



NEVADA DIVISION OF
**ENVIRONMENTAL
PROTECTION**

STATE OF NEVADA
Department of Conservation & Natural Resources

Brian Sandoval, Governor
Bradley Crowell, Director
Greg Lovato, Administrator

September 10, 2018

Jay A. Steinberg
Nevada Environmental Response Trust
35 East Wacker Drive, Suite 1550
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: *Treatability/Pilot
Modification No. 4 – Unit 4 Source Area In-Situ Bioremediation Treatability Study*

Dated: August 28, 2018

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. The change on both groundwater levels and perchlorate concentration of adjacent wells responding to the short-term step-drawdown and constant-rate tests (a duration of up to 60 hours) indicates that the time needed to see the change on TDS concentration may not need three months. However, because of very high perchlorate concentration of groundwater in the two extraction wells proposed, the extended pumping will remove a large amount of perchlorate and other chemicals from groundwater. This modification doesn't have details how these chemicals extracted from groundwater will be handled. NDEP asks an addendum about handling the chemicals extracted once NERT decides it.
2. The downhole probe suitable for monitoring field parameters was proposed in the Galleria Road Bio-Treatability Study Modification Reversion 1. NDEP suggests a similar down-hole probe to be deployed in the monitoring wells and extraction wells when it is applicable.
3. Table 3 (Performance Monitoring Sampling Protocol) has five field parameters being recorded on observation wells, yet only two on pumping wells, NDEP suggests getting all wells to have five field parameters or at least getting all five parameters with the down-hole probe.
4. The extended pumping test proposed in this modification can be a pilot study for the pump & treat pilot study for the groundwater remediation of Unit Buildings 4 and 5 area. NDEP suggests a comparison among the pump & treat, in-situ bioremediation, hybrid of the pump & treat and in-situ bioremediation.
5. NDEP suggests monitoring the five parameters for 24 hours after ending the extended pumping and observing potential water level rebounding and chemical changes.

Please contact the undersigned with any questions at wdong@ndep.nv.gov or 702-486-2850 x252.

Sincerely,



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Bureau of Industrial Site Cleanup
NDEP-Las Vegas City Office

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