



STATE OF NEVADA
Department of Conservation & Natural Resources
DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor
Leo M. Drozdoff, P.E., Director
Colleen Cripps, Ph.D., Administrator

March 17, 2014

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 Study Work Plan, Permeable Reactive Barrier Pilot, Revision 1, Nevada Environmental Response Trust Site, Henderson, Nevada*

Dated: December 27, 2013

Dear Mr. Steinberg,

The NDEP has received and reviewed the Trust's above-identified Deliverable and provides comments in Attachment A. A revised Deliverable should be submitted by **04/17/2014** based on the comments found in Attachment A. The Trust should additionally provide an annotated response-to-comments letter as part of the revised Deliverable.

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

Sincerely,

Weiquan Dong, P.E.
Special Projects Branch
Bureau of Corrective Actions
NDEP-Las Vegas City Office

WD: JD



EC: Greg Lovato, Bureau of Corrective Actions, NDEP
James Dotchin, NDEP, BCA LV
Dave Emme, NDEP
Adam Baas, Edgcomb Law Group
Allan Delorme, ENVIRON
Andrew Barnes, GeoSyntec
Andrew Steinberg, Nevada Environmental Response Trust
Betty Kuo, MWDH2O
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Brian Waggle, Hargis + Associates
Cassandra Joseph, AG's Office
Catherine Sties, MWDH2O
Charles K. Hauser, Esq., Southern Nevada Water Authority
Chuck Elmendorf, Stauffer Management Company, LLC
Dave Share, Olin
David Johnson, Central Arizona Water Conservation District
Ebrahim Juma, Clean Water Team
Ed Modiano, de maximis, inc.
Eric Fordham, Geopentech
George Crouse, Syngenta Crop Protection, Inc.
Dave Share, Olin Co
Jay Steinberg, Nevada Environmental Response Trust
Jeff Gibson, AMPAC
Jill Teraoka, MWDH2O
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Joe Kelly, Montrose Chemical Corporation of CA
Joe Leedy, Clean Water Team
Joe McGinley McGinley & Associates
John Pekala, Environcorp
Kirk Stowers, Broadbent & Associates
Kurt Fehling, The Fehling Group
Kyle Gadleym, GeoSyntec
Lee Farris, BRC
Marcia Scully, Metropolitan Water District of Southern California
Mark Paris, Landwell
Matt Pocernich, Neptune & Company Inc.
Michael Long, Hargis + Associates
Mickey Chaudhuri, Metropolitan Water District of Southern California
Nicholas Pogoncheff, PES Environmental, Inc.
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Paul Hackenberry, Hackenberry Associates, LLC
Peggy Roefer, Southern Nevada Water Authority
Ranajit Sahu, BRC
Rebecca Shircliff, Neptune and Company, Inc.
Richard Pfarrer, TIMET
Rick Kellogg, BRC
Ron Zegers, Southern Nevada Water Authority
Scott Bryan, Central Arizona Project
Stephen Tyahla, U.S. Environmental Protection Agency, Region 9
Susan Crowley, Crowley Environ.
Tanya O'Neill, Foley & Lardner LLP
Teri Copeland
Wayne Klomp, AG's Office

Attachment A

1. Section 3.2 Hydrology, pages 8-9. It would be expected that groundwater velocity based on an on-site, long-term aquifer test would carry more weight than a regional groundwater flow model. The difference between the velocities is an order of magnitude; please clarify the impact, if any, to the PRB design and evaluation.
2. Section 3.3 Groundwater Quality, page 9. This section discusses groundwater quality in very general terms.
 - a. There is no discussion of the proposed site being immediately adjacent to the City of Henderson (COH) Bird Viewing Preserve (formerly COH RIBs) where treated wastewater has been disposed of for over 15 years. There is no discussion of the potential impact to the proposed in-situ PRB. For example, are the COH RIBs expected to have an impact on groundwater quality including DO, BOD, ORP, TOC, etc. and if so what are the implications to proposed evaluation
 - b. In addition to sulfate what about nitrogen species as electron acceptors?
 - c. Table 3 as referenced in Section 3.3. DO is recorded as 2.6 as N?
 - d. Table 3 as referenced in Section 3.3. ORP values are reported as 1100 mV and 3520 mV, please verify these values.
3. Section 4.0 Technology Overview and Rationale, page 10. There is evidence of elevated manganese both upgradient and downgradient of the proposed *in-situ* PRB. This comment is for information in terms of the existing redox environment.
4. Section 5.0 PRB Pilot Design, page 12. Please, also, refer to comment 2 (a). Prior to implementation, the NDEP requests a more detailed evaluation of field groundwater parameters (ORP, pH, DO, temperature) for the proposed test area.
5. Table 2. The McGinley & Associates maintains "All Wells Master" dated October 2013 that shows well PC-100R to be plugged and abandoned. The source data for the "All Wells Master" is the data submitted by all companies of the BMI area.
6. Figure 7. Preliminary Time Schedule for PRB Treatability Study. Upon approval of the PRB Work Plan from NDEP, this schedule should be converted from quarters to specific dates.
7. Appendix B. Please add the affiliation of John Pardue and W. Andrew Jackson.