screening criteria in the 0.0 to 0.5 feet interval.

11. **Section 2.3.4.3, last paragraph** – The report discusses a wetlands survey; however, no other mention of a wetlands survey is indicated in the planned RI Phase 1 scope of work. The TCEQ agrees a wetlands survey should be completed if contamination is verified in the surface water pathway.

    EA Response: A wetlands survey will be completed in future phases of the RI if the Phase 1 RI data indicates a complete exposure pathway for surface water.

12. **Section 2.3.10, fourth bullet** – TCEQ notes that the term "surface water" is incorrectly used in place of "sediment" in this bullet and should be corrected.

    EA Response: The suggested revision has been made.

13. **Section 2.3.10, ninth bullet** – TCEQ notes that the third field example given "190701" does not correctly match the example date and should be corrected to "190902."

    EA Response: The suggested revision has been made.

14. **Section 2.3.11, first paragraph** –TCEQ recommends using a blind field duplicate nomenclature instead of adding a "-D" to the parent sample designation.

    EA Response: Due to the use of Scribe, which is a software tool developed by EPA to assist in the process of managing environmental data, use of blind duplicates creates confusion at a later date when a large volume of data is being managed and evaluated, and samples have to be cross-referenced when doing data management. As such, on EPA Task Orders, it is protocol to designate duplicates with a "D", versus using blind duplicates.

15. **Table 2, Data Quality Objectives –**

    a. Step 2 - the TCEQ recommends adding the following objectives:

        i. Confirm no active private wells that may be unregistered or unlisted are in the site vicinity by completing a field receptor survey.

        ii. Evaluate the hydraulic gradient of the shallow ground water bearing unit(s) in the site vicinity.

        iii. Evaluate and delineate the small, interconnected streams and ponds of the surface water pathway located east of the site.

        EA Response: Per the 20 February 2019 phone call, items ii and iii have been added to Table 2, Step 2. However, EPA deferred to including item i in the SAP, as this activity may be placed under the site's Community Plan.

    b. Step 5, third bullet, "If it does pose a risk or the possibility of a continuing release to ground water," - the TCEQ recommends revising this to "If it does pose a risk or the possibility of a continuing release to ground water and surface water," because overland flow may release soil contaminants directly to the surface water pathway.

        EA Response: Statement has been revised to "*If it does pose a risk or the possibility of a continuing release to groundwater and/or surface water*"

    c. Step 7 – TCEQ recommends the following revisions:

i. Fourth bullet, "Ground water samples will be collected from the existing on-site well," – revise to "Ground water samples will be collected from the existing on-site wells," because there are two existing site water wells.

EA Response: The suggested revision has been made.

ii. Sixth bullet, "Soil borings and soil samples will be collected during Phase 1 to delineate soil contamination and confirm source areas," – revise to "Soil borings and soil samples will be collected during Phase 1 to delineate soil contamination and confirm source areas and site lithology."

EA Response: The suggested revision has been made.

16. **Table 6, Standard Operating Procedures** – TCEQ notes that Standard Operating Procedure (SOP) number 032 is not provided in Appendix C.

EA Response: SOP 32 covers installation of piezometers, which are not planned for the Task Order. It was inadvertently listed in Table 6, and has been removed per the above comment.

17. **Appendix A tables, general comment** – TCEQ recommends adding some field blank samples under the Quality Control (QC) samples count in case field conditions necessitate collection, as described in Table 7.

EA Response: Because site-related COPCs are metals and cyanide, field blanks will not be collected as part of the Phase 1 RI field activities. If the Phase 1 RI data confirms that VOCs are site-related COPCs, field blanks will be added to the sampling regiment for subsequent phases of the RI.

18. **Appendix A, Table A-1, Sampling Design Matrix** – Phase 1 Ground Water Sampling - the TCEQ notes an existing site water well is designated for sample subsets additional analyses. TCEQ recommends designating a monitoring well for the additional analyses instead of a site water well because the well construction information will be known and constrained to site specifications.

EA Response: MW-01 has been designated as the well that will be analyzed for the full suite of analytes since it is anticipated this well will be installed within/or in close proximity to a potential source area associated with the site.

19. **Appendix A, Table A-2, Sampling Design Matrix** – Phase 1 Soil Sampling - the TCEQ recommends changing the designated sample subsets additional analyses for DSB-2 and MW-2 to DSB-3 or DSB-4 and MW-3, respectively. DSB-3 and DSB-4 are located in the vicinity of a former soil waste pile and known soil contamination (previous sample locations I10 and J10). MW-3 is located in closer proximity to known contaminated soil areas and the overland route.

EA Response: As requested full suite analyses has been shifted from of DSB-2 to DSB-3, and from MW-2 to MW-3.

