

December 27, 1994

**COMMENTS
TA-53 MIXED WASTE SURFACE IMPOUNDMENTS
CLOSURE PLAN**

- 1) Comment 2, p. 3, Discussion. **...and Table 3-10 on pages 3-66 and 3-67 will be changed to reflect the increase in the number of samples to be collected....**

[New Table 3-10 - looks like the number of samples for specific media has been reduced: It also looks like the sample type for some samples has been changed from "grab" to "composite".]

- 2) Comment 2, p. 4, ¶1, Proposed Text Changes, pp. 5-2 through 505. **...This approach is based on two methodologies: comparison with screening action levels (SALs) developed using the methodology outlined in the Installation Work Plan (LANL 1993)....**

LANL was going to "reference use of LANL SALs and send document down. The SALs live in FEMAT at LANL. (LANL SALs are IWP.]" - This material has not been received. - "Land unity concept. - Will pull out of IWP and incorporate into plan. Pertinent to constituents below SALs." - Quoted material is from notes from 11/9/94 meeting.]

- 3) Comment 2, p. 4, §2, Proposed Text Changes, pp. 5-2 through 5-5. **...The QA/QC evaluation will be based on the Quality Assurance Project Plan (Appendix J to the Closure Plan) and Appendix K to the Installation Work Plan for Environmental Restoration....**

[CHECK OUT APPENDIX J. We don't have Appendix K - do we need it?]

- 4) Comment 2, p. 4, §2, Proposed Text Changes, pp. 5-2 through 5-5. (Also Comment 13, p. 16, App. K, p. K-1, §K-1.) **...The level of uncertainty associated with estimated (e.g., J-flagged data) values and the potential effect this may have on the decision making process will be discussed. Those data that do not meet the QA/QC criteria will be rejected....**

It was agreed (or we stated) at the November meeting that J-flags should be used. My notes say that LANL will establish exact criteria for removing a data point. TICs? [CHECK APPENDIX J.]

- 5) Comment 2, p. 4, §3, Proposed Text Changes, pp. 5-2 through

TK



5-5. ...Background will be defined as the 95% upper tolerance level (UTL) calculated from concentrations of inorganic constituents measured in soil and tuff similar to that present near the TA-53 lagoons. If existing data are not sufficient to provide a statistically meaningful UTL, then additional samples will be collected near the lagoons in locations believed to be unaffected by releases from Laboratory facilities....

Decide now whether existing data are sufficient. If so, include data and justification for using these data in the closure plan. If not, include a map with sampling locations for background determination, accompanying text justifying these locations, and a time-frame for determining background.

- 6) Comment 2, p. 4, §4, Proposed Text Changes, pp. 5-2 through 5-5. ...If the maximum concentration in soils, subsoil, and tuff is less than the SAL, then the clean closure performance standard will be met for that constituent....

No. This only applies if all constituents are under the applicable SALs. [Otherwise, it applies if it is less than an order of magnitude below the SAL? Or are we going with LANL's multiple constituent comparison?]

- 7) Comment 2, Proposed Text Changes, pp. 5-2 through 5-5. ...If multiple constituents are detected and the total sum of the SAL comparison ratios (maximum concentration/SAL) is less than 1 (LANL 1993b), then clean closure will be met (see Section 3.1 for a detailed discussion of multiple constituent comparisons....)

Section 3.1 of what? This closure plan? Doesn't discuss this subject. LANL 1993b?

- 8) Comment 2, p. 5, carry-over §, Proposed Text Changes, pp. 5-2 through 5-5. ...if the constituent does not have a SAL, a SAL will be developed...using the methodology presented in Appendix J of the IWP (LANL, 1993b)....

[Has Appendix J been accepted by EPA? Reviewed by NMED?]

- 9) Comment 2, p. 5, §1, Proposed Text Changes, pp. 5-2 through 5-5. ...If constituents are detected at frequencies of less than 5% most will be eliminated from consideration....

Based on what? This is not what was discussed at the meeting?

