

July 2, 2007

Ms. Susan Crowley
Tronox LLC
PO Box 55
Henderson, Nevada 89009

Re: **Tronox LLC (TRX)**
NDEP Facility ID #H-000539
Nevada Division of Environmental Protection Response to:
Quarterly Performance Report, Perchlorate Recovery System, Henderson, Nevada January – March 2007 dated May 29, 2007

Dear Ms. Crowley,

The NDEP has received and reviewed above-identified TRX report (1st Quarter 2007 Report). Comments have been provided in Attachment A. Please provide a fully annotated response to comments letter as an Appendix the Semi-Annual Performance Report for Chromium and Perchlorate for January – June, 2007.

Please contact the undersigned with any questions at 702-486-2850 x 240 or sharbour@ndep.nv.gov.

Sincerely,

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

CC: Jim Najima, NDEP, BCA, Carson City
Brian Rakvica, NDEP, BCA, Las Vegas
Todd Croft, NDEP, BCA, Las Vegas
Keith Bailey, Tronox, Inc, PO Box 268859, Oklahoma City, Oklahoma 73126-8859
Sally Bilodeau, ENSR, 1220 Avenida Acaso, Camarillo, CA 93012-8727
Barry Conaty, Akin, Gump, Strauss, Hauer & Feld, L.L.P., 1333 New Hampshire Avenue, N.W., Washington, D.C. 20036
Brenda Pohlmann, City of Henderson, PO Box 95050, Henderson, NV 89009
Mitch Kaplan, U.S. Environmental Protection Agency, Region 9, mail code: WST-5, 75 Hawthorne Street, San Francisco, CA 94105-3901
Rob Mrowka, Clark County Comprehensive Planning, PO Box 551741, Las Vegas, NV, 89155-1741
Ranajit Sahu, BRC, 311 North Story Place, Alhambra, CA 91801
Rick Kellogg, BRC, 875 West Warm Springs, Henderson, NV 89011
Mark Paris, Landwell, 875 West Warm Springs, Henderson, NV 89011
Craig Wilkinson, TIMET, PO Box 2128, Henderson, Nevada, 89009-7003
Kirk Stowers, Broadbent & Associates, 8 West Pacific Avenue, Henderson, Nevada 89015
George Crouse, Syngenta Crop Protection, Inc., 410 Swing Road, Greensboro, NC 27409
Nick Pogoncheff, PES Environmental, 1682 Novato Blvd., Suite 100, Novato, CA 94947
Lee Ericksen, Stauffer Management Company, P.O. Box 18890, Golden, CO 80402
Chris Sylvia, Pioneer Americas LLC, PO Box 86, Henderson, Nevada 89009
Paul Sundberg, Montrose Chemical Corporation, 3846 Estate Drive, Stockton, CA 95209
Joe Kelly, Montrose Chemical Corporation of CA, 600 Ericksen Avenue NE, Suite 380, Bainbridge Island, WA 98110
Paul Hackenberry, Hackenberry Associates, LLC, 550 W. Plumb Lane B425, Reno, Nevada 89509

Attachment A

1. General comment, please note that the March 29, 2007 NDEP Comments on the Semi-Annual Performance Report Dated February 26, 2007 (2nd Semi-Annual 2006 Report) must be additionally applied to the Quarterly Performance Reports as applicable. This includes any similar tables and figures.
2. Section 1.0, last paragraph, include both the mass perchlorate removed per quarter and the mass perchlorate removed per day for the on-Site well field, Athens Road well field, seep area well field, and the grand total.
3. Section 2.0, first paragraph, last sentence, please explain the significance of comparing the current interceptor well field extraction rate to the 65 gpm rate that is cited.
4. Section 3.0, pg 3-2, second paragraph, the NDEP acknowledges that ARP-4, ARP-5, and ARP-6 have been temporarily abandoned for 6 to 9 months. Please continue to update the status of these piezometers in future Quarterly and Semi-Annual Performance Reports until these piezometers have been reestablished.
5. Tables, Table 2, please clarify the relationship between wells ART-6 and ART-9 via a footnote on this table.
6. Figures, the NDEP has the following comments:
 - a. Figure 1, this Figure is not legible. It is not possible to discern the locations of many of the wells. Please provide this Figure on a larger sized piece of paper in the future.
 - b. Figure 7, NDEP notes that based upon a review of this Figure it appears that no appreciable change in perchlorate concentration has occurred since 2001. This suggests a continuing source.
 - c. Figure 8, see comment for Figure 7.
 - d. Figure 14, due to the scale of this Figure it is not possible to discern any meaning. Please modify the scale in future submittals or provide two Figures with different time frames covered.
7. Appendix A, the depth to groundwater and groundwater elevations for the November 2006 sampling event reported in the 2nd Semi-Annual 2006 Report do not match several November 2006 values reported in the 1st Quarter 2007 Report. This was especially noted for the “ART” and “I” designated wells. Errata for Appendix A must be submitted with TRX’s response to comments (RTC).
8. Appendix B, the NDEP has the following comments:
 - a. Well M-48, it is noted that this well is downgradient of the slurry wall. Please explain what appears to be a continuing source of >200 mg/l perchlorate to this well.
 - b. Well M-69, please explain the increasing concentrations in this well which is located on the western edge of the plume.
9. Appendix C, Database, Qualifiers, there are two columns of qualifiers in the database, “lab_qualifiers” and “validator_qualifiers.” It is not always clear which of these was used to determine the final qualifier. It would seem that the validator_qualifier should be the final qualifier. Also, many “u” and “ud” lab_qualifiers do not have a qualifier in the validator_qualifier column. For completeness the report should clarify what the final qualifier is and how the lab_qualifiers are used.
10. Appendix C, Laboratory Reports, General Comment, a laboratory report is incomplete without a Case Narrative (or similar discussion of sample conditions and deviations from quality) and Chain of Custody (COC). Most of the laboratory reports submitted appears to have no Case Narrative - the Report Comments pages are blank (and unsigned), and the COC is missing for laboratory reports 198847.pdf, 198415.pdf, and possibly others. The DVSR should provide clarification as to why this information is missing. The DVSR is incomplete without all COCs.