20. **Appendix A, Table A-3, Sampling Design Matrix** – Phase 1 Sediment Sampling – The sampling tool is not designated as disposable. If using non-dedicated equipment, all analytical methods should be included in equipment blank analysis.

    EA Response: Sediment samples will be collected using sediment core samplers with disposable sleeves or laboratory-grade disposable scoops. This has been added to the Note Section of Table A-3, and clarified under Section 2.3.4.2 of the SAP text.

21. **Appendix A, Table A-4, Sampling Design Matrix – Phase 1 Surface Water Sampling**

    a. The sampling depth is indicated as 0.0-1.0 feet below surface or shallower; however, Section 2.3.4.3 of the report indicates a depth of 0.0-0.5 feet. The table and report should be updated for consistency.

       EA Response: Table A-4 has been revised to indicate a sample interval of 0.0-0.5 feet so that it is consistent with the SAP text.

    b. The table notes indicate "Analyses for hexavalent chromium may be eliminated if it is not detected in soil or ground water samples." The TCEQ recommends adding sediment to this statement.

       EA Response: The suggested revision has been made.

22. **Appendix A, Table A-5, Sample Design Matrix Investigation-Derived Waste Sampling** – TCEQ notes that TCLP Metals analysis is listed twice in this table.

    EA Response: Table A-5 has been updated so that TCLP metals only appear once on the table.

23. **Appendix A figures, general comment** – TCEQ recommends adding "Proposed" to figure titles as specific sample locations will likely change in the field.

    EA Response: As requested, "Proposed" has been added to the Appendix A sample location figures.

24. **Appendix A, Figure A-1, Phase 1 Remedial Investigation Monitoring Well and Water Well Sample locations** –

    a. TCEQ notes that two of the three proposed monitoring well locations are situated adjacent to a stream or pond in the site vicinity, most likely with the goal of evaluating the surface water to ground water pathway as stated in Table 2, Step 2. TCEQ recommends that Phase I monitoring wells be situated to confirm the presence of contamination in shallow ground water and located in potential source areas. The ground water to surface pathway could be evaluated in Phase 2,

if needed. Alternatively, ground water samples could be collected in additional locations by installing temporary wells in Phase 1 or Phase 2 prior to installing additional permanent monitoring wells. Temporary wells could overlap with soil boring locations in suspected source areas.

EA Response: As discussed and agreed upon during the 20 February 2019 phone call, the location of MW-1 has been shifted to the east side of the waste storage shed since this is an area where blasting sand has been identified, and staining has been observed outside this building. The location of MW-2 was moved to a location adjacent to Stream 5A2 per a recommendations provided by EPA. The locations of MW-2 and MW-3 can help to determine whether impact has migrated offsite and if there is a groundwater to surface water pathway, since is currently a community concern that needs to be addressed. The groundwater assessment activities will be expanded as necessary during the Phase 2 RI activities, based on the findings of the Phase 1 RI field activities.

b. TCEQ additionally recommends placing monitoring wells 1) adjacent to the site water wells for comparison of analytical data because the water wells have unknown depths and screen intervals, and 2) at an upgradient location.

EA Response: The above recommendations will be taken into consideration as part of the Phase 2 RI field activities.

25. **Appendix A, Figure A-2, Phase 1 Remedial Investigation Soil Sample locations –**

a. The TCEQ notes that the Regional Screening Level (RSL) values listed for chromium are for trivalent chromium and recommends adding a note on the figure to explain this.

EA Response: Figure A-2 has been updated to include both trivalent and hexavalent designation for screening values as recommended.

b. The TCEQ recommends adjusting the sample location for JSB-1 to the fence line south of the site facility building where ponded water has been observed to collect after rain events to assess this location as a potential source area (HRS, Reference 14, page 5, photo 10).

EA Response: Five scoped soil boring locations (DSB-8 through DSB-12) had been reserved to place at additional locations, as needed, during the Phase 1 RI field event. One of these borings (DSB-9) has been placed at the above recommended location.

c. The TCEQ recommends adjusting the sample location for DSB-6 to the area south of F7 where there is a gap in planned nature and extent sample locations.

EA Response: Five scoped soil boring locations (DSB-8 through DSB-12) had been reserved to place at additional locations, as needed, during the Phase 1 RI field event. One of these borings (DSB-8) has been placed at the above recommended location.

d. The TCEQ recommends adding potential source area soil boring locations near previous sample locations I10 and G5, where some of the deepest known exceedances of RSLs are located, to determine the vertical extent of contamination. This may be considered in future RI sampling as well.

EA Response: This recommendation will be considered during the Phase 2 RI field activities.

