

Meeting Minutes

Project: Tronox (TRX)  
Location: Conference Call  
Time and Date: 9:00 AM, Monday, November 26, 2007  
In Attendance:  
NDEP: Brian Rakvica, Shannon Harbour  
Neptune: Paul Black (consultant to NDEP)  
Copeland: Teri Copeland (consultant to NDEP)  
Environmental Answers: Keith Bailey (consultant to TRX)  
ENSR: Lisa Bradley (consultant to TRX)

1. The purpose of this conference call was to discuss the Phase B work plan in relation to risk based decision making.
2. TRX stated that the Phase A borings were to represent several source areas. That the TRX facility is large and can be complicated but TRX believes that the data have been largely consistent with the conceptual model, that the site issues are mainly associated with groundwater, and that constituents in soil in Phase A are generally below conservative comparison levels with some exceptions. NDEP does not agree.
3. TRX stated that few constituents were noted above the comparison levels.
4. TRX stated that their approach has focused on constituent comparison levels and EAs based on parcels for sale or that have similar use planned.
5. NDEP's approach has focused on the adequacy of characterization of each source area for risk based decisions.
6. TRX will submit 2 tables by FedEx tomorrow. The tables are organized by LOU and combine elements of the CSM and Phase A/B for groundwater and soil, respectively. A map illustrating the proposed sampling will be submitted at this time also.  
**ACTION ITEM [Completed.]**
7. NDEP explained that an Exposure Area is defined by the receptor characteristics and the homogeneity of concentrations. That large Exposure Areas (really Decision Units consisting of many Exposure Areas) should have the same receptor scenarios throughout and consist of contiguous Exposure Area with same concentration distribution. NDEP stated that TRX has not filled in data for all source areas so that each source area has some analysis results (historical and/or current).
8. TRX has approached from similar land use not concentration distributions. TRX stated that the EAs are areas of random access by a receptor. NDEP stated that some EAs are so large that random access throughout the EA by a receptor is unlikely. Similar concentrations are then needed instead to be able to think of the EA as a single Exposure Area (Decision Unit). NDEP also noted that potentially some EAs could be combined under the same considerations. TRX stated that current use is important in the risk assessment as an example of potential future industrial use and can be used for informed decision making.
9. NDEP stated that if TRX wants to receive No Further Action with unrestricted industrial and/or commercial use then current conditions do not dictate what future

- use may be. For example, a building currently on the property may be demolished in the future.
10. TRX questioned comment 65 in NDEP's Draft comments. Comment 65 mentions a default of 0.5 acre for an exposure area. If TRX wants to use a higher number, rationale should be provided to the NDEP. EA is not the same as an exposure area. For example, EA08 may have 3 (or more) exposure areas based on current use and source areas. NDEP stated that the distribution of concentrations of the driver chemicals should be homogeneous over a large exposure area. Tronox disagrees but will work with NDEP to define exposure areas once the Phase B data are available. Exposure areas for higher concentration distributions should be minimized as the data allows. NDEP noted that exposure frequency may be much lower for a smaller area.
  11. NDEP pointed out the post-remediation risk assessment may be different than pre-remediation risk assessment and that the pre-remediation dataset could be used for decision making.
  12. TRX does not believe that the exposure areas need to be smaller than the EAs if the concentrations are below the comparison levels. NDEP stated that if the source areas have not been adequately characterized, TRX may not have the highest concentrations for comparison, which could lead to missing a potential risk.
  13. TRX stated that the original intent of the Phase B Work Plan was to include both judgmental and random sampling because the receptors are not limited to the source areas.
  14. NDEP stated that TRX should first look at the concentration distributions and future land use for the delineation of the exposure areas. TRX disagreed. NDEP stated that if TRX wants to have unrestricted industrial and/or commercial land use, TRX would need to use concentration distributions within each EA; otherwise, the NDEP may have to place restrictions on development in the NFA if an exposure area does not pass the risk assessment and there are no other feasible options.
  15. NDEP stated that it is not appropriate to average elevated concentrations into a single large exposure area.
  16. NDEP will send TRX references for default building size. **ACTION ITEM.**  
**[Completed.]**
  17. NDEP stated that TRX should use professional judgment when determining if step-out sampling is necessary. NDEP suggested considering defensibility and providing logical arguments and rationale for any decisions not to conduct step-out sampling if the data are above a comparison level. Additionally, NDEP stated that TRX may discuss NDEP's stance if a particular problem has been identified prior to submittal.
  18. NDEP stated that NDEP's Draft comments provided to TRX for the November 9, 2007 conference call were provided after only 30 days of review at TRX's request. NDEP did not have time to review the other documents referenced by the Phase A/B document. TRX could have added the information that was cited in these references to facilitate NDEP's review, which may have eliminated some of NDEP's Draft comments.
  19. NDEP stated that the most efficient organization of the Phase A/B document would be based on source areas.

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20. TRX stated that PEF modeling would be used for the on-site dust pathway. NDEP stated that Cr-VI could be a driver for this pathway and that TRX had historically provided data for Mn that was five orders of magnitude higher than the PRG.
21. TRX questioned NDEP's request in the Draft comments for additional dioxins/furans sampling in the Phase B Work Plan. NDEP stated that there were elevated concentrations reported in an area with no known source area. NDEP believes the conservative approach would be to sample in this area to check for a possible source and possible higher concentrations. TRX does not agree that the reported concentrations were "elevated" since they are under the 1 ppb comparison level. NDEP stated that TRX may respond to this comment with data and rationale if they want to refute the comment.