



NEVADA DIVISION OF  
**ENVIRONMENTAL  
PROTECTION**

STATE OF NEVADA  
Department of Conservation & Natural Resources

Steve Sisolak, Governor  
Bradley Crowell, Director  
Greg Lovato, Administrator

May 1, 2019

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: *Galleria Drive  
Bioremediation Treatability Study Work Plan Addendum*

Dated: March 29, 2019

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. 3.3.1 Carbon Substrate Injections of Galleria Drive Bioremediation Treatability Study Work Plan Addendum. Please submit a spreadsheet showing the calculation of the stoichiometric requirements for the carbon substrate based on the mass of perchlorate and other electron acceptors that will migrate through the treatability study area and the actual requirements for the carbon substrate based the results and findings of the previous and on-going treatability studies and literature case studies before the field implication;
2. Because the actual amount of carbon substrate injection is linked to the number of the injection wells and the injection time, it should be a basis for the costs of Task 1.5 – Injection of Table 1 – Detailed Budget of Galleria Dr. Bioremediation Cost Basis – Attachment B. Please take this factor into the consideration in the future similar project budgets;
3. 4.2 Effectiveness Monitoring of Galleria Drive Bioremediation Treatability Study Work Plan Addendum. Please provide a baseline condition of the mass of perchlorate and other electron acceptors, and the field parameters and laboratory parameters of the selected monitoring wells before the carbon substrate injection;
4. The injection rate and pressure of carbon substrate and chase water are a critical information to monitor the biofouling of the injection well screens and the long-term performance of the in-situ bioremediation, NDEP asks this information to be reported in the future monthly progress report;
5. NDEP requires more detail performance criteria and confirmation methods for this treatability study and future treatability and pilot studies. NDEP suggests that NERT considers organizing this information into tables e.g., Tables 4.1 Performance Criteria and 4.2 Performance Confirmation Methods of "In Situ Bioremediation Of Perchlorate Using

Horizontal Flow Treatment Wells” (Paul Hatzinger and Jay Diebold, 2009, ESTCP Project ER-0224);

Please contact the undersigned with any questions at [wdong@ndep.nv.gov](mailto:wdong@ndep.nv.gov) or 702-486-2850 x252.

Sincerely,



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

WD:cp

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Kyle Hansen, Tetrattech  
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