STATE OF NEVADA



Department of Conservation & Natural Resources

Joe Lombardo, Governor James A. Settelmeyer, Director Jennifer L. Carr, Administrator

August 3, 2023, 2023

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 *Feasibility Study* Work Plan for OU-1 and OU-2

Dated: June 30, 2023

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 10/03/2023 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 702-668-3929.

Sincerely,

Dong Weiguan

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

WD:AP

EC:

Frederick Perdomo, Deputy Administrator NDEP
James Dotchin, NDEP BISC Las Vegas
Alan Pineda, NDEP BISC Las Vegas
Andrew Steinberg, Nevada Environmental Response Trust
Anna Springsteen, Neptune & Company Inc.
Betty Kuo Brinton, Metropolitan Water District of Southern California
Brian Waggle, Hargis + Associates
Brian Loffman, Nevada Environmental Response Trust
Brian Rakvica, Syngenta

Carol Nagai, Metropolitan Water District of Southern California

Chris Ritchie, Ramboll

Christine Klimek, City of Henderson

Chuck Elmendorf, Stauffer Management Company, LLC

Dan Petersen, Ramboll

Dane Grimshaw, Olin

Dana Grady, TetraTech

Daniel Chan, SNWA

Darren Croteau, Terraphase Engineering, Inc.

Dave Share, Olin

Dave Johnson, SNWA

David Bohmann, TetraTech

Ed Modiano, de maximis, inc.

Eric Fordham, GeoPentech

Gary Carter, Endeavour

Jay A. Steinberg, Nevada Environmental Response Trust

Jeff Gibson, Endeavour

Jill Teraoka, Metropolitan Water District of Southern California

Joanne Otani, The Fehling Group

Ashley Green, Montrose Chemical Corporation of CA

Joe Leedy, Clean Water Team

John Edgcomb, Edgcomb Law Group

John-Paul Rossi, Stauffer Management Company LLC

John Solvie, Clark County Water Quality

Karen Gastineau, Broadbent & Associates

Kathrine Callaway, Cap-AZ

Kelly McIntosh, GEI Consultants

Kirk Stowers, Broadbent & Associates

Kirsten Lockhart, Neptune & Company Inc.

