

## Meeting Minutes

**Project:** Tronox (TRX)  
**Location:** Conference Call  
**Time and Date:** 9:00 AM, Tuesday, January 22, 2008  
**In Attendance:** NDEP – Brian Rakvica, Shannon Harbour  
Tronox –Susan Crowley  
Environmental Answers – Keith Bailey (for TRX)  
ENSR –Elizabeth Perry, Robert Kennedy (for TRX)

CC: Jim Najima, Paul Black, Paul Duffy, Dave Gratson

1. The meeting was held to discuss TRX's radionuclide issues pertaining to the NDEP All Companies letter dated December 7, 2007.
2. Discrepancy between the Uranium and Thorium decay chains in the analytical results for the Phase A and Parcels A & B investigations:
  - a. STL-Richland used two different preparatory (prep) methods for the Uranium and Thorium radionuclide analyses: Mixed acids (including HF, hence complete dissolution) for the Thorium chain and nitric acid (incomplete dissolution) for the Uranium chain.
  - b. TRX used a factor approach for the Parcel A & B dataset to obtain a NFA but this approach doesn't sufficiently address the radionuclide issue for the Phase A dataset.
3. It is believed that the uranium data (ICP metal analysis) exceeds background in the Phase A dataset.
4. TRX needs to demonstrate secular equilibrium.
  - a. TRX used alpha spectroscopy (spec) for the Uranium and Thorium chains on 10% of the samples collected for the Phase A investigation (15 samples).
  - b. Uranium chain activities were generally less than the Thorium chain activities in the Phase A dataset and this is likely due to the digestion differences discussed above.
5. TRX stated that the Muddy Creek formation (MCf) samples (deeper samples) should be compared to the deep background dataset that is being generated by BRC/TIMET. (Results are expected in early February from BRC).
6. NDEP will send TRX electronic copies of the TIMET and BMI radionuclide responses to the December 7, 2007 letter. **ACTION ITEM.**
7. TRX stated that they are waiting for STL-Richland to provide calculated results for Uranium series and Thorium series radionuclides using the spectra recorded during gamma spectroscopy measurements for Radium-226 and Radium-228 on the 15 samples from the Phase A dataset that were additionally analyzed with alpha spec. STL-Richland has already provided results for 13 of the 15 samples. Results for the remaining two samples are expected this week. TRX will notify NDEP by Monday, January 28, 2008 whether the results from the remaining two samples were received and will provide a submittal date for this information. **ACTION ITEM.**
8. TRX will compare the gamma spec results to the alpha spec results and present the analysis to NDEP.
9. TRX believes that the radionuclide data should be relied on more heavily than the Uranium metal data for comparison to background determinations.
10. NDEP stated that their consultants have been working on the problem of false negatives (apparent lack of equilibrium) when demonstrating secular equilibrium because of the error associated with the analytical results. NDEP will provide feedback to all of the companies as soon as possible.