



# STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

Jim Gibbons, Governor

Allen Biaggi, Director

Leo M. Drozdoff, P.E., Administrator

November 10, 2009

Susan Crowley (Contractor)  
C/O Tronox LLC  
PO Box 55  
Henderson, NV 89009

Re: **Tronox LLC (TRX)**  
**NDEP Facility ID #H-000539**  
Nevada Division of Environmental Protection (NDEP) Response to:  
*Annual Remedial Performance Report for Chromium and Perchlorate, Tronox LLC,*  
*Henderson, Nevada, July 2008 – June 2009*  
Dated August 21, 2009

Dear Ms. Crowley,

The NDEP has received and reviewed TRX's above-identified Report and provides comments in Attachment A. TRX should provide an annotated response-to-comments (RTC) letter as part of the next Semi-Annual Report submittal.

Please contact the undersigned with any questions at [sharbour@ndep.nv.gov](mailto:sharbour@ndep.nv.gov) or (702) 486-2850 extension 240.

Sincerely,

Shannon Harbour, P.E.  
Staff Engineer III  
Bureau of Corrective Actions  
Special Projects Branch  
NDEP-Las Vegas Office  
Fax: 702-486-5733



SH:bar:sh

CC: Jim Najima, NDEP, BCA, Carson City  
Brian Rakvica, NDEP, BCA, Las Vegas  
Keith Bailey, Environmental Answers LLC, 3229 Persimmon Creek Drive, Edmond, OK 73013  
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Brenda Pohlmann, City of Henderson, PO Box 95050, Henderson, NV 89009  
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Jeff Gibson, AMPAC, 3883 Howard Hughes Pkwy, Ste 700, Henderson, NV 89169

### Attachment A

1. Section 2.1, page 3, 2<sup>nd</sup> paragraph, last sentence, the value given in this sentence for the Lake Mead water flow rate “currently” injected into the trenches does not correspond with the “current” value on Figure 2. Please clarify.
2. Section 4.1.1, page 12, 3<sup>rd</sup> paragraph, TRX states that a “groundwater pulse containing a high concentration of perchlorate, with few other salts present, is responsible for this anomaly [elevated perchlorate concentration without a corresponding elevated TDS concentration].” Please discuss where the “groundwater pulse” would have originated that is responsible for this “anomaly” that has been occurring since at least 2005.
3. Section 4.1.2, pages 13-14, the perchlorate concentrations discussed in this Section do not coincide with the perchlorate concentrations listed on Plate 7. Please provide better quality control of future documents.
4. Section 4.1.3, page 16, 2<sup>nd</sup> paragraph, TRX states that “The relative higher perchlorate-impacted groundwater in PC-91 appears to be limited in lateral and vertical extent, based on the lower concentrations in other nearby wells.” PC-91 is screened approximately 1520 – 1530 ft MSL (starting about 15 ft below the water table). “Nearby well” PC-133 is screened across the water table with approximately 30 ft of wetted screen (approximately 1510 – 1540 ft MSL). The proposed groundwater well is also shown as having approximately 30 ft of wetted screen (approximately 1510 – 1540 ft MSL) and screened across the water table. Please discuss whether it is appropriate to compare the results of PC-91 to other dissimilarly screened wells. TRX should consider revising the Site-wide Sampling and Analysis Plan to better monitor the vertical components of the plumes.
5. Section 4.2, page 18, please clarify whether Pond AP-5 is still being remediated by slow feed into the FBR or if the insoluble solids drying and awaiting disposal.
6. Figures, NDEP has the following comments:
  - a. The colors and markers should be consistent for the corresponding data sets for each of the following sets of Figures.
    - i. Figures 9 and 11
    - ii. Figures 14 and 14A
    - iii. Figures 15 and 17
  - b. Figure 2, please indicate when the north trench came back on-line.
7. Plate 6, Groundwater Total Chromium Map, the iso-contours in Inset B on the northwest side of the slurry wall seem to be incorrect. The 1 ppm iso-contour just east of M-69 and the 0.1 ppm iso-contour just east of M-70 seem to be switched. Please review and revise as necessary for future submittals.
8. Appendix A, NDEP has the following comments:
  - a. Please note that the electronic version of the database was not included on the CD submitted with this document.
  - b. NDEP noted several instances of anomalous data (e.g. M-97 is listed as being sampled on both 5/4/09 and 5/6/09 with identical results, M-100 is noted as “dry” but a perchlorate concentration is listed, etc.). NDEP did not provide an exhaustive review of this Table. Please provide better quality control of the data in future documents.

9. Appendix C, NDEP has the following comments:
  - a. Response-to-Comment (RTC) 2.a and 2.b, TRX should provide the response to each of NDEP's comments in the RTC or provide a reference to the location of the response within the document.
  - b. RTC 4, if NDEP comments on a Figure, Table, or Section of a document and TRX changes the Figure, Table or Section number in the Revised or new report, the new number should be referenced in the corresponding RTC. (e.g. Figure 3 in the Semi-Annual Report in NDEP Comment 4 became Figure 2 in the Annual Report, in which NDEP Comment 4 was addressed. The RTC should have noted the change in number.)
10. Appendix D, NDEP responded under separate cover. Please see NDEP correspondence Re: Data Validation Summary Report dated October 20, 2009.