NEVADA DIVISION OF
ENVIRONMENTAL PROTECTION

STATE OF NEVADA
Department of Conservation & Natural Resources
Brian Sandoval, Governor
Bradley Crowell, Director
Greg Lovato, Administrator

August 28, 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: *2018 Greener Cleanup Best Management Practice Implementation Work Plan*

Dated: June 29, 2018

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 10/31/2018** 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,

Dong Weiquan

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

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
R9LandSubmit@EPA.gov
Scott Bryan, Central Arizona Project
Steve Clough, Nevada Environmental Response Trust
Steven Anderson, LVVWD
Tanya O'Neill, Foley & Lardner L
Todd Tietjen, SNWA

Attachment A

General Comments

1) The Work Plan provides a good description of the BMP evaluation process to date and clearly outlines how the results of the footprint analysis are being used in BMP selection. The Work Plan also gives a comprehensive picture of the BMP evaluations that NERT will conduct in 2018.

2) The BMP Implementation Work Plan describes how NERT will evaluate BMPs in several key areas (renewable energy, local suppliers, green laboratories, and green contracts), with completion dates of the BMP evaluations in 2018. The outcome of the BMP evaluations should be to recommend individual BMPs, timeframes for implementation, and expected benefits that may be achieved by the BMPs. However, the Work Plan does not state these as outcomes in all cases. (See specific comments below for more observations on this point.) NDEP understands that for most BMPs, further details may have to be worked out after completion of the BMP evaluations, but to the extent possible recommendations for individual BMPs should be made in the BMP evaluations.

3) Since the results of the BMP evaluations are expected in 2018, NDEP may expect implementation of recommended BMPs to begin in 2019. NDEP would also expect results of implementation to be documented in NERT's semi-annual/annual reports. The BMP evaluations should note how the results of the recommended BMPs will be reported (for example, in which documents or reports, and within what timeframe) and what aspects of the BMPs will be reported (for example, date of implementation, resources conserved, and footprint reductions achieved).

4) NDEP recommends an adjustment to the terminology in the BMP Implementation Work Plan for referring to BMPs. In discussions among NERT, NDEP, and EPA in January - March 2018 the term "BMP" was used to refer to two aspects of the BMP process: (1) BMPs which are practices that directly result in footprint reductions, such as installation of solar panels, and (2) documents which evaluate potential BMPs, such as the Renewable Energy Plan. However, this terminology may cause ambiguity regarding actual BMPs that are selected and implemented at the site. NDEP recommends that the terminology be adjusted in the Work Plan so that the term "BMP" refers to BMPs that are implemented for footprint reductions, and "BMP evaluation" be used for situations in which potential BMPs are being further evaluated. For example:

    a. In the table on p. 11 of the Work Plan, the column headings for the first four entries would be "BMP Evaluations" (left hand column) and "Scope of Evaluation" (right hand column). The fifth item in the table should be identified simply as a "BMP", perhaps in a separate table.

    b. In the introduction to the Work Plan (p. 1), the text could read "… the Trust determined that four areas would be subject to further BMP evaluations, and one BMP would be implemented, in 2018 …"

This will help to highlight the fact that the BMP evaluations noted in the Work Plan are continuations of the BMP evaluation and selection process, and are not themselves BMPs. Text in other key areas of the Work Plan should be adjusted as well. NDEP is open to other ways to address this concern, but finds it important to make a distinction between the BMPs themselves, and the process for evaluating the BMPs.

Specific Comments

1) (p. 4) NDEP is pleased to see the statement that the long-term BMPs will be evaluated in 2019, as stated under "Implementation" on p. 4. However, please clarify the activities to occur in 2019. The second sentence says that the remaining long-term BMPs prioritized for further evaluation in Table A-2 will be evaluated for implementation in 2019. Is it the evaluation or the implementation (or both) that will occur in 2019? This should also be clarified in the last paragraph on p. 8. (Note that the caption for the figure on p. 9 implies that only the evaluation will occur in 2019.)

2) (p. 8) The number of BMPs selected for further evaluation, as noted in the last paragraph on p. 8, should be restated for clarity. In the first sentence, it should be made clear that 43 BMPs were identified as already in place or were selected for further evaluation (although this is also stated later in the paragraph). The last paragraph on p. 18 should also be revised.

3) (p. 8) NDEP recommends adjusting the number of remaining BMPs to be evaluated in 2019, as noted in the last paragraph on p. 8, from 32 BMPs to 28 BMPs. Of the 32 remaining BMPs, 4 were thought not to be appropriate for further consideration, per discussion among NERT, NDEP, and EPA in March 2018. The BMPs, with the reasons they should be removed from consideration, are:

   BMP #15A Purchase RECs (due to added cost for NERT)
   BMP #25 Buy carbon offsets (due to added cost for NERT)
   BMP #30 "Green" hotels and meetings (due to difficulty in identifying green hotels)
   BMP #41 Restrict traffic to confined corridors (due to practical needs on-site)

   This adjustment should also be made in the Conclusion on pp. 18 - 19.