- 10) Comment 2, p. 5, ¶1, Proposed Text Changes, pp. 5-2 through 5-5. ...However, a comparison risk analysis related to background UTLs will also be developed (EPA, 1989Z) to help the reviewer evaluate whether allowing the sludge to remain

would result in an increase in human health risk....

[Think about this. EPA 1989 is not included in the references. Is this the Superfund Risk Assessment Protocol?]

- 11) Comment 2, p. 5, §1, Proposed Text Changes, pp. 5-2 through 5-5. **If constituents are detected at frequencies of less than 5% most will be eliminated from consideration. Infrequently detected constituents that will be considered for further evaluation include those constituents detected at high concentrations (i.e., at least one detection at a concentration greater than or equal to five times the limit of detection (LOD) (LANL, 1994a; EPA 1989)....**

[What did we decide at the meeting in November?]

- 12) Comment 2, p. 5, §1, Proposed Text Changes, pp. 5-2 through 5-5. **...If many TICs are present, or the TIC concentrations appear high, an effort will be taken to positively identify and reliably measure the concentrations (EPA 1990)....**

How many are many? How high is high?

- 13) Comment 2, p. 5, §1, Proposed Text Changes, pp. 5-2 through 5-5. **...a concentration-toxicity (C-T) screening analysis....**

[??? See Superfund guidelines?]

- 14) Comment 2, p. 5, ¶1, Proposed Text Changes, pp. 5-2 through 5-5. **...those that contribute less than 1% of the total C-T risk will be eliminated from further consideration....**

[What did we decide about this at the meeting in November? Do the Superfund guidelines address this point?]

- 15) Comment 2, p. 6, Proposed Text Changes, p. 3-11. **...When the total value is less than 1, then the additive effects of multiple constituents are not considered to present a human health risk....**

[??? This is not the less than an order of magnitude below the SAL discussed at the November meeting.]

- 16) Comment 4, p. 7, Proposed Text Changes, p. 3-19. **...The total levels of PCBs...were below the proposed 1994 SAL for soil (1 mg/kg). The total PCB...in sample 53-N3-C1-S was above the SAL.**

The old revision says (p. 3-19) all samples were below the 1993 SAL. What SALs are referred to? What proposed 1994 change (to 1 ppm)? Change justified by what?

[READ TSCA POLICY FOR PCB SPILLS. (What TSCA policy?)]

- 17) **Comment 5, p. 8, Discussion, p. 3-19. ...J-flagged concentrations will not be eliminated from consideration in the baseline risk assessment based on comparisons with screening action levels. The text in Section 3 and Appendix K (see response to Comment 2) has been modified in accordance with the comment and discussions conducted with NMED on 11/5/94.**

Not really. Section 3 is revised to say, "...The level of uncertainty associated with estimated (e.g., J-flagged data) values and the potential effect this may have on the decision making process will be discussed. Those data that do not meet the QA/QC criteria will be rejected...." READ APPENDIX J ON THIS POINT.]

- 18) **Comment 6, p. 9, Discussion, p. 3-53, ¶3. ...In addition, the phrase "three times"...will be deleted in order to be consistent with actual field practice.**

What is actual field practice?

- 19) **Comment 11, p. 13, Proposed Text Changes, p. 4-5. In addition, if hazardous constituents are detected and confirmed before closure is certified, appropriate action will be taken to address the presence of these constituents.**

"appropriate action" is vague. Perhaps - wording should be added to identify possible appropriate actions - vadose zone investigation/characterization/remediation?

- 20) **Comment 12, p. 14, Discussion.**

Refers to EPA 1989 and LANL 1994a: Neither of these is identified in the References. [EPA 1989 - IRIS?] [I think these references are for Appendix K and slipped into the body of the report. EPA 1989 = Superfund risk assessment guidance; LANL 1994a = LANL IPW, Appendix K (in draft).]