26. **Appendix A, Figures A-3 and A-4, Phase 1 Remedial Investigation Sediment and Surface Water Sample locations –**

a. TCEQ notes that there is a rectangular depression area situated between the site facility building and small stock pond and near the overland route that may be frequently or permanently filled with water (HRS, Reference 14, page 13, photo 26). This feature was not sampled during the SI. The TCEQ strongly recommends EPA sample surface water and sediment from this feature during Phase I by adding to or rearranging current planned sample locations.

EA Response: As discussed during the 20 February 2019 phone call, soil boring locations DSB-5 and/or DSB-7 will be used to assess this area as part of the Phase 1 RI field activities. If it is determined this area is impacted based on the Phase 1 sampling event and this feature is determined to hold water perennially, then additional characterization of this feature, to include sediment and/or surface water will be considered during the Phase 2 RI field event.

b. The TCEQ notes the stream layer on these figures may not be accurate and the interconnected stream network east of the site is complex, branching, and not fully mapped. EPA should be prepared to modify planned sediment and surface water locations as needed based on field conditions.

EA Response: This comment is acknowledged, and EA may shift a portion of the sample locations based on encountered field conditions.

27. **Appendix D tables, general comments –**

a. Table notes should be updated to indicate which chromium screening values are based on trivalent chromium.

EA Response: A designation has been added in the analyte name to denote it as hexavalent, trivalent, or total chromium in the Appendix D tables.

b. Table note 1 should be updated with the most recent RSLs (November 2018).

EA Response: The requested revision has been made.

c. Several screening values contain errors. Screening values should be quality controlled (QC) to ensure accuracy and use of the most recent, updated values.

EA Response: The Appendix D Tables have been revised per the comments provided by EPA and TCEQ, and they have undergone further internal review following the revisions.

28. **Appendix D, Table D-1B, Screening Criteria for Soil and Private Laboratory Reference Limits -** table note 5 should be updated with the most recent TCEQ PCLs (April 2018). Additionally, the following information should be added in this note: total soil combined for a 0.5-acre source area.

EA Response: The requested revisions have been made.

29. **Appendix D, Tables D-2A and D2B, Screening Criteria for Ground Water and CLP Reference Limits and Private Laboratory Reference Limits –**

a. Table D-2A – Chromium has a note 8 next to it, but there is no associated note in the table.

EA Response: The "8" was a relic used in a previous table version. Per comment 27A, the analyte name has been revised to denote these screening values are for total chromium, and which are for trivalent chromium.

b. Table D2A – The MCL for cadmium is 5 ug/L.

EA Response: Table D2-A has been revised as noted above.

c. Note 3 regarding TCEQ PCLs should be updated to indicate residential values.

EA Response: The requested revision has been made

30. **Appendix D, Tables D-4A and D-4B, Screening Criteria for Surface Water and CLP Reference Limits and Private Laboratory Reference Limits –**

a. A note should be added to cite the source of the TRRP Ecological Benchmarks.

EA Response: The requested revision has been made.

b. TCEQ recommends adding the following to Table note 2: "The TSWQS Human Health for Fish Only Consumption value multiplied by 10 represents the value for an incidental fishery, as discussed in the TCEQ Regulatory GuidanceRG-366/TRRP 24 'Determining PCLs for Surface Water and Sediment' (December 2007)." Refer to this guidance to determine applicability to site data.

EA Response: The requested revision has been made.

c. Table D-4B - National Recommended Water Quality Criteria, Aquatic Life Freshwater Chronic screening values are incorrect for alkalinity and pH.

EA Response: Table D-4B has been revised with the correct values as noted above.

Comments from Tracie Phillips, Ph.D., Toxicology Section, Toxicology Division, Texas Commission on Environmental Quality

Screening Criteria for Soil (Tables D-1A and D-1B)

While tables D-1A and D-1B provide several different types of soil screening levels for consideration as the overall project screening levels, the TCEQ TRRP residential total soil combined ($^{Tot}Soil_{Comb}$) protective concentration levels (PCLs) were not included in the Table D-1A, but they were included in Table D-2A. There are two analytes from Table D-1A with $^{Tot}Soil_{Comb}$ PCLs that are lower than the proposed project screening level (cis-1,2-dichloroethene and 2-nitroaniline) (see Table 1). There are three analytes from Table D-1A without a proposed project screening level that do have $^{Tot}Soil_{Comb}$ (4-bromophenyl-phenylether, 4-chlorophenyl-phenylether, and carbazole) (Table 1).

In addition, total PCBs are not listed as an analyte in Tables D-1A or D-1B, unlike all the other Appendix D tables. For consistency, total PCBs should be considered as an analyte here, or an explanation of why it was excluded should be provided.