Kim Kuwabara, Ramboll

Kurt Fehling, The Fehling Group

Laura Dye, CRC

Lee Farris, BRC

Marcia Scully, Metropolitan Water District of Southern California

Maria Lopez, Metropolitan Water District of Southern California

Mark Paris, Landwell

Mauricio Santos, Metropolitan Water District of Southern California

Melanie Hanks, Olin

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

Michael Long, Hargis +

Mickey Chaudhuri, Metropolitan Water District of Southern

California Nicholas Pogoncheff, PES Environmental, Inc.9

Orestes Morfin, CA

Paul Black, Neptune & Company

Peter Jacobson, Syngenta

Ranajit Sahu, BRC

Rebecca Sugerman, U.S. Environmental Protection Agency, Region 9

Richard Pfarrer, TIMET

Rick Kellogg, BRC

R9LandSubmit@EPA.gov

Roy Thun, GHD

Spencer Lapiers de maximis

Steve Armann, U.S. Environmental Protection Agency, Region 9

Steve Clough, Nevada Environmental Response Trust

Steven Anderson, LVVWD

Tanya O'Neill, Foley & Lardner L

Todd Tietjen, SNWA

William Frier, U.S. Environmental Protection Agency, Region 9

Zeitel Senitz, de maximis

Attachment A

- 1. The NDEP requires the FS workplan to be consistent with the 1988 EPA Guidance on Conducting Remedial Investigations and Feasibility Studies under CERCLA and with the NCP. If the Trust's plans conflict with the 1988 guidance at any point, they should prioritize adherence to the guidance and NCP.
- 2. The FS cost estimation should have a range of -30% to +50% for evaluating alternatives, but the conceptual design requirements should not mandate a specific level of remedial engineering design for each alternative (e.g., 30% Remedial Design listed in the FS workplan for each alternative). To maintain consistency with the FS guidance and achieve the cost estimation goal, the language in the FS workplan should allow flexibility in developing conceptual designs for various remedial alternatives. Refer to Section 6.2 of the 1988 guidance, which addresses the Detailed Analysis of Alternatives (Section 2.7 of the FS workplan) and considers cost as a balancing criterion. The Trust should leverage information from the RI and their numerous studies.
 - a. As per Section 6.2.1 of the 1988 guidance: "Each alternative should be reviewed to determine if an additional definition is required to apply the evaluation criteria consistently and to develop order-of-magnitude cost estimates (i.e., having a desired accuracy of +50 percent to -30 percent). The information developed to define alternatives at this stage in the RI/FS process may consist of preliminary design calculations, process flow diagrams, sizing of key process components, preliminary site layouts, and a discussion of limitations, assumptions, and uncertainties concerning each alternative."
 - b. As per Section 6.2.3.7 of the 1988 guidance: "Accuracy of Cost Estimates. Site characterization and treatability investigation information should permit the user to refine cost estimates for remedial action alternatives. It is important to consider the accuracy of costs developed for alternatives in the FS. Typically, these 'study estimate' costs made during the FS are expected to provide an accuracy of +50 percent to -30 percent and are prepared using data available from the RI. It should be indicated when it is not realistic to achieve this level of accuracy."
- 3. NDEP suggested considering greener remediation and BMP analysis for the study in its letter dated on March 23, 2023. NDEP requests adding a statement indicating that the FS will consider previously selected short- and long-term BMPs for greener cleanups.
- 4. NDEP requests that NERT address the "to-be-considered" (TBC) criteria beyond Applicable or Relevant and Appropriate Requirements (ARARs) in the FS workplan. These TBCs were part of the RI and site risk assessment conducted by NERT. Implementing this comment will require making global changes to the FS workplan.
- 5. The FS work plan's statement in Section 3.1.1 about OSSM's contamination and remediation obligations requires clarification. The FS workplan states that "Based on the January 26, 2023, meeting with OSSM, NDEP, and NERT, it is NERT's understanding

that NDEP may not require OSSM to further mitigate or eliminate the continuing trespass of OSSM contamination onto OU-1 and/or remediate the DNAPL currently present within OU-1". NDEP has requested that OSSM submit a Remedial Alternative Selection (RAS) for DNAPL on and off their property including on the NERT site. Therefore, NDEP asks that NERT revises this statement to reflect the NDEP's stand trespassing DNAPL on the NERT site.

- 6. Section 2.4 Identification and Screening of Applicable Technologies Page 8 Paragraph 3. For transparency reasons it will be important to clearly explain why a technology was screened out.
- 7. Section 2.5, along with Figure 3 of the FS workplan, outlines the development of remedial alternatives related to impacted media, COPCs, and RAO. The inclusion of the alternative titled "OU-1 Groundwater Trespassing Plume Containment" implies that remedial alternatives will evaluate COPCs associated with the OSSM plume and DNAPL, with the selected containment alternative presumed to meet OU-1 RAOs. This may lead to increased groundwater treatment costs. NDEP has asked OSSM to submit GWRAS contingency language (as an addendum to the GWRAS) requiring OSSM to coordinate and cooperate with NDEP and NERT in addressing any unavoidable material cost increases resulting from trespass contaminants for which the companies are responsible.
- 8. NDEP requests NERT to revise the FS workplan based on the comments that the Metropolitan Water District (MWD) made directly on the FS workplan texts that were directly emailed to NERT and CC to NDEP and US EPA, as appropriate.
- 9. NDEP reserves its comments on how the AMPAC and NERT perchlorate plumes further commingle in OU-3 and discharge into the Las Vegas Wash in this FS workplan and will comment it in the FS Report for OU-3. It is acceptable that the FS Report for OU-1 and OU-2 documents how much additional cost will be incurred to treat AMPAC's perchlorate within OU-2 to support future cost sharing discussions.