



NEVADA DIVISION OF
**ENVIRONMENTAL
PROTECTION**

STATE OF NEVADA
Department of Conservation & Natural Resources

Brian Sandoval, Governor
Leo M. Drozdoff, P.E., Director
David Emme, Administrator

July 25, 2016

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: *Data Validation
Summary Report, Document No. 04020-023-152 and Associated EDD, Upgradient
Investigation, September 2006, Tronox, LLC, Henderson, Nevada*

Dated: September, 2006

Dear Mr. Steinberg,

The NDEP has received and reviewed the Trust's above-identified Deliverable. NDEP's first comments on the Deliverable were emailed to the Trust's predecessor—Tronox on November 13, 2006, but the DVSR and EDD are not finalized. NERT made a request to have a review on this Deliverable on January 28, 2016 because this Deliverable could help the Trust's Health Assessment for the Parcels of C through H. NDEP provides comments on the Deliverable in Attachment A. A revised Deliverable should be submitted **by 9/25/2016** 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,

Weiquan Dong, P.E.
Bureau of Industrial Site Cleanup
NDEP-Las Vegas City Office

WD:cp

EC:

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Carlton Parker, NDEP BISC Las Vegas
Adam Baas, Edgcomb Law Group
Allan Delorme, Ramboll Environ

Alison Fong, U.S. Environmental Protection Agency, Region 9
Andrew Barnes, Geosyntec
Andrew Steinberg, Nevada Environmental Response Trust
Anna Springsteen, Neptune & Company Inc.
Betty Kuo Brinton, MWDH2O
Brenda Pohlmann, City of Henderson
Brian Waggle, Hargis + Associates
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Steve Clough, Nevada Environmental Response Trust
Steven Anderson, LVVWD

Tanya O'Neill, Foley & Lardner L
Todd Tietjen, SNWA

Attachment A

DVSR Review:

1. Section 1.0, Introduction: Please list the analyses performed and number of samples analyzed.
2. Section 2.0, Data Validation Process, top of document page 3: Please define SRC.
3. Section 3.2, Instrument Calibration and Tuning, next to last paragraph and Table E-6: The text notes that TCDD and TCDF were qualified in sample M-120-10 and M-120-0.5; however, TCDD was not qualified in sample M-120-10 and PeCDD was qualified in sample M-120-0.5. Please check the text and qualifications and correct as necessary. These results, detected between the EDL and the lowest calibration standard were qualified because the laboratory did not qualify them (J). Now, based on the definition of the reason code, the results appear to have an associated calibration issue, when such is not the case. Is there another reason code that can be applied to these results?
4. Section 3.3, Interference Check Sample Results: There are several questions regarding the ICS A qualifications.
 - a. The validation memo (06C071) associated with the ICS A qualifications notes the interfering elements in the qualified samples as calcium and/or iron; however, the qualification scheme detailed in the bullet point indicates that all of the interferents (aluminum, calcium, iron and magnesium) must be present in the sample at concentrations greater than or equal to that of the ICS A solution for a sample to be qualified. If the bullet point is correct, then the samples do not require qualification. Please confirm the logic used to qualify the samples.
 - b. The manganese and copper detects are quite large. Were the ICS A detects of a similar concentration as the sample results? If the ICS A detects were significantly smaller (an order of magnitude or more), the effect of the potential positive matrix interference could be negligible. Please check the logic used to qualify these samples.
 - c. If the samples are to be qualified, copper in one of the samples listed as qualified – M120-40D – is not qualified. Please add the qualification or explain why this result was not qualified.
5. Section 3.4, Blank Contamination:
 - a. Regarding the negated results, it appears for results originally above the reporting limit, the reporting limit was elevated to the concentration of the sample. Please note this in the text.
 - b. Two results for Ra-226 are reported in the EDD (Henderson_Upgradient_Data.xls) with the reason code “u-b.” Per the text in this section and Table E-8, the reason code should be “u-be.” Please correct the text or EDD as necessary.
6. Section 3.6, Laboratory Control Samples: The second paragraph indicates the 3,3'-dichlorobenzidine results were rejected for poor LCS recovery and an LCS/LCSD RPD outlier. The results listed in this section were rejected due to the low LCS recovery but probably not for the RPD outlier. Please revise the text in this section accordingly.
7. Section 3.7, Matrix Spikes: 2,3,7,8-TCDD and 2,3,7,8-TCDF were both qualified as

estimated in parent sample M120-0.5_03/07/2006, but the associated totals (total TCDD and TCDF) were not coded as having been qualified for the matrix spike (j-m). Please check the qualifications and if this total requires qualification, then please add an explanation to the text.