Table 1. Analytes from Table D-1A with $^{Tot}Soil^{Comb}$ PCL values that should be considered

Analyte	*CASRN*	*Project Screening Level (mg/kg)*	*Residential $^{Tot}Soil^{Comb}$ PCL mg/kg)*
cis-1,2-Dichloroethene	156-59-2	160	140
2-Nitroaniline	88-74-4	74.1	14
4-Bromophenyl-phenylether	101-55-3	NS	0.28
4-Chlorophenyl-phenylether	7005-72-3	NS	0.16
Carbazole	86-74-8	NS	230

EA Response: Per the above comments, and other received comments, Tables D-1A and D-1B have been revised to include the recommended TCEQ TRRP Tier 1 PCLs for soil based on a 0.5 acre source area, and the TCEQ Ecological Soil Benchmarks. The screening values mentioned above will also be considered when evaluating the site for risks. D-1A has also been revised to include total PCBs. Cyanide will be submitted for analyses the EPA Houston Laboratory or one of its CLP Laboratories, so it has been shifted to Table D-1A.

Screening Criteria for Ground Water (Tables D-2A and D-2B)

While tables D-2A and D-2B provide several different types of ground water screening levels for consideration as the overall project screening levels and do include TCEQ TRRP residential groundwater ingestion ($^{GW}GW_{Ing}$) PCLs, some analytes on Table D-2A did not utilize the lower TRRP $^{GW}GW_{Ing}$ PCLs as the proposed project screening level. Two analytes, bromodichloromethane and dibromochloromethane, have $^{GW}GW_{Ing}$ PCLs that are lower than the proposed EPA MCL (Table 2).

In addition, there are two errors in the $^{GW}GW_{Ing}$ PCLs used. The first is for total PCBs on Table D-2A, which lists no values available. However, total PCBs has a $^{GW}GW_{Ing}$ PCL of 0.5 µg/L, which should be utilized as the proposed project screening level. The second error is on Table D-2B for the $^{GW}GW_{Ing}$ PCL listed for hexavalent chromium; 0.0001 mg/L is the listed value but 0.1 mg/L is the correct value (Table 3).

Table 2. Analytes from Table D-2A with $^{GW}GW_{Ing}$ PCL values that should be considered

Analyte	*CASRN*	*Project Screening Level (µg/L)*	*Residential $^{GW}GW_{Ing}$ PCL (µg/L)*
Bromodichloromethane[6]	75-27-4	80	15
Dibromochloromethane	124-48-1	80	11

Table 3. Analytes from Tables D-2A and D-2B with errors

Analyte	*CASRN*	*Project Screening Level (µg/L)*	*Residential $^{GW}GW_{Ing}$ PCL (µg/L)*
[Table D-2A] Total PCBs	1336-36-3	NS	0.5
[Table D-2B] Hexavalent Chromium	18540-29-9	0.0001	0.1

EA Response: Note 4 at the bottom of Table D-2A defines how screening values for groundwater are selected. It states: "the project screening level was selected to satisfy EPA requirements. The EPA MCL will be used; if no EPA MCL standard exists for an analyte, then the project screening level is the lower of the EPA Tap Water RSL or TCEQ TRRP PCL, if achievable". The screening values mentioned above and provided in the below Table 2 will be considered when evaluating the site for risks.

Table D-2A has been revised to include the TCEQ PCL of 0.5 0.5 µg/L for total PCBs. The hexavalent chromium values in Table D-2B, have been converted into µg/L, making the TCEQ PCL for hexavalent chromium 100 µg/L. Cyanide will be submitted for analyses the EPA Houston Laboratory or one of its CLP Laboratories, so it has been shifted to Table D-2A.

Screening Criteria for Sediment (Tables D-3A and D-3B)

While tables D-3A and D-3B provide several different types of sediment screening levels for consideration as the overall project screening levels, the TCEQ TRRP residential total combined sediment ($^{Tot}Sed_{Comb}$) PCLs were not included. The TCEQ last published these PCLs in 2006. Since toxicity factors have changed since 2006, the TD preliminarily calculated draft PCLs with

updated toxicity factors in accordance with the exposure factors listed in TRRP 24. However, it is important to note that these are draft PCLs only and that official PCLs are calculated by the Technical Support Section. Comparing these draft PCLs to the sediment tables provides sediment screening levels for 39 (of 158) analytes from Table D-3A and 2 (of analytes from Table D-3B that do not have a proposed project screening level (see Tables 4 & 5).

