



November 10, 2021

Jay A. Steinberg
Nevada Environmental Response Trust
35 East Wacker Drive, Suite 690
Chicago, IL 60601

**Re: Tronox LLC (TRX) Facility
Nevada Environmental Response Trust (Trust) Property
NDEP Facility ID #H-000539**
Nevada Division of Environmental Protection (NDEP) Response to: *Las Vegas Wash ZVI
Enhanced Bioremediation Treatability Study Work Plan Addendum*

Dated: September 29, 2021

Dear Mr. Steinberg,

The NDEP has received and reviewed the Trust's above-identified Deliverable and finds that the document is acceptable with the following comments noted for the Administrative Record:

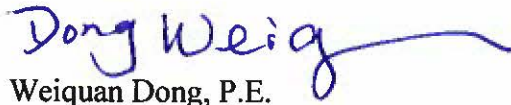
1. Table 4 5: Summary of Groundwater Analytical Results in Transect 1A Page 4-8. In the initial Tetra Tech analysis performed in 2019 the total dissolved solids (TDS) in the semi consolidated UMCf were present at concentrations up to 3,900 mg/L. It was therefore concluded that the TDS was unlikely to be toxic to perchlorate reducing bacteria. However, in Table 4-5, TDS in the UMCf in Transect 1A was reported as being as high at 71,000 mg/L. It should pay an attention that there may be toxic effects on bacteria at this TDS concentration.
2. Appendix F. Transect 1A Bench Scale Report. TDS was not measured directly on the groundwater sample used for this study. Conductivity was measured at 8.9 mS/cm which can be converted to 5,690 mg/L which is lower than the lower end of the range measured for the UMCf in Transect 1A. Therefore, the water used in this study was different from the TDS that will be encountered in the field. Please bear this in mind during the field implementation.
3. Section 7.6.2: Tests 2a, 2b and 2c – Discontinuous Boring Array Wall – p.7-20. It is stated in Section 7.6.1 that the sand/gravel/ZVI mixture to be emplaced using one pass trenching will have a hydraulic conductivity and porosity of 30 ft/day and 0.3, respectively, which are greater than those of the native materials through which groundwater will flow, rather than around the PRB. However, in Section 7.6.2 it is stated that for the discontinuous barriers, boreholes will be filled with a mixture containing 50% sand and 50% ZVI. Since no gravel is incorporated into this mixture it seems that the porosity and hydraulic

conductivity may be lower than the native materials. Please consider this potential effect during the field implementation.

4. Section 7.6.3 Inoculum and Nutrient Injection Design p. 7 21 and Appendix I – Injection Well Design and Injection Procedures. Section 7.6.3 acknowledges that the inoculum may be sensitive to exposure to oxygen. The inoculum may be sensitive to other things in the site groundwater. It may be advisable for SiRem to acclimate the inoculum in site groundwater before sending.

Please contact the undersigned with any questions at wdong@ndep.nv.gov or 702-668-3929.

Sincerely,



Weiquan Dong, P.E.
Bureau of Industrial Site Cleanup
NDEP-Las Vegas City Office

WD:cp

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