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NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
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STATE OF NEVADA
Department of Conservation & Natural Resources
DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor
Leo M. Drozdoff, P.E., Director
Colleen Cripps, Ph.D., Administrator

May, 20 2014

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: *Field Sampling Plan Revision 0, Nevada Environmental Response Trust Site, Henderson, Nevada*

Dated: January 24, 2014

Dear Mr. Steinberg,

The NDEP has received and reviewed the Trust's above-identified Deliverable and provides comments in Attachment A. A revised Deliverable should be submitted **by 06/20/2014** based on the comments found in Attachment A. The Trust should additionally provide an annotated response-to-comments letter as part of the revised Deliverable.

Please contact the undersigned with any questions at wdong@ndep.nv.gov or 702-486-2850 x252.

Sincerely,

Dong

Weiquan Dong, P.E.
Special Projects Branch
Bureau of Corrective Actions
NDEP-Las Vegas City Office

WD:jd

EC: Greg Lovato, Bureau of Corrective Actions, NDEP
James Dotchin, NDEP, BCA LV
Dave Emme, NDEP
Adam Baas, Edgcomb Law Group
Allan Delorme, ENVIRON
Andrew Barnes, Geosyntec
Andrew Steinberg, Nevada Environmental Response Trust
Betty Kuo, MWDH2O
Brenda Pohlmann, City of Henderson
Brian Waggle, Hargis + Associates
Cassandra Joseph, AG's Office
Catherine Sties, MWDH2O
Charles K. Hauser, Esq., Southern Nevada Water Authority
Chuck Elmendorf, Stauffer Management Company, LLC
Dave Share, Olin
David Johnson, Central Arizona Water Conservation District
Ebrahim Juma, Clean Water Team
Ed Modiano, de maximis, inc.
Eric Fordham, Geopentech
George Crouse, Syngenta Crop Protection, Inc.
Dave Share, Olin Co
Jay Steinberg, Nevada Environmental Response Trust
Jeff Gibson, AMPAC
Jill Teraoka, MWDH2O
Joanne Otani
Joe Kelly, Montrose Chemical Corporation of CA
Joe Leedy, Clean Water Team
Joe McGinley McGinley &Associates
John Pekala, Environcorp
Kirk Stowers, Broadbent & Associates
Kurt Fehling, The Fehling Group
Kyle Gadleym, Geosyntec
Lee Farris, BRC
Marcia Scully, Metropolitan Water District of Southern California
Mark Paris, Landwell
Matt Pocernich, Neptune & Company Inc
Michael Long, Hargis + Associates
Mickey Chaudhuri, Metropolitan Water District of Southern California
Nicholas Pogoncheff, PES Environmental, Inc.
Paul Black, Neptune and Company, Inc.
Paul Hackenberry, Hackenberry Associates, LLC
Peggy Roefer, Southern Nevada Water Authority
Ranajit Sahu, BRC
Rebecca Shircliff, Neptune and Company, Inc.
Richard Pfarrer, TIMET
Rick Kellogg, BRC
Ron Zegers, Southern Nevada Water Authority
Scott Bryan, Central Arizona Project
Stephen Tyahla, U.S. Environmental Protection Agency, Region 9
Susan Crowley, Crowley Envirn.
Tanya O'Neill, Foley & Lardner LLP
Wayne Klomp, AG's Office

Attachment A

Essential Corrections

1. General

   A) Hexachlorobenzene (HCB) is identified as a COPC in soils and is listed in all applicable tables as a target analyte using the organochlorine pesticides analyses (method 8081). However, in the QAPP, this compound is listed only as a target analyte for the SVOC 8270 analyses. It will be necessary to resolve this discrepancy between the FSP and QAPP to ensure that the samples are analyzed for HCB by the appropriate method. If method 8081 is selected, that the MQOs for 8081 analyses must be added to the QAPP.

   B) Both the FSP and the QAPP discuss the potential of groundwater contamination based on leaching from contaminated soils. Table 1b of the FSP lists the chemicals of potential concern (COPCs) in soil based on leaching to groundwater. The QAPP discusses the synthetic precipitation leaching procedure (SPLP) and provides screening levels and MQOs in Table 4. However, the FSP does not mention the analysis of leachates for soil samples. There needs to be a clarification of which soils will be subjected to the SPLP procedure, and how they are to be collected/handled.

   C) The FSP mentions only TO-15 and helium leak check for soil vapor analysis and states that samples will be collected in Summa canisters or Tedlar bags (Sec 4.9 Soil Gas Sampling). However, the Field Guidance Document (FGD 010) only mentions Summa canisters. Also, the QAPP notes several additional VOC analytes for soil vapor analysis by 8260. These are not mentioned in the FSP (even as a footnote that the compounds would be added to the TO-15 analyte list).

