



environmental management, inc.

October 8, 2010

Ms. Shannon Harbour, P.E.
NDEP-Bureau of Corrective Actions
901 S Stewart St
Carson City, NV 89701

RE: Interim Approach for Unsaturated Zone Soil Remediation
Tronox LLC, Henderson Nevada: NDEP Facility ID # 000539
Project # 2027.10

Dear Ms. Harbour:

With this letter, Tronox LLC (Tronox) is presenting a brief description of an interim approach for remediation of unsaturated zone soil at the Tronox facility in Henderson, Nevada (the Site). Supporting information for this approach is provided in the following two attachments:

1. Revised Work Plan to Evaluate In Situ Soil Flushing of Perchlorate-Impacted Soil, Tronox LLC, Henderson, Nevada
2. Evaluation of Perchlorate Mass Distribution

The elements of this proposed interim remedial approach are the following:

1. Conduct column studies and a field pilot study of in situ soil flushing to assess this technology's effectiveness at removing perchlorate and other leachable constituents of concern (COCs) from throughout the unsaturated zone.
2. Develop criteria for targeting areas of the unsaturated zone for large-scale in situ soil flushing operations, assuming the field pilot study proves successful.
3. Conduct a feasibility study of other remedial options for unsaturated zone leachable COCs that might be implemented in addition to, or instead of, flushing.
4. Work with NDEP to develop a comprehensive plan for remediating unsaturated zone soil at the Site.

As you know, excavation of soils that exceed direct-exposure basic comparison levels (BCLs) or background levels for chemicals of concern (COCs) other than perchlorate is in progress, and is expected to be completed by the end of 2010. The soil flushing column studies listed under the first element above were recently completed in accordance with the Revised Work Plan to Evaluate In Situ Soil Flushing of Perchlorate-Impacted Soil (Northgate, May 27, 2010). The



results of these column studies are incorporated into the latest version of the pilot study work plan, which is presented as the first attachment to this letter.

Based on the success of the laboratory column studies, Tronox anticipates that in situ soil flushing will be an effective remedial approach for larger-scale application at the Site. Tronox has evaluated perchlorate mass distribution (see Attachment 2) for use in targeting Site areas for potential in situ soil flushing. If the field pilot test is successful, Tronox proposes to focus soil flushing treatment on the areas with the highest perchlorate mass that are also accessible and upgradient of the barrier wall and Interceptor Well Field (IWF).

Because soil flushing is not feasible for all areas of the Site, Tronox will also work closely with NDEP to assess the feasibility of other remedial technologies to address remaining concentrations of perchlorate and other chemicals with concentrations that are potentially leachable. As requested by NDEP in their July 30, 2010 comments on the Revised Environmental Covenants, Institutional and Engineering Control Plan, (Tronox, June 9, 2010), Tronox will prepare a feasibility study of remedial options in consultation with NDEP.

Tronox looks forward to working with NDEP to complete the remediation of soil at the Site. Please contact me or Susan Crowley at (702) 592-7727 if you have any comments or questions concerning this correspondence.

Sincerely,
Northgate Environmental Management, Inc.



Deni Chambers, CEM
Principal-in-Charge

Enclosures: Attachment 1
Attachment 2