Table 4. Analytes from Table D-3A with Draft Residential $^{Tot}Sed_{Comb}$ PCLs that should be considered

Analyte	*CASRN*	*Project Screening Level (mg/Kg)*	*Draft Residential $^{Tot}Sed_{Comb}$ PCL – 2018*
1,2-Dibromo-3-chloropropane	96-12-8	NS	1.78E+01
1,2-Dibromoethane (EDB)	106-93-4	NS	6.61E+03
1,2-Dibromoethane (EDB)	106-93-4	NS	6.61E+03
Bromochloromethane	74-97-5	NS	2.94E+04
Chloroethane	75-00-3	NS	2.94E+05
cis-1,3-Dichloropropene	10061-01-5	NS	7.35E+01
Cyclohexane	110-82-7	NS	3.67E+06
Methyl Acetate	79-20-9	NS	7.35E+05
Methylcyclohexane	108-87-2	NS	3.67E+06
trans-1,3-Dichloropropene	10061-02-6	NS	2.20E+04
1,4-Dioxane	123-91-1	NS	2.20E+04
2,2'-Oxybis (1-chloropropane)	108-60-1	NS	2.03E+02
2,4-Dimethylphenol	105-67-9	NS	3.06E+03
2,4-Dinitrophenol	51-28-5	NS	3.06E+02
2,6-Dinitrotoluene	606-20-2	NS	2.09E+01
2-Nitroaniline	88-74-4	NS	4.59E+01
2-Nitrophenol	88-75-5	NS	3.06E+02
3,3'-Dichlorobenzidine	91-94-1	NS	3.16E+01
3-Nitroaniline	99-09-2	NS	4.59E+01
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	NS	1.53E+01
4-Bromophenyl-phenylether	101-55-3	NS	9.47E-01
4-Chlorophenyl-phenylether	7005-72-3	NS	9.47E-01
4-Nitroaniline	100-01-6	NS	6.12E+02
4-Nitrophenol	100-02-7	NS	3.06E+02
Acetophenone	98-86-2	NS	1.53E+04
Benzaldehyde	100-52-7	NS	7.35E+04
Benzo(b)fluoranthene	205-99-2	NS	1.16E+02
bis(2-Chloroethoxy)methane	111-91-1	NS	1.29E+01
Caprolactam	105-60-2	NS	7.65E+04
Carbazole	86-74-8	NS	7.11E+02
Isophorone	78-59-1	NS	1.50E+04
N-Nitroso-di-n-propylamine	621-64-7	NS	6.31E-01
N-Nitrosodiphenylamine	86-30-6	NS	9.01E+02
Benzo(a)anthracene	56-55-3	0.0317	1.16E+02
Barium	7440-39-3	NS	2.29E+04
Beryllium	7440-41-7	NS	2.66E+01
Thallium	7791-12-0	NS	3.57E+01
Vanadium	7440-62-2	NS	8.47E+01
Sodium	7440-23-5	NS	2.20E+04

Table 5. Analytes from Table D-3B with Draft Residential $^{Tot}Sed_{Comb}$ PCLs that should be considered

Analyte	*CASRN*	*Project Screening Level (mg/kg)*	*DRAFT Residential $^{Tot}Sed_{Comb}$ PCL – 2018 (mg/kg)*
Hexavalent Chromium	18540-29-9	NS	1.41E+02
Cyanide	57-12-5	NS	3.20E+02

EA Response: The above requested revisions to Tables D-3A and D3-B were made. The 2006 TCEQ TRRP residential total combined sediment ($^{Tot}Sed_{Comb}$) PCLs have been added to these tables, and in the case of the draft 2018 values, they were added to the tables, and these values were bolded and italicized, with a footnote at the bottom indicating these are draft screening values. Cyanide will be submitted for analyses the EPA Houston Laboratory or one of its CLP Laboratories, so it has been shifted to Table D-3A.

Screening Criteria for Surface Water (Tables D-4A and D-4B)

While tables D-4A and D-4B provide several different types of surface water screening levels for consideration as the overall project screening levels, including the Texas Surface Water Quality Standards (SWQS), the TCEQ TRRP Human Health Surface Water Risk-Based Exposure Levels (HH SW RBELs) were not included. The HH SW RBELs are based on current state and federal water quality standards and state drinking water criteria; these values should be used rather than just relying on the Texas SWQS. There is one analyte on Table D- 4A, 1,2-dibromoethane (EDB), that has a HH SW RBEL and no proposed project screening level. There are 15 analytes with HH SW RBELs available that are lower than the proposed project screening level (14 on Table D-4A and 1 on Table D-4B) (see Tables 6 & 7).

In addition, there is a mistake on Table D-4B, the value listed for the Texas SWQS for total cyanide is incorrect. The listed value is for free cyanide, total cyanide has a HH Water and Fish value of 4 µg/L and a HH Fish Only value of 400 µg/L (see Table 8). There are also several mistakes in the SWQS Water and Fish and Fish Only values listed in Table D-4A. If these values are to remain on the table, they should be update based on the most current SWQS available (2018).

