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March 16, 1994

Ms. Diana Webb, LANL/AIP/POC
LAAO, 528 35th Street
Los Alamos , NM 87544

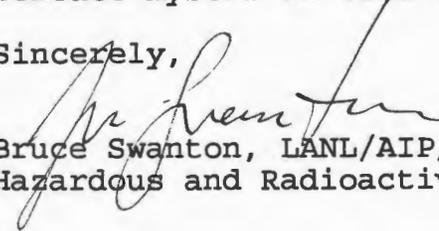
RE: Meeting Notes on Review of LANL's May 1991 RCRA
Facility Investigation (RFI) Work Plan for Operable Unit
(OU) 1106

Dear Ms. Webb:

The enclosed attachment provides the Department of Energy (DOE) a copy of the meeting notes from discussions held between the Agreement-In-Principle's (AIP) and LANL personnel concerning AIP's technical comments for the above referenced RFI Work Plan as received by the Hazardous and Radioactive Materials Bureau's (HRMB) Technical Compliance Program.

Should you have any questions concerning this matter, please contact myself or Teri Davis of my staff at 672-0449 or 672-0443.

Sincerely,


Bruce Swanton, LANL/AIP/POC, Program Manager
Hazardous and Radioactive Materials Bureau

BS/td
Attachment

Circ. copy: Benito Garcia, HRMB Bureau Chief
Steve Alexander, HRMB
Barbara Hoditscheck, HRMB
Neil Weber, DOE Oversight Bureau Chief

Circ. copy: Glen Saums, SWQB Program Manager
Dennis McQuillan, GWPRB Program Manager

cc: Teri Davis, HRMB/AIP
File LANL Red93
Barbara Driscoll, EPA Region 6
Caroline Mason, LANL 1106 OUPL



TL

MEMORANDUM

TO: Steve Alexander, Technical Compliance Program Manager

THROUGH: *W* Bruce Swanton, POC
AIP DOE/LANL

FROM: Teri D. Davis
LANL/DOE Oversight Program

DATE: December 9, 1993

SUBJECT: **Comments on LANL's May 1991, Operable Unit 1106 RFI Work Plan**

Meetings were held between NMED/AIP staff and LANL personnel on November 8, 1993 and November 29, 1993 to discuss LANL's response to AIP comments on OU 1106 RFI Workplan. Participants at the meetings included the following personnel:

Gary Eller - LANL OU 1106 Project Leader
Janet Brewer - LANL
Steve Yanicak - NMED/AIP
Teri Davis - NMED/AIP

NMED/AIP concerns are reproduced below followed by the response and discussion.

SECTION 1, HSWA-RELATED ISSUES

General Comments

1. This work plan disregards the possible existence of some contaminant migration pathways at several sites. In general, NFA nominations which rely on the perceived lack of migration pathways are not recommended (see 1.1.4p3, 4.1.4.2, 16.1p4, and 17.1p2).

LANL

RESPONSE The workplan is inconsistent with respect to specific pathways versus the sampling plans, but essential pathways are addressed.

Specific Comments

1. [1.1.4p3] This statement appears to be in conflict with concepts within chapter 5 which identify "Five pathways of concern" of which unsaturated (vadose) zone transport (in both the liquid and vapor phase) is addressed as a major contaminant transport pathway.

LANL

RESPONSE See response to general comment #1.

This same statement suggests that the groundwater pathway is not of direct concern "based on the great depth and no known pathway to the main aquifer". Depth to groundwater in Otowi-4 is approximately 780 feet, perched water was encountered at approximately 250 feet and the alluvial aquifer in LA Canyon in the vicinity of Otowi-4 is approximately 15 feet thick. Since the hydrologic connection(s) between these zones of saturation are not understood it is recommended that the groundwater pathway be given more consideration.

LANL

RESPONSE The groundwater pathways are being addressed by the subsurface drilling activities in the RFI workplan. The workplan is inconsistent with respect to specific pathways versus the sampling plans and in some instances the actual investigation being conducted.

2. [1.2.2p1] "The ER program will be conducting Laboratory-wide background studies of hydrogeology, geology..." Generalization of the hydrogeology and geology between OUs may not be possible due to the variability in stratigraphy, structure and other geologic conditions between sites. Hydrogeologic/geologic characterization at specific sites should be discussed on a case-to-case basis with the appropriate stakeholders prior to development of sampling plans.

LANL

RESPONSE Agreed that not all studies can be characterized generally; however, the extrapolations are useful.

3. [2.2.4, f2.2-3] The following SWMUs are not located on this figure:
 - 21-027(d)
 - 21-027(a)
 - 21-006(e)
 - 21-011(k)

LANL

RESPONSE Agreed.

4. [3.1.1p1] "Activities unrelated to plutonium processing also occurred at DP West; however, they are not detailed herein because they did not result in the SWMUs addressed in this document.".... Where are these activities addressed?