   D) Geotechnical parameter analyses are mentioned in the FSP, however two of the tests, Atterberg Limits and Grain Size are not mentioned in the QAPP.

   E) The text mentions "attenuation parameters" for groundwater analysis in Sec 3.2.5 and Sec 4.7, but this is not one of the analytical categories in Tables 4, 5, or 6. The tests associated with attenuation monitoring should be defined.

2. Sec 3.1.7 Investigation of Soil Beneath Unit Buildings and Leach Plant – There is a discrepancy between the stated analyses for the soil borings (p. 10) and the analyses marked in Table 2 RIDSB-1 in area 8. The following tests specified in Table 2 are not mentioned in the text: rare metals, SVOC, OC Pest, OP Pest, PAH, PCB, Dioxins, Organic acids, and radionuclides.

3. Table 4 Groundwater Sampling at New Groundwater Monitoring Wells. Please add two columns of "Groundwater Table Elevation" and "Depth to Groundwater", respectively. The footnote is not consistent with the table content.

4. Table 5 Groundwater Sampling at Existing Groundwater Monitoring Wells. Please add two columns of "Groundwater Table Elevation" and "Depth to Groundwater", respectively. Please add existing wells of COH-2, COH-2A, HMW-8, HMW-9, HMW-23, MCF-K8, MCF-29B/A, MCF-30A/B, WMW5.58S WMW6.15S and WMW6.55S to the sampling plan if they are accessible.

5. Table 6 Trust Monitoring Program Wells To Be Analyzed for VOCs And Other COPCs – Sec 3.3 states that the wells in this table will be analyzed for the COPCs listed in Table 1a; however, the COPCs cyanide, alpha-BHC, heptachlor epoxide, bis(2-ethylhexyl)phthalate, and 4-chlorobenzenesulfonic acid are not included in Table 6.

6. Figure 8 Proposed Downgradient Plume Wells. Please move the Well of PC-156 to the location of the Well PC-157 and move the well PC-157 to the location close to the well COH2A. The NDEP suggests the boring depth of 70 feet and the screen interval from 15 to 60 feet for these three wells.

Minor Corrections

1. Sec 3.1 Soil Data Gaps – All references to the analysis of soil physical properties as specified in Sec 3.4 should be changed to Sec 3.5. Sec 3.4 is Groundwater Level Measurements.
2. Sec 3.2 Groundwater Data Gaps

   A) It is stated that up to 68 off-Site groundwater monitoring wells will be sampled; however only 47 off-Site wells are listed in Tables 4 and 5.

   B) Table 6 should also be referenced for the Trust Monitoring Program Wells.

3. Sec 3.2.2 Background Determination – Several of the middle WBZ wells listed for slug testing are not included in Tables 4, 5, or 6: MC-MW-18, MC-MW-39, M-152, and M-156. If this is correct, it should be clarified that these wells will not be sampled for chemical analyses.
4. Sec 4.0 Sampling Procedures and Equipment – Recommend adding soil vapor equipment to this section.
5. Sec 5.8 Field QA/QC Procedures – The last sentence of the first paragraph does not make sense. Suggest changing the verbiage to simply state that extra sample volume will have to be collected for samples designated for MS/MSD analysis. There should be a similar discussion for laboratory duplicates (although less extra volume is required).
6. Sec 5.8.5 Matrix Spike/Matrix Spike Duplicates – The first sentence does not make sense. Suggest rewording to state that although MS/MSD samples are not field QC samples, extra volume needs to be collected for samples designated for MS/MSD analysis.
7. References – The EPA DQO Guidance document, *Guidance on Systematic Planning Using the Data Quality Objectives Process EPA QA/G-4* (February 2006) should be added to the reference list.
8. Table 1b Preliminary Chemicals of Potential Concern in Soil Based on Leaching to Groundwater – the "*" definition footnote should be added to this table.
9. Table 1b – as a general comment, with the exception of PCB 209, all of the PCB congeners listed here have WHO TEF values, and can be converted to dioxin toxicity equivalents (TEQs). As one of the comments for the QAPP, the question was posed as to whether PCB congener TEQs should be discussed along with the dioxin TEQ discussions. Although this would not require any changes to the FSP, the comment is still valid.
10. Table 2 Soil and Grab Groundwater Sampling in Borings and Exploratory Trenches – The 10' interval for Area 6 should be marked as "hold" according to Sec 3.1.5.

11. Table 3 Soil Sampling in Groundwater Monitoring Well Pilot Borings Field Sampling Plan – For the Area 8 soil boring intervals greater than 5', the General Soil Chemistry category should be marked as "hold" according to Sec 3.2.7.