4) (p. 8) Regarding the 28 long-term BMPs to be evaluated in 2019, as noted in the last paragraph on p. 8, we would like to emphasize several that we think would be particularly promising at NERT, per discussion among NERT, NDEP and EPA in March 2018:

   BMP #1 Water efficient plumbing
   BMP #4 Energy efficient HVAC systems
   BMP #6 "Greener" process chemicals
   BMP #35 Reuse treated groundwater
   New BMP Native planting & pollinator habitat

5) (p. 11) In the table on p. 11, the description of the Renewable Energy Plan should be clarified. The description seems to imply that the Renewable Energy Plan will outline how NERT will evaluate renewable energy options. However, per the description in pages 11 - 13, it seems clear that the evaluations will occur in the Renewable Energy Plan itself. NDEP recommends a clarification in the table on p. 11:

> Develop a Renewable Energy Plan ~~for evaluating~~ which will evaluate current and future alternatives for utilizing renewable energy sources; …

The table should also make clear that the Renewable Energy Plan will recommend BMPs for implementation and will provide a timeline for implementation. (See also comment 7 below).

6) (p. 12) Purchasing renewable energy certificates (RECS), noted in the 4th bullet point, should be removed from consideration, as mentioned in comment 3 above. Mention of RECs should also be removed from the diagram on p. 13.

7) (p. 12) In the closing paragraph and/or the bullet points on p. 12, it should be made clear that the Renewable Energy Plan will recommend BMPs for implementation and will provide a timeline for implementation. The text could also note that for certain complex BMPs, further details may be established in future specific workplans for the BMPs. Also, although the diagram on p. 13 states that the Renewable Energy Plan will consider carbon reduction benefits, the text on p. 12 or 13 should also make it clear that the Plan will identify expected benefits from recommended BMPs.

8) (p.13) In the middle box of the diagram, increasing energy efficiency should be first priority rather than last priority (assuming the bullet points are arranged in order of priority).

9) (p. 13) A fourth step should be added to the diagram after Feasibility Assessment: recommending specific BMPs to be implemented for energy efficiency and renewable energy, and establishing timeframe for implementation.

10) (p. 14) When evaluating local product vendors, the BMP evaluation should identify expected benefits that may be achieved by using the suppliers. The evaluation should take into account, where possible, trade-offs for choosing suppliers with shorter transport distances to the site. For example, a supplier may be more distant from the site, but may provide the option of rail transport, resulting in a smaller transport footprint as compared with a closer supplier with transport only by truck. As another example, a supplier may be closer, but the production of the material may have a larger footprint than the production for a supplier that is more distant. It is not necessary (and may not be possible) to research the specifics of transport and production related to the suppliers, but if the information is easily available, it should factor into the recommendations for selecting alternative suppliers.

11) (p. 16) In the last sentence of the closing paragraph regarding laboratory analysis, it's implied but not stated explicitly that an outcome of the BMP evaluation process will be identification of specific BMPs at the laboratory. NDEP requests that the BMP evaluation identify specific BMPs, and provides timelines, notes on implementation, and expected benefits from the BMPs.

12) (p. 17) The summary paragraph regarding greener contract language should include general timing for when the language would be put into contracts. For example, are NERT contracts renewed or amended annually, allowing for addition of the greener contract language?

13) (p. 17) For the reuse of sampling equipment, the BMP has been selected, and specifics of implementation are to be worked out between Ramboll and Tetra Tech. Due to the large number of monitoring wells and frequent sampling events, this BMP promises to be effective for footprint reductions. Although the protocols for reusing sampling equipment will be placed in the Remedial Performance Groundwater SAP, NDEP would also like to see the results of this BMP reported in NERT's semi-annual/annual reports.

Other Topic

On a related topic, NDEP understands that NERT has been advancing the Greener Cleanups concept on an ongoing basis as opportunities arise, both for the GWETS and for other operations at the site. For example, Ramboll has moved personnel to the local area, which would reduce the footprint for personnel transportation. In addition, solar panels have been installed to provide electricity to on-site office trailers. As another example, new treatment reagents (such as coagulants) are being considered at the site, which may reduce the footprint related to materials manufacturing and transport. Even though such actions may be instituted for reasons other than reducing the footprint at the site, or are applied to operations other than the GWETS, NDEP encourages NERT to report the actions in the semi-annual/annual report, if they may be considered Greener Cleanup BMPs. In addition, NERT should report such actions, even if they were not selected through the formal BMP evaluation process.