## STATE OF NEVADA





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

March 5, 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: AP Area Down and Up Flushing Treatability Study Work Plan

Dated: February 12, 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 soil flushing was demonstrated in the Central Retention Basin at the NERT site as an effective method to mobilize the perchlorate of vadose zone but relatively low mass reduction in the Test Plots 1 and 4 was observed and attributed to preferential flow through relatively narrow pathways in the vadose zone due to the reduced water application rates. NDEP suggests that NERT take a further look on the preferential flow issue if it can be improved the perchlorate mass reduction in this project;
- 2. Please provide more details on the vadose zone mass estimates and modeling as appendix in the this project result report;
- 3. The perchlorate mass reduction of vadose zone and UMCf should be separately reported before summing it together;
- 4. NDEP require details on the injection of the calcium polysulfide and tracer and these details should at least include total mass, injection rate, and movement distance and concentration along the flow paths. It is also good to know potential precipitate from the calcium polysulfide reactions and its impact on the porosity;
- 5. The final project result report should include electronic data of all raw monitoring data collected in Section 4.1.1 Performance Monitoring;
- 6. The final project result report should also include a map showing the plumbing system (pipe, flow meters), telemetry system and controls for extraction system, the location of the injection, the extraction and the monitoring wells.

Please contact the undersigned with any questions at 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

## EC:

James Dotchin, NDEP BISC Las Vegas

Carlton Parker, NDEP BISC Las Vegas

Allan Delorme, Ramboll Environ

Alison Fong, U.S. Environmental Protection Agency, Region 9

Andrew Barnes, Geosyntec

Andrew Steinberg, Nevada Environmental Response Trust

Anna Springsteen, Neptune & Company Inc.

Betty Kuo Brinton, MWDH2O

Brenda Pohlmann, City of Henderson

Brian Waggle, Hargis + Associates

Carol Nagai, MWDH2O

Chinny Esakkiperumal, Olin Corporation

Chris Ritchie, Ramboll Environ

Chuck Elmendorf, Stauffer Management Company, LLC

Dan Pastor, P.E. TetraTech

Dave Share, Olin

Dave Johnson, LVVWD

David Parker, Central Arizona Water Conservation District

Derek Amidon, Tetratech

Ebrahim Juma, Clean Water Team

Ed Modiano, de maximis, inc.

Eric Fordham, Geopentech

Gary Carter, Endeavour

George Crouse, Syngenta Crop Protection, Inc.

Harry Van Den Berg, AECOM

Jay Steinberg, Nevada Environmental Response Trust

Jeff Gibson, Endeavour

Jill Teraoka, MWDH2O

Joanne Otani

Joe Kelly, Montrose Chemical Corporation of CA

Joe Leedy, Clean Water Team

John Edgcomb, Edgcomb Law Group

John Pekala, Ramboll Environ

Kelly McIntosh, GEI Consultants

Kevin Fisher, LV Valley Water District

Kirk Stowers, Broadbent & Associates

Kirsten Lockhart, Neptune & Company Inc.

Kim Kuwabara, Ramboll Environ

Kurt Fehling, The Fehling Group

Kyle Gadley, Geosyntec

Kyle.Hansen, Tetratech

Lee Farris, BRC

Marcia Scully, Metropolitan Water District of Southern California

Maria Lopez, Water District of Southern California

Mark Duffy, U.S. Environmental Protection Agency, Region 9

Mark Paris, Landwell

Michael J. Bogle, Womble Carlyle Sandridge & Rice, LLP

Michael Long, Hargis + Associates

Micheline Fairbank, AG Office

Mickey Chaudhuri, Metropolitan Water District of Southern California

Nicholas Pogoncheff, PES Environmental, Inc.

Orestes Morfin, CAP

Paul Black, Neptune and Company, Inc.

Paul Hackenberry, Hackenberry Associates, LLC

Patti Meeks, Neptune & Company Inc.

Peggy Roefer, CRC

Ranajit Sahu, BRC

Richard Pfarrer, TIMET

Rick Kellogg, BRC

Scott Bryan, Central Arizona Project

Steve Clough, Nevada Environmental Response Trust

Steven Anderson, LVVWD

Tanya O'Neill, Foley & Lardner L

Todd Tietjen, SNWA