



*Solutions for Your Site Development,  
Construction, and Environmental Projects.*

To: Dan Fleming

From: Robert Beckwith  
Molly Arp Newell

Date: February 6, 2002

RE: Response to Navy Comments on the Temporary Well Interim Report, Building 105,  
Submitted December 2001

Below are TolTest's responses to your comments received January 31, 2002. Each item number respectively corresponds to your comments.

GENERAL COMMENTS:

1. This interim report was included in the scope of the project because TolTest and GLNLC believed that a snap shot of progress was an important part of the assessment and closure procedure. The document was not meant to stand alone with regards to historical information. The document was intended to set the stage for work yet to take place.
2. The time frame for closure has not changed, therefore, no mention of it was made here. The timeframe as established previously and as provided in the RCRA Closure plan dated April 2001. The Interim report was submitted in accordance with the timeline. We have lost a little ground with the timeline over the past month, as it has not been submitted to IEPA yet. The timeline I refer to was last modified in October of 2001. A copy of the updated timeline can easily be included in the Interim Report. It is appropriate to include the timeline issue in a cover letter to the Agency when this submittal is sent to IEPA.
3. Screening levels as defined in Federal Risk Assessment Guidance for Superfund (RAGS) and in the Illinois Tiered Approach to Clean Up Objectives (TACO) do not come into play during the collection of field samples. The screening levels used in the field consist only of the meter reading indicated by a photoionization detector (PID). These readings provide an indication of contaminant levels relative to "background", which is usually 0 to 3 ppm. The meter readings are helpful in identifying if contaminant levels are increasing or decreasing as the continuous core samples are pulled from the hydraulic push split spoon. The "screening" element allows the field geologist to pull samples from the strata with the highest level of contamination. If elevated readings are not indicated, soil samples are usually pulled from the first saturated strata encountered. With that said, please keep in mind that the Agency has stated in its correspondence that the soil plumes for this site have been defined, and additional soil sampling to define the soil plumes is not necessary. TolTest proposed that soil samples be collected for the following reasons: 1) to better define the soil plumes, because the TCE plume is not necessarily the same size and the DCE plume, and the result of "modeled" plumes may be a great

deal larger than the actual plumes if we did not sample soil during the field activities scheduled for groundwater delineation purposes; 2) we needed to collect soil for physical analyses and for total organic carbon content for modeling purposes.

4. As you appropriately point out in the *Specific Comments*, we do not yet know what the clean up objectives are, as we have not classified the groundwater as Class I or Class II. The regulatory objectives and goals for clean up /closure of soil and groundwater may be applied to the results of laboratory analyses, after we have classified the groundwater. We must perform hydraulic conductivity testing in a permanent well prior to calculating a yield from the saturated media. We have scheduled the installation of permanent wells, per the timeline, for the first quarter, 2002.

5.&6. Modeling has not yet been performed. TolTest agrees with the Agency that the general extent of soil contamination has been delineated. We cannot model until we agree that the extent of groundwater has been delineated, and only after hydraulic conductivity has been determined. I don't know the acronym ECO/HHRA. Migration to groundwater modeling will be done. Keep in mind, too, that we are dealing with dense non-aqueous phase liquids, DNAPLs. They generally seek depth to the extent that the local geology will allow. Our local geology includes dense, lean clay that was deposited in a subglacial environment.

#### SPECIFIC COMMENTS:

7. ELUCs is the correct term for the closure mechanism planned for this site. Other terms have been used in the past. ELUCs is an all encompassing term that includes administrative controls, institutional controls, engineering controls, environmental controls and so forth.

8. Thank you for the copy of the document entitled "Memorandum of Agreement between the IEPA and USEPA Region 5 and the US Department of (NAVY, ARMY, AIR FORCE)" dated 10-30-00. TolTest has anticipated the development of this document, but heretofore has not had an opportunity to review it. We knew only that Jenny Ross, previously from GLNTC, and the Department of Defense were working on a collaborative effort with the state and federal agencies to develop this MOA in the fall of 2000. We anticipate that the MOA will be the "centerpiece" for closing RCRA units and LUST sites at GLNTC which do not meet no further action criteria.