11. Appendix D, RTC, general comment, this response to comments section should also be included in the 1st Semi-Annual 2007 Report.
12. Appendix D, RTC 7, according to Table 4 in the 1st Quarterly 2007 Report, Athens Rd well field exhibited a decrease of 106 pounds per day between June 2006 and July 2006 followed by an increase of 110 pounds per day between August 2006 and September 2006, which is when TRX reports that ART-9 became operational. Please discuss the cause(s) of the 106 pounds per day decrease and how this relates to the 110 pound per day increase two months later.
13. Appendix D, RTC 10.a, check the location of the vertical scale on Figure 2 of the 2nd Semi-Annual 2006 Report for accuracy. If the actual groundwater elevation of I-K is 1713.75, as reported by TRX, the vertical scale on Figure 2 shows that this elevation is still below the screened interval.
14. Appendix D, RTC 10.f.i-vii, the NDEP acknowledges that TRX collects samples from 50 sampling points on the interim groundwater treatment system and that illustrating these on the current Figure 7 would significantly decrease legibility of the figure. Therefore, please increase the size of Figure 7 and use footnotes to illustrate where the sampling points are located, what analyses are being conducted at each sampling point, and the frequency of sampling at each point. Please include these revisions in the 1st Semi-Annual 2007 Performance Report.
15. Appendix D, RTC 11.c, TRX's RTC does not address NDEP's original comment. Therefore, provide an explanation and discussion on the increasing total chromium outflow concentrations in the 1st Semi-Annual 2007 Performance Report. The discussion must include a schedule for how TRX plans to mitigate this issue.
16. Appendix D, RTC 11.e, please include and denote any estimated data in this table.
17. Appendix D, RTC 12.c, please include and denote any estimated data in Plate 3.
18. Appendix D, RTC 15.b.ii, please submit a schedule for and clarification on the intended procedures for the recommended pump test on M-71 and M-72. This item can be completed via an e-mail to the NDEP.
19. Appendix D, RTC 15.b.iii, the NDEP acknowledges that the current detection limit for total chromium is 0.02 mg/L. Please include a contour line for 0.02 mg/L on the Total Chromium in Groundwater map commencing with 1st Semi-Annual 2007 Report. If TRX believes that the 0.02 mg/l contour line is not plausible, please discuss this matter with the NDEP.
20. Appendix E, Section 1.0, Introduction, Sample and Analysis Clarification, the database provided with this DVSR includes all data from first quarter 2006 to first quarter 2007. This complicates review of the report and references provided in the report. For example, there are three different methods in the database for Chromium-Hexavalent, but only one of these methods appears to be relevant to this DVSR.
 - a. In this section, provide a list of the analytes for which analyses were performed and the samples (e.g., 20 groundwater samples) that were analyzed included in this Performance Report.
 - b. The report should include a table that shows the sample IDs (in rows) and the analytes (in columns) for which these samples were analyzed.
21. Appendix E, Section 1.0, Introduction, include a statement that all samples were filtered for all analyses, or if not all analyses, include for which analyses the samples were filtered.
22. Appendix E, Section 2.0, Data Validation Process, page 1, after the bullets, the DVSR refers to "the non-CLP methodologies." Please write out the acronym the first time it is used.
23. Appendix E, Section 2.0, the DVSR states, "The results contained in the lab reports listed in the data validation memorandum were subjected to thorough data review rather than formal full data validation as recommended in the guidance on data validation provided by NDEP for the BMI Plant Sites (NDEP, 2006). MWH did not provide complete data packages with raw data for the reviewed results and therefore, verification of the initial and continuing calibrations and other elements in the Tier 2 list beyond batch quality control (QC) were not available for review." The analytical laboratory, MWH,

- should be required to provide data that allows validation to Tier 3 to meet the data validation guidance provided by NDEP.
24. Appendix E, Section 3.1, Holding Time and Sample Preservation and Table E-3, Table E-3 indicates a number of results were qualified due to holding time. However, both a J and a J- qualifier are used with no obvious distinction. This section should explain the logic for qualifying results as J- versus J.
 25. Appendix E, Section 3.2, Blank Contamination, the memorandum included with this report, dated May 1, 2007 (file: TH1stqtr2007.pdf) indicates blank contamination was identified in two blanks. The DVSR should include a discussion of both blanks.
 26. Appendix E, Section 4.1, Precision, paragraph 2, change “LSC/LCSD pairs” to “LCS/LCSD pairs.”
 27. Appendix E, Section 4.5, Comparability, this section should include the methods used for each analyte or suite of analytes, especially since multiple methods were included. It is noted that this information is in the memorandum dated May 1, 2007 (file: TH1stqtr2007.pdf) but should also be included in the DVSR. Also, two methods for total chromium are shown in the memorandum. The DVSR should explain why there were two methods used and discuss their comparability.
 28. Appendix F, the NDEP does not find the information provided in this appendix useful without a corresponding map(s). The map(s) must include all wells listed on the proposed sampling plan and be color-coded with respect to sampling frequency with another map color-coded with respect to chemical analysis. Please submit these items in the 1st Semi-Annual 2007 Report.