Table 6. Analytes from Table D-4A with HH SW RBEL values that should be considered

Analyte	*CASRN*	*Project Screening Level (µg/L)*	*HH SW RBEL – Water & Fish (µg/L)*
Bromoform	75-25-2	69.1	66.9
Bromomethane	74-83-9	110	100
Dibromochloromethane	124-48-1	7.6	7.5
Methyl tert-Butyl Ether	1634-04-4	51000	15
trans-1,2-Dichloroethene	156-60-5	4000	100
2,2'-Oxybis (1-chloropropane)	108-60-1	4000	200
2,4-Dichlorophenol	120-83-2	60	10
2,4-Dinitrophenol	51-28-5	31	10
2-Chlorophenol	95-57-8	130	30
4,6-Dinitro-2-methylphenol	534-52-1	12	2
Dibenz(a,h)anthracene	53-70-3	5	0.0012
Isophorone	78-59-1	1800	340
Manganese	7439-96-5	100	50
Manganese	7439-96-5	100	50

Table 7. Analytes from Table D-4B with HH SW RBEL values that should be considered

Analyte	*CASRN*	*Project Screening Level (µg/L)*	*HH SW RBEL –Water & Fish (µg/L)*
Cyanide – Total	57-12-5	5.2	4

Table 8. Analytes from Table D-4B with errors

Analyte	*CASRN*	*Human Health for Water and Fish Consumption (µg/L)*	*Human Health for Fish Only Consumption (µg/L)*	*HH SW RBEL – Water & Fish (µg/L)*	*HH SW RBEL – Fish Only (µg/L)*
Cyanide – Total	57-12-5	200	NS	4	400

EA Response: The above requested revisions to Tables D-4A and D4-B were made. The TCEQ TRRP Human Health Surface Water Risk-Based Exposure Levels been used to replace Texas Surface Water Quality Standards, and the Project Screening Levels have been adjusted to reflect the TCEQ screening values provided in the above Tables 6 through 8. Cyanide will be submitted for analyses the EPA Houston Laboratory or one of its CLP Laboratories, so it has been shifted to Table D-4A.

Overall Comments

There are several analytes in each media that either: do not have a screening value listed but do have a TCEQ TRRP value available, have a TCEQ TRRP value lower than the screening value listed, or have an error in the TCEQ values listed. It is important for the document to take into account all applicable and current TCEQ TRRP cleanup values. Use of incomplete screening values could result in COCs being inappropriately screened out of cleanup.

EA Response: The Appendix D Tables have been revised per the comments provided by EPA and TCEQ, and they have undergone further internal review following the revisions.

Comments from Greg Zychowski, Division Support Section, Remediation Division, Texas Commission on Environmental Quality

General and Miscellaneous Comments

1. **Groundwater-to-surface water (^{SW}GW) and -sediment (^{Sed}GW) pathways** – If the ^{SW}GW and ^{Sed}GW pathways are complete, please consider comment 2 from my previous memorandum (TCEQ 2 018a) for several resources that may be valuable to the respective evaluations.

   EA Response: The above comment will be considered if groundwater to surface water and sediment pathways are determined to be complete, and the site is undergoing evaluation for risks.

2. **Biota and bioaccumulation studies** – If necessary, biota may be collected and analyzed, and site-specific bioaccumulation may be studied. Please note that the Protective Concentration Levels Database (WTAMU 2019) also includes numerous literature-derived bioaccumulation factors.

   EA Response: The above comment will be considered if the Phase 1 RI data indicates the need for the collection and analysis of biota samples.

3. **Soil sampling depths** – For ERA purposes, soil samples should represent the depth intervals most relevant to wildlife exposure. By 30 TAC 350.4(a)(88) and (86) in the TRRP rule (TCEQ 2009), surface and subsurface soil for ERAs encompass the 0-0.5 feet and 0.5-5 feet depths, respectively. The sampling design matrix in SAP Table A-2 identifies intervals of 0-0.5 feet and 0.5-2 feet for surface soil, and a "total depth" of 15 feet for subsurface soil. To the extent that soil samples are collected in ecologically attractive habitat, and if the TCEQ's recommendations are not adopted, the relevance of the final sampling intervals to ecological risk should eventually be explained.

   EA Response: As also indicated in response to TCEQ Comment 7b, per the 20 February 2019 call, it was agreed that the intervals for a portion of the soil boring locations would be shifted from the total depth interval (15 feet or refusal) to the 2 to 5 feet interval for soil boring locations suspected to be location within/in close proximity to suspected

source areas. And the more distal soil boring locations would still be sampled at 0.0–0.5 feet, 0.5–2.0 feet, and (15 feet or refusal) as originally planned, in order to better determine is site COPCs have migrated by way of shallow groundwater flow. Based on the results of the Phase 1 soil sampling, the Phase 2 soil sampling event would be expanded as necessary to address data gaps, including additional soil boring locations, and /or deeper depth intervals at some of the existing locations if the deepest Phase 1 interval still had screening level exceedances. In order to accommodate this recommendation, the Phase 1 Soil Sampling Design Matrix (Appendix A) and SAP text has been revised, and a summary of the depth interval adjustments is presented in tabular form below as part of the response to TCEQ Comment 7B.

