



NEVADA DIVISION OF
**ENVIRONMENTAL
PROTECTION**

STATE OF NEVADA
Department of Conservation & Natural Resources

Brian Sandoval, Governor
Leo M. Drozdoff, P.E., Director
David Emme, Administrator

December 30, 2015

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: Phase III Groundwater Model Refinement, Attachment A of Annual Remedial Performance Report for Chromium and Perchlorate, Nevada Environmental Response Trust Site, Henderson, Nevada

Dated: October 30, 2015

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. NDEP requires that the model files in next submittal include final outputs and a readme file to document the contents of the model files, the information on the MODFLOW version and the graphical-user interfaces (GUI) and the instruction to run the model.
2. NDEP suggests that a map showing both conceptual and simulated groundwater fluxes of each model boundary in next model submittal.
3. Please provide the data that supports the stream conductance presented in Figure 9 in next model submittal.
4. Please provide more details how the groundwater discharge to Las Vegas Wash is distributed between Reaches A and B using GIS in Table 1a.
5. The conceptual water budget and the simulated water budget with Phase III Model in Table 5 are almost perfectly matched, which is generally not common. It is noticed that some numbers of the conceptual groundwater fluxes were back-calculated with the parameters from the model, which is not conventionally done for the conceptual water budget. The conceptual water budget should be independently derived from the parameters based on measurements and applicable data. Please try to provide an independent conceptual water budget in next model submittal.
6. Section 1.2 Phase III Model Refinements, page 2, last three bullets on page. The bulleted items:
 - a. explicitly modeling the weirs installed in Las Vegas Wash;
 - b. comprehensive uncertainty analysis; and

- c. extending the model boundary to Three Kids Weir and evaluation of the influence of fault zones in that area,

are essential additions to the model. The NDEP requires including these three items in the Phase IV model submittal.

7. Section 2.1.3 Evapotranspiration From Groundwater, page 6. Please provide more detail regarding the adjustment of evapotranspiration, in next model submittal.
8. Section 2.2.2 Focused Recharge, Storm Water Retention Basins, page 8 and Figure 3. Please note that there is, also, a storm water retention basin west of OSSM between Eastgate Road and the freeway. Please include the focused recharge for that pond in next model submittal.
9. Section 4.3 Phase III Model Evaluation, page 16; Figure 13, Layer 1. At the scale presented it is somewhat difficult to see but some of the largest errors (± 10 to 20 feet or more) occur on site at NERT and OSSM near their respective GWETS and in the area of the AMPAC perchlorate plume. NDEP requests clarification of the potential impact to the capture zone analysis for the respective GWETS with the next model
10. According to the All Wells Database, Wells M-156 (screened 175 to 195 feet), TR-9 (screened 210 to 250 feet), and TR-10 (screened 80 to 100 feet) are screened in the Middle Zone (UMCf) and are included in the analysis including maps, figures, and tables for the Shallow Zone.
 - a. Please clarify if Layer 1 includes other Middle Zone wells that are not screened across the Shallow Zone and transitional Muddy Creek (xMCF) in next model submittal.
 - b. Also, given the isolation of the Middle Zone from the Shallow Zone at these depths, please clarify the potential impact to the model's calibration targets and capture zone analysis in next model submittal.

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:jp

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