9. Table 3 indicates 6,900 mg/L PCE at GP01. PCE typically exhibits a low level of dissolved phase product (less than 1000 ug/L) apart from the source; therefore, TolTest believes that GP01 is at or very near the contaminant source. The PCE is probably sitting within and just below the sandy lens from 5 to 5.5 feet below grade. It does not appear to be traveling along the water main conduit along Samson Street. Even if we obtain a Class 2 groundwater classification, we have an exceedence of PCE in this location, GP01. We will have to model the potential extent of migration of the PCE, and seek a no further remediation (NFR) status using ELUCs. Long term monitoring (LTM) may or may not be necessary, if we are successful in negotiating an ELUC.

10. Due to hydraulic push refusal at two of the planned soil boring locations, we were unable to complete more than 14 of the 15 planned geoprobe borings. The next field activities planned for the site include six hollow stem auger borings with installations of monitoring wells in each. The collection of hydraulic conductivity data is key to the next field mobilization, so that groundwater classification and appropriate modeling may take place.

11. IEPA approved the Closure Plans for the five RCRA projects included in this delivery order on June 29, 2001. If you would like a copy of the correspondence, please let us know.

12. The contaminants of concern (COCs) were discussed in the RCRA Closure plans approved by the Agency in June 29, 2001. Samples collected at Building 105 by a previous contractor, EarthTech, were analyzed for VOCs only, because the site was a former dry cleaning facility. The waste stored/generated at this building, as provided in the Part A permit, is PCE. TolTest has relied on documents previously prepared by other contractors and provided by GLNTC for information specific to the Part A permit. We have reviewed documents prepared by others. It is appropriate to focus on VOCs in this instance as other wastes were not documented or believed to be stored here. Based on review of previous analytical data and the March 10, 1999 letter from IEPA, TolTest developed a closure plan that eliminates most of the VOCs as COCs. The COCs, as specified the approved closure plan consist only of PCE and DCE. Toltest believes this is cost effective and appropriate for this site.

13. The previous investigation, together with the recent soil boring activities, indicate that the plume has not traveled very far. Little degradation has taken place as provided in the EarthTech VOC analyses. Regarding other degradation products, TolTest did analyze for 1,1 dichloroethene and trans-1,2-dichloroethene but found minimal, where present, detectable amounts of them. Vinyl chloride has not been detected at the site in the past, and did not enter into consideration as a COC, per IEPA correspondence.

14. It is true that the number of groundwater samples collected outside the groundwater plume during the TolTest soil boring phase is minimal. TolTest states that the plume is defined in all directions but one based on results of recent data together with results of groundwater samples from 1998 to define the lateral extent of groundwater contamination. TolTest believes the 3 directions of the horizontal dimension to be defined regardless of the groundwater classification.

15. Previous to mobilization to the field, TolTest was knowledgeable regarding difficulties encountered by EarthTech in its 1998 report, which documents auger refusal in the vicinity of GL98-105-13 and GL96-105-03. TolTest representatives Molly Arp Newell and Khush Mander discussed the potential for auger refusal just prior to drilling activities. TolTest has not consulted with GLNTC specifically about the potential of subsurface obstructions since development of the Closure Plan.

16. Soil samples were collected in concert with the discussion in General Comment #3 above. Again, the extent of soil contamination is not an issue with IEPA.

17. TolTest believes that this DNAPL is limited in its vertical migration by the geology. The PCE at GP01, our “source” location, sits just below the sand and is migrating very slowly in the saturated strata at eight feet below grade. Lateral migration in the subglacial sediments known as diamicton is very slow. Drilling deeper at GP01 would allow contamination to travel deeper faster. Regarding GP08 and other locations, the PCE concentration will be highest at the saturated interval. Because the sample is saturated, it becomes a groundwater issue, not a soil delineation issue. Nonetheless, the most contaminated soil sample, even if from the saturated zone, was collected for analyses – to be used for modeling purposes later (see # 3 above).

18. Please see #3 above.

19 & 20. TolTest can overlay the PCE and DCE data on maps any way you like. Please let us know what you would like to see.

21. It is true that the EarthTech nomenclature is confusing. We are dealing with three sample numbers for most of the EarthTech borings. The numbers ending in 1 represent the shallowest soil sample from that location, 0 – 6 inches into “native” soil. The numbers ending in 2 represent samples from 30 to 36 inches below grade. The numbers ending in 4 represent samples from 66 to 72 inches below grade.