Ecological Screening Values

Several issues regarding the ecological screening values were identified, and the following comments focus specifically on these concerns. In addition to these recommendations, site representatives are highly encouraged to double-check any existing and new screening values for accuracy.

4. **Soil screening values** – While TCEQ's ecological screening benchmarks were listed for sediment (tables D-3A and D-3B) and surface water (tables D-4A and D-4B), they are not found in Table D-1A for soil. The TCEQ's ecological soil screening benchmarks (TCEQ 2018b) should be incorporated into the final ERA.

   EA Response: Per the above comment, and other received comments, Tables D-1A and D-1B have been revised to include the recommended TCEQ TRRP Tier 1 PCLs for soil based on a 0.5 acre source area, and the TCEQ Ecological Soil Benchmarks. D-1A has also been revised to include total PCBs. Cyanide will be submitted for analyses the EPA Houston Laboratory or one of its CLP Laboratories, so it has been shifted to Table D-1A.

5. **Sediment screening values (missing values)** – Several metals in tables D-3A and D-3B (selenium, thallium, and others) did not feature ecological screening values for sediment. These would be useful to the ERA. If screening values are not proposed, the respective chemicals of potential concern (COPCs) should be retained for further assessment in the ERA, with ecological protective concentration levels (PCLs) eventually calculated if necessary.

   EA Response: Per the above comments, and other received comment, the 2006 TCEQ TRRP residential total combined sediment ($^{Tot}Sed_{Comb}$) PCLs have been added to Tables D3-A and D3-B, and in the case of the draft 2018 values, they were added to the tables, and these values were bolded and italicized, with a footnote at the bottom indicating these are draft screening values. The addition of these screening criteria assisted in establishing Project Screening Levels for most the analytes in question. If screening values are currently not available for a portion of the COPCs, they will be evaluated further when evaluating site risks. Cyanide will be submitted for analyses to the EPA Houston Laboratory or one of its CLP Laboratories, so it has been shifted to Table D-3A.

6. **Sediment** screening values (accuracy and clarity) – The references cited for ecological screening benchmarks appear to be correct. However, at least a couple of the screening values in Table D-3A need to be revised. These include but are not necessarily limited to the ecological screening benchmarks for silver (shown as 1 mg/kg; should be 0.57 mg/kg) and Aroclor 1254 (reported as "NS"; should be 0.06 mg/kg). Site representatives should check for other inaccuracies and make corrections as appropriate.

   EA Response: Tables D3-A and D3-B, as well as other Appendix D tables have been revised per the comments provided by EPA and TCEQ. These revisions include the screening values for silver and Aroclor 1254. As recommended, the tables have undergone further internal review following these revisions.

7. **Surface** water screening values – Ideally, tables D-4A and D-4B should include notes to clarify whether the surface water screening levels are based on dissolved or total concentrations, and whether segment-specific hardness and total suspended solids (TSS) values have been applied. The information on dissolved-versus-total concentrations should inform how the analytical results are reported as the ERA progresses. Additionally, the source of total and hexavalent chromium screening values should be explained in more detail. Both come from RG-263b (TCEQ 2018b), but the total chromium benchmark as reported in the SAP is based on the RG-263b trivalent chromium benchmark, while the hexavalent chromium benchmark comes from its own specific value in RG-263b.

   EA Response: The screening values for the TCEQ Surface Water Benchmarks that represent the dissolved portion in water have been bolded and italicized, and has been noted in the note section at the bottom of Tables D-4A and D-4B. As indicated in the Revision 01 SAP text and the Sample Design Matrix (Appendix A) both total (unfiltered) and dissolved (filtered) surface water samples will be collected and analyzed for metals from each proposed surface water location during the Phase 1 RI field event, but only 10% of the samples will be analyzed for other analytes (including harness and TSS). The analytical results for these samples will be used to determine if there is a complete surface water pathway and if site COPCs have migrated offsite. These results will also be used to determine whether or not further investigation of surface water needs to be conducted during Phase 2 RI activities, and if warranted, it will form the basis of the Phase 2 RI surface water sampling activities. The Phase 1 RI data, along with the Phase 2 data will also be carried forward for further evaluation of site risks. Tables D-4A and D-4B have also been revised, per the comment relating to chromium.