LANL

RESPONSE *These activities did not cause releases and therefore are not to be addressed. However an incorrect statement was discovered in this same paragraph in that it was stated nuclear-fuel processing occurred at this site. Nuclear-fuel processing never occurred at this site.*

5. [4.1.4.2] This section suggests that infiltration into the tuff is limited; (e.g. "does not penetrate deeper than 10 to 22 feet into the tuff") and that clay fillings of joints and fractures inhibit the infiltration of precipitation. Joints/fractures that are open or partially open should be noted in this section because they may serve as pathways for contaminant transport.

LANL

RESPONSE *The workplan is inconsistent with respect to specific pathways versus the sampling plans and in some instances the actual investigation being conducted.*

6. [4.1.5.1] "No occurrence of perched water within the Bandelier Tuff has been identified." It has been observed that numerous springs emerge from contacts between welded ashflows within the Tshirege Member (e.g. Sawyer Spring, Homestead Spring). Please clarify this apparent discrepancy.

LANL

RESPONSE *Subsequent work has suggested that this statement is not true.*

7. [4.1.5.1, f4.1-5] Borehole (TW-2) is not located on this figure as referenced in paragraph one of this section.

LANL

RESPONSE *This should read TW-3, not TW-2.*

8. [4.1.7.2.p5] Data needs should include the frequency and nature of both tectonic and cooling fractures within the entire OU, not just in the area of MDA V. Data needs should also include studies to determine the impact of fractures on liquid migration.

LANL

RESPONSE *This is being addressed and has been carried out and reported in Phase I report.*

NMED

RESPONSE *Agreed. The Phase I report is much more comprehensive in site-characterization than the RFI workplan outlined.*

9. [4.1.8.1.p11] "Laboratory and in situ measurements of hydrogeological properties of tuff at TA-21 OU are needed." How will these data needs be met?

LANL

RESPONSE Refer to Section 12.5.1.4.

10. [10.2b1] It is our understanding that units which are not nominally SWMUs, e.g. units with solely radiological contamination, will be retained as units to be addressed within the RCRA RFI/CMS/CMI framework. Thus the eventuality that a site is not a SWMU would not be a cause for NFA nomination. This issue should be discussed with the appropriate stakeholders.

NMED

RESPONSE This issue has been discussed by the Assumptions Task Force. Suggest that this issue be addressed in the next IWP.

11. [11.7] The level of QA/QC available for all analytical procedures using the mobile lab is not clearly stated. Clarification is needed concerning the detection limits and QA level attainable for individual constituents using the mobile lab.

LANL

RESPONSE Suggest that this information be provided in the next IWP as perhaps an Appendix.

NMED

RESPONSE Agreed.

12. [11.9, f11.9-1] Boreholes #6,7,8 are not labeled.

LANL

RESPONSE Agreed, the boreholes are not specifically labeled.

13. [14.1p2] SWMU 21-013(g) is mentioned here but is not referenced under Surface Disposal Area [SWMU 21-013(b)-(f)].

NMED

RESPONSE After this issue was reviewed, this question is withdrawn.

14. [14.3.1.1] The origin of the drain lines seem to be in question. If contamination is confirmed, how will these drain lines be addressed?

LANL

RESPONSE In general, some drain lines may not be addressed. A general contingency plan has not been developed for this scenario.

NMED

RESPONSE Recommended that a contingency plan should exist for these drain lines. Geophysical surveys could be conducted after all D&D activities have been completed to assure all drain lines have been addressed.

15. [14.3.2] The results of this initial sampling plan propose using Level II data for NFA recommendations. The use of low confidence data (Quality Assurance (QA)/Quality Control (QC) Level II) is not adequate for use as a basis for NFA recommendations. This issue should be discussed with the appropriate stakeholders.

LANL

RESPONSE This is a programmatic issue that LANL/EPA/NMED must eventually come into agreement with when considering data quality objectives and required QA/QC.

NMED

RESPONSE Agreed.

16. [14.3.3] It is recommended that an organic vapor survey be conducted along with the radiological survey since the source term states that liquids contaminated with organics might have entered the tank(s).

LANL

RESPONSE This work is being conducted as a part of the personnel health and safety requirements for field operations.

17. [14.3.4.2, t14.3-1] It is suggested that at tank TA-21-346, in shallow borehole #1, that the interval between 2.5-5 feet have the same lab analysis performed on it as interval 0.0-2.5 feet.

LANL

RESPONSE This is probably an error in the table. The sampling plans will be reviewed for consistency between boreholes.

18. [14.5.4.1] Regarding the nonsequential numbering of DP diesel tanks; what happened to #15 & #16?

LANL

RESPONSE A letter from Bill C. Franks (ZIA Engineering) to Gary Eller states that these tanks were never installed. This letter can be found in LANL's Records Processing Facility.

19. [14.7.3.1.p1] See Specific Comment #16.

LANL

RESPONSE See response to item #16.