8. Section 3.8, Internal Standards, last paragraph: Please list the total number of metals results qualified.
9. Section 3.9, Laboratory Duplicates, LCS/LCSD:
 - a. The text in this section indicates dimethoate in three samples, five organophosphorus pesticide results in sample EB-3, and 29 organophosphorous pesticide results in sample M-120 were qualified as estimated for LCS/LCSD RPD outliers; however, the reason codes in the EDD (Henderson_Upgradient_Data.xls) indicate the samples were qualified for LCS recovery outliers. Please confirm these qualifications and correct the reason codes or text as necessary.
 - b. The last paragraph in the LCS/LCSD section refers to recoveries and as such, this paragraph should be moved to Section 3.6.
10. Section 3.9, Laboratory Duplicates, MS/MSD:
 - a. In the EDD (Henderson_Upgradient_Data.xls), one dioxin congener is qualified for an RPD outlier in sample M120-10; however, this result is not listed as qualified in the text. Please confirm the qualification and correct text or EDD as necessary.
 - b. Hexachlorobutadiene is listed as qualified in sample M-118-50 for an RPD outlier, but the EDD (Henderson_Upgradient_Data.xls) reason code indicates the sample was qualified for MS/MSD outliers.
 - c. Please list the number of metals results qualified.
11. Section 3.10, Field Duplicates:
 - a. Sample TR-7A has arsenic qualified in the EDD (Henderson_Upgradient_Data.xls) for a field duplicate RPD outlier, but this qualification is not listed in the text.
 - b. The M-116 wells have copper, lead and zinc qualified for field duplicate RPD outliers, but there is no field duplicate pair for this well. If the well is associated with M-117, then only copper and lead should be qualified. If it is associated with M-119, copper should be qualified, as should arsenic and calcium, but not lead and zinc. Please check the source of these qualifications, correct as necessary, and if the qualifications remain, perhaps it would be useful to include text to indicate the source of the qualifications.
12. Section 3.12, Quantitation: In the EDD, two TPH results were qualified as estimated (J) with a "j-r" reason code, which is defined as "estimated due to a quantitation problem." These two qualifications are not discussed in the text, nor do they appear in Table E-14. Please check these qualifications and correct the text/table and EDD as necessary.
13. Section 3.13, Other Issues: In the EDD, eight radiochemical results are qualified as estimated non detects with a reason code "uj-a," which is defined as "low abundance." These qualifications do not appear in the report text, nor any of the tables. Please check these qualifications and correct the text/table and EDD as necessary.
14. Section 3.14, Rejected Results: Please identify the number of methanol and tert-butyl

alcohol results rejected.

15. Section 4.2, Accuracy: Two results were rejected for LCS recovery. This should be noted in the next to last paragraph. At the end of the first sentence in the first paragraph, there are duplicated commas. The end of the next sentence has duplicated periods.
16. Section 4.5, Comparability: The end of the second sentence needs a period instead of a comma and the next to last sentence needs a period.
17. Section 4.6, Sensitivity: The next to last sentence needs a period instead of a comma.
18. Section 5.0, Conclusions: The text states that 90% of the data were accepted as reported by the laboratory without qualification based on validation action. This percentage does not account for results qualified as estimated because the results were between the MDL and the RL. As these results should have a qualification code, their qualification could be considered a validation action. Please either include these results in this calculation or explain why these results were excluded.
19. General: Please check all parenthetical definitions. Some appear after the first use of the acronym (e.g. ICP and GC.MS) and some appear multiple times (e.g. COC).
20. Tables, general: Many tables listing qualified dioxins do not include the “uj-q” reason code. In some cases, the code may be listed, but due to the limited width of the cell, the code is not visible.
21. Table E-2: The reason code “u-b” is not defined on this table. Please add this definition.
22. Table E-6, next to last line: An extra comma is present at the end of the reason code.
23. Table E-8: One sample ID is left-truncated. Please correct the formatting for this cell so the entire ID is visible.
24. Table E-14:
 - a. Most sample IDs are left-truncated. Please correct the formatting for these cells so the entire ID is visible.
 - b. Sample M-120_03 has four dioxin results qualified; however, there are no dioxin results for this sample in the EDD.

EDD Review, Henderson_Upgradient_Data.xls

1. There are 11 results where the “Val Qualifier” and the “Reason Code” do not match. For example, a result qualified “UJ” is has a reason code of “j-m” or a result qualified “J” has a reason code of “uj-m.” These codes carry through to the Tables.
2. The iron result for EB-1 and the M-120_05/03/2006 dioxin results have null “Lab Qualifier” but have “Val Qualifier” of “U” with a null “Reason Code.”

3. The hexavalent chromium result for FB-1 has a "u" "Lab Qualifier" but the "Val Qualifier" is null.
4. 229 results have a "J" "Lab Qualifier" and "Val Qualifier" but a null "Reason Code."