8. **Screening** values and contract-required quantitation limits (CRQLs) – TCEQ's ecological screening benchmarks (and other TCEQ values, including Tier 1 PCLs) are occasionally lower than the CRQLs. Given the site history, this is arguably more of an issue for metals than for other analytes. The concern is especially important in cases where CRQLs exceed surface water screening benchmarks that equal (or are calculated from) the Texas Surface Water Quality Standards (30 TAC 307, TCEQ 2018c); e.g., for cadmium, copper, nickel, and selenium. Site representatives are encouraged to resolve this issue to the extent possible.

EA Response: EA will take this into consideration when evaluating site risks.

Additional TCEQ Comments received on 8 March 2019

Revised soil sample locations (Figure A-2/Table A-2)

1. **TCEQ comment 7(b) and eco attachment comment 3;** TCEQ recommends one of the following options below:

    a. Sample depth rearrangement option (switching 15-ft/refusal depth with 5-ft depth): TCEQ recommends adding DSB-7 and DSB-9 (instead of JSB-1) to the list of borings that will be sampled from 2 to 5 feet instead of 15 feet or refusal. These locations are close to the facility and more likely to be C/I than Residential. Likewise, JSB-1 is more likely to be Residential than DSB-9. With the above changes, TCEQ would be ok with the suggested boring designations that will be sampled from 2 to 5 feet instead of 15 feet or refusal, but would request the following acknowledgement to be added to the SAP: that if contamination in these borings is not delineated by 5 feet, additional soil samples will be collected in Phase 2. Likewise, for all other borings, if contamination is not delineated by 2 feet, additional soil samples will be collected in Phase 2.

    b. *Alternative and preferred option: TCEQ recommends keeping the original 3 sampling depths in all borings for consistency (0-0.5, 0.5-2, and 15 ft or refusal), but adding a fourth depth from 2-5 ft in the following borings: DSB-2, DSB-5, DSB-7, DSB-8, DSB-9, JSB-1 through JSB-4. This can be done by taking out the reserved DSB-10 through DSB-12 boring locations and associated 9 samples, and using the funding for these samples to apply to the fourth depth at select borings instead. This may prevent the need for additional vertical delineation in future sampling events.

    EA Response: Table A-2 has been revised to collect soil samples as described in the Alternative and Preferred Option.

2. **TCEQ comment 26(a):**

    a. We discussed with EA that one of the planned soil borings in the rectangular depression filled with water area would be shifted to assess this feature (DSB-5, DSB-6, DSB-7 area). Is this still the plan, and will the revised SAP discuss this)?

    EA Response: As previously indicated in response to TCEQ comment 26a, and as discussed during the 20 February 2019 phone call, soil boring locations DSB-5 and/or DSB-7 will be used to assess this area as part of the Phase 1 RI field activities. If it is determined this area is impacted based on the Phase 1 sampling event and this feature is determined to hold water perennially, then additional characterization of this feature, to include sediment and/or surface water sampling will be considered during the Phase 2 RI field event. A footnote has been added to Table A-2 that states "DSB-5 and/or DSB-7 will be used to assess a rectangular depression reported

to contain water as part of the Phase 1 RI field activities. If it is determined this area is impacted based on the Phase 1 sampling event and this feature is determined to hold water perennially, then additional characterization of this feature, to include sediment and/or surface water sampling will be considered during the Phase 2 RI field event. The locations of these borings may be adjusted in the field to accommodate the exact location of the depression."

Revised GW sample/MW locations

1. **TCEQ comment 24(a):**

   a. TCEQ recommends adjusting the revised MW-1 location to the vicinity of previous soil sampling grids E6 or G5 (location of consistent RSL exceedances at mid-depths). If placed in the vicinity of grid E6, suggest placing between grids E6 and E7 or E6 and D6.

   EA Response: During the 20 February 2019 phone call, it was agreed to move MW-1 to the east side of the Waste Storage shed. EA moved the location of MW-1 accordingly where it is located east of this structure, and will also be in close proximity to the blasting sand disposal area located southeast of the of the Waste Storage Shed. The locations described above will place MW-1 a considerable distance northeast of the of the Waste Storage Shed (Near G5), or south (between E6 and E7) or west of the Waste Storage Shed (between E6 and D6), which contradicts what was agreed to on 20 February 2019. Given the presence of the blasting sand in this area, in addition to the staining around the Waste Storage Shed, any location around the Waste Storage Shed is within a probable source area, and the proposed location of MW-1 can be shifted as necessary, based on observed field conditions when the well location is being marked for installation.

2. **Additional comments/questions:**

   a. Will facility wells be surveyed to allow use in groundwater elevation determination?

   EA Response: These are hand-dug wells with concrete pipe making up the well walls. However, EA is planning to survey the top of the concrete walls in order to calculate water elevations in the two wells.

   b. Flush mount vs. stick-up: TCEQ advises that the field area near the small pond is prone to flooding (proposed location of MW-3).

   EA Response: This will be taken into account when installing the monitoring wells.