

June 13, 2006

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 requested format and content changes to Semi- Annual Chromium Performance Reports and Quarterly Perchlorate Performance Reports

Dear Ms. Crowley,

The NDEP has reviewed the format and content of the reports that are generated to evaluate the performance of the chromium and perchlorate remedial systems. Since these systems are inherently linked, it is the opinion of the NDEP that a single report should be generated. This will reduce duplication of efforts by Trx and the NDEP. Additionally, in the future, as additional analytes are added it is logical to discuss all of these matters under a single report. This is consistent with the methodology applied at other sites. Detailed comments are included as Attachment A to this letter.

It is suggested that a meeting be scheduled to discuss these comments and the schedule for implementation of the revised format and content.

Please contact me if there are any questions.

Sincerely,

Brian A. Rakvica, P.E.
Supervisor, Special Projects Branch
Bureau of Corrective Actions
NDEP-Las Vegas Office

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CC: Jim Najima, NDEP, BCA, Carson City
Shannon Harbour, NDEP, BCA, Las Vegas
Todd Croft, NDEP, BCA, Las Vegas
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Brenda Pohlmann, City of Henderson, PO Box 95050, Henderson, NV 89009
Mitch Kaplan, U.S. Environmental Protection Agency, Region 9, mail code: WST-5,
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Rob Mrowka, Clark County Comprehensive Planning, PO Box 551741, Las Vegas, NV, 89155-
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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
Lee Erickson, Stauffer Management Company, 400 Ridge Rd., Golden, CO 80403
Chris Sylvia, Pioneer Americas LLC, PO Box 86, Henderson, Nevada 89009
Paul Sundberg, Montrose Chemical Corporation, 3846 Estate Drive, Stockton, California
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Joe Kelly, Montrose Chemical Corporation of CA, 600 Ericksen Avenue NE, Suite 380,
Bainbridge Island, WA 98110

Attachment A

1. General comment, the quarterly and semi-annual groundwater monitoring reports generated by TIMET are an acceptable format and Trx should consider reviewing the general formatting of these reports in addition to the comments provided below.
2. General comment, the NDEP acknowledges and appreciates that some of these changes may necessitate a change in existing consent orders, consent agreements and administrative orders on consent.
3. The goals of the report are as follows:
 - a. Demonstrate capture (hydrologic and chemical);
 - b. Demonstrate system removal efficiency; and
 - c. Presentation of contamination extents (e.g.: plume maps).
4. The NDEP suggests that the frequency of the report be as follows:
 - a. Quarterly reporting and sampling for a limited number of wells.
 - b. Annual reporting for the larger set of wells.
 - c. Full contour maps presented quarterly with dashed contours for inclusion of non-contemporaneous data.
5. The NDEP has the following suggestions for the text of the report:
 - a. The format as laid out in the semi-annual chromium report, which is virtually identical to the quarterly perchlorate report, is acceptable to the NDEP with exceptions noted below.
 - b. Please add a discussion of the layout of the system. This discussion should be tied to a new figure which is a process flow diagram (PFD). This PFD should detail the entire system including (but not limited to):
 - i. Well fields/surface water capture
 - ii. Lift stations
 - iii. Discharge pipe
 - iv. Treatment systems
 - v. Pond GW-11 and any other storage units
 - c. Within the discussion of each well field, Trx should discuss any findings that are out of the ordinary. If the findings are consistent with previous quarters very little discussion is needed.
 - d. The chromium report contains very little discussion regarding hexavalent chromium. The NDEP requests that this discussion be greatly expanded. It is the understanding of the NDEP that the plume is nearly 100% hexavalent. Trx should sample the entire plume for hexavalent and total chromium to determine this. Due to the toxicity of hexavalent chromium, future reporting should discuss this issue.
6. General comment, database and report development, the NDEP has the following comments:
 - a. It is not evident to the NDEP that Trx utilizes a database and appropriate GIS/mapping software to develop these reports.
 - b. It is the opinion of the NDEP that development of a comprehensive, validated database (MS Access compatible) and utilization of GIS/mapping software will eventually expedite the development of these reports. Furthermore, this electronic relationship will correct some of the

quality problems that have been noted between figure and table development. The NDEP can provide examples, if necessary.

- c. In addition, a long-term cost savings is likely to be realized.
 - d. The NDEP acknowledges that there is a cost associated with the development of this database that will likely take several months and tens of thousands of dollars.
7. Figures, the NDEP has the following suggestions and comments:
- a. If Trx believes that the development of these figures on a quarterly basis is too onerous, the NDEP is willing to discuss inclusion of some of these figures on a semi-annual or annual basis only.
 - b. Figure 1, location map, generally acceptable.
 - c. Presentation of consent order monitoring area, the NDEP believes that this figure is generally unnecessary and can be incorporated into other figures.
 - d. Consent Order Area potentiometric surface, the NDEP does not find this figure useful and requests that this figure be replaced with a new figure that covers a larger area. Trx has developed figures at a scale of 1"=1,000' and these are useful (similar to the "annual figures" submitted for perchlorate).
 - e. Contaminant maps for on-site, the NDEP does not find this figure useful and prefers a map that covers a larger area. Trx has previously developed figures at a scale of 1"=1,000' and these are useful (similar to the "annual figures" submitted for perchlorate).
 - f. Cross-sections, the NDEP finds these figures useful. The NDEP requests that the reports contain one of these figures for each well field. A figure similar to Plate 5 of the quarterly perchlorate report is useful. The NDEP requests that the lithologic data be added to this figure.
 - g. Time versus concentration graphs, the NDEP believes that these figures are useful and suggests that the figures that are presented as a "section graph" be used. It is requested that one of these figures be included for each well field transect for the following contaminants: perchlorate, TDS, hexavalent chromium and total chromium.
8. Tables, the NDEP has the following suggestions and comments:
- a. Select wells data tables, the following is suggested:
 - i. The tables that are presented should show all wells and all analytes. These tables can be time limited (e.g.: the last five quarters of data).
 - ii. The electronic version of the tables should include all current and historical data.
 - iii. In these tables, the consent agreement wells can be flagged in some sort of way.
 - b. Influent and effluent concentrations, this is a helpful table.
 - c. Present discharge pumping rates for each well in each well field.
 - d. Ground water elevation data. It is suggested that this information be presented for all wells versus time in an Appendix. A select number of hydrographs can present this data in the "Figures" section.
9. Miscellaneous

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- a. The sampling method(s) used needs to be clarified. This is one of many items that needs to be included in the Field Sampling Plan (FSP) as a Standard Operating Procedure (SOP).
- b. Bailing is not an acceptable method of sampling.
- c. Tronox is strongly encouraged to evaluate the applicability of low flow purge and sampling.