- 21) **Comment 12, P. 14, Discussion. Based on discussions between LANL and NMED on 11/9/94, it was agreed that this EPA methodology for focusing the risk on those constituents contributing greater than 99% of the C-T screening risk could remain....**

[?Is this what we decided?]

- 22) **Comment 18, P. 19, Discussion, p. 5-5, ¶1. LANL proposes to identify a subset of the Laboratory background data that applies to soils and tuff similar to that present in the vicinity of the TA-53 lagoons. These data will be used to establish background concentrations for comparison with measured metals or radioactive constituents in the soils and**

tuff underlying the lagoons. If existing applicable data are not sufficient to provide a meaningful statistical analysis of the background concentrations, additional samples will be collected at locations near the lagoons that are believed to be unaffected by releases from the TA-53 facilities.

This needs to be more specific. Existing data must be presented to NMED for approval before the closure plan can be approved. If existing data are not sufficient, the sampling plan to collect additional samples must be approved by NMED. Data sufficiency and an additional sampling plan need to be decided now and included in the closure plan.

Comments from the 11/9/94 meeting indicate the following: "Comparable soils - on top of mesa. ID soil types/soil horizons. Do soil sampling. Need to talk about how this will be done. Go back into Pat's data?"

- 23) Comment 21, p. 21, Proposed Text Changes, p. 5-23, ¶1. **...These wastes may be returned to the impoundments if the analytical results show them to be below detection limits for hazardous constituents. Mixed wastes must not be returned to the impoundments.**

["If LANL intends to return waste to impoundments, we will need to know if it is mixed." ?Discuss?]

- 24) Comment 21, p. 21, Proposed Text Changes, p. 5-23, ¶4. **...the liner will be decontaminated by steam cleaning followed by rinsing with clean water. ~~The wash and rinse water will be disposed of to the impoundments.~~ The liner will be field screened....**

The rinse water must be tested. How will the rinse water be disposed, if hazardous?

- 25) Comment 21, p. 22, Proposed Text Changes, p. 5-24, §5.3.2, ¶2, 1.5. **Any waste materials that must be disposed of, and that could exceed TCLP regulatory levels, will be resampled and analyzed using the TCLP. In addition, any waste that must be disposed of will be resampled and analyzed using the TCLP as necessary to meet the requirements of the treatment, storage, or disposal facility.**

Discuss. Is this redundant?

- 26) Comment 22, p. 22, Discussion, pp. 6-1 through 6-4. **LANL agrees with the comment and will submit one Final Closure Report instead of a series of reports. Section 6.0 and Appendix K will be completely revised and all descriptions and references to the series of reports will be revised.**

One interim report, if removal is necessary. (If removal is

not necessary, then interim report will not be necessary). If an S&A plan for delineation of hot spots and for confirmation that all hazardous constituents have been removed is necessary, NMED must approve prior to implementation.

- 27) Comment 22, p. 22, Proposed Text Changes, p. 5-5. **Application of the above process to demonstrate clean closure will be documented in a series of reports the Final Closure Report to be submitted to NMED, as described in Section 5.2.2 6.0.**

See NMED response to Discussion above.

- 28) Comment 25, p. 29, Proposed Text Changes, p. 3-57. **...except for samples collected for total and amenable cyanide analyses.**

Amenable cyanide analyses?

- 29) Comment 30, p. 32, Discussion. ***See response to Comments 2 and 18.**

There is nothing in the responses to Comments 2 and 18 that indicate that changes will be made as requested to p. K-3.

- 30) Comment 31, p. 32, Proposed Text Changes, p. K-5. **...One or 2 exposure units of the total 36 will be selected for the quantitative risk assessment. The selection will be based on the exposure unit(s) that have the greatest potential health risk and or health hazard based on the C-T screening process.**

[???

- 31) Comment 34, p. 34, Discussion, p. K-8, Table K-1. **The use of a 30 year duration is consistent with recent EPA publications....**

Have read OSWER Directive 9285.6-03 and Superfund Guidance (Human Health Evaluation Manual, Part A), which agrees with LANL.