20. [14.7.4.1.p1] Establishing the number of samples to be taken regardless of area does not appear appropriate. The probability that contamination within a given gridded area is not missed cannot be assessed without determining the extent of the unit to be sampled. For planning purposes, it is suggested to estimate a gross area then determine the number of samples needed to reach a specified confidence level to assure that contamination within a specified gridded area is not missed. Judgmental sampling should supplement gridded sampling plans based on topography, site inspections, etc.

LANL

RESPONSE The workplan will be reviewed with this comment in mind.

21. [14.7.4.1.p6] "Certain sampling intervals can be omitted because wastes should be mixed and dispersed if this was disposal area".... If the origins of these SWMUs are not known, this assumption may not be valid. Documentation supporting homogeneity should be submitted.

LANL

RESPONSE The assumption of homogeneity will be reexamined and the sampling plan will be adjusted according. All intervals will be sampled if necessary.

22. [14.7.4.1, 21-024(1).p4] "This location collects drainage from the entire area south of Bld TA-21-21"... The culvert is north of Bld TA-21-21.

NMED

RESPONSE This comment refers to section [15.2.4.p4].

LANL

RESPONSE Agreed. The text will be corrected.

23. [14.7.4.1, 21-024(o)] Why is this SWMU not addressed in this section?

NMED

RESPONSE After review of this issue, this question is withdrawn.

24. [15.6.2b2] Why are metals not included as potential contaminants as stated in the source term?

LANL

RESPONSE Inorganics are addressed.

NMED

RESPONSE Agreed.

25. [15.6.4p1] Why are the boreholes being drilled near the inlet side of the septic tank? It is recommended that subsurface samples be taken at any hot zones detected from the Rad-VOC surveys.

LANL

RESPONSE In response to the first question, this strategy will be reviewed and possibly changed to sample the outlet. The second question is agreed upon.

26. [16.all] It is suggested that for all proposed angled boreholes, the holes be completed as monitoring wells (soil-gas, moisture probe, etc.). This action should increase the efficiency of the RFI and provide valuable data which can be used to evaluate risk-based remedial selections for these MDAs.

27. [16.1p4] Liquid migration in the vadose zone should be considered as potential migration pathway.

LANL

RESPONSE Agreed. Inconsistencies exist in the wording of the workplan. Boreholes outlined in this workplan will address this issue.

28. [16.1.4.p4] VOCs should be analyzed for in these drainage samples.

LANL

RESPONSE Disagree due to the limited quantities associated with the units involved and due to the forty year time-frame in which VOC's would have volatilized.

NMED

RESPONSE Agreed.

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29. [16.4.2.b2] Level II data is proposed to be used to confirm the "absence of contamination". See Specific Comment #15.

LANL

RESPONSE See response to specific comment #15.

30. [17.1p2] Potential contaminant migration pathways should also include liquid movement in vadose zone, surface water runoff, and erosive exposure.

LANL

RESPONSE See response to general comment #1.

31. [17.4.4.1] "Nominal borehole depth will be 10ft"..... Is this proposed depth appropriate with consideration of previous regrading at these individual structures?

LANL

RESPONSE This issue will be reviewed prior to sampling and if necessary the sampling plan will be adjusted according.

Clarify the use of subsurface soil samples with respect to the method description in Chapter 11.

NMED

RESPONSE After review, this statement is retracted.

32. [17.4.4.1.p6] If no gravel-concrete is encountered will the borehole be relocated?

LANL

RESPONSE Yes.

NMED

RESPONSE The section reference should read [17.4.4.1.p4].

33. [17.4.4.2] Method 6010 should be used instead of TCLP to determine health based action levels. If the DQO for this sample is to determine health based action levels then why is TCLP being proposed to met this objective?

NMED

RESPONSE This issue was discussed and agreed that TCLP was adequate to determine the presence of hazardous constituents in a subsequent investigation of this site since the DQO was not to determine health based action levels.

Initial borehole (f) is shown on figure 17.5-1 as being east of the sump; in the text it is stated as being to the west.

LANL

RESPONSE Agreed. Based on the logic that the drain line at this location is most probably to the east, then the borehole should be located to the east.

34. [18.1] What buildings are scheduled for D&D and when is this planned?

LANL

RESPONSE Building 3 is being worked on now and Building 4 is scheduled for next summer.

35. [18.5.1] A RAD-VOC survey should be conducted as a part of the current RFI activities. Hot spots could be marked and fenced off until D&D.

LANL

RESPONSE Active health and safety programs are in place that monitor and control the entry into hot spot locations associated with this D&D.

36. [18.7] The RAD-VOC survey should extend from the suspected contaminant location to the mesa edge.

NMED

RESPONSE After review of this issue this statement is withdrawn.

37. [18.8.3] How will it be confirmed that the former location of the sump has been located when drilling?

LANL

RESPONSE The cores will be examined to determine this.

38. [18.9] See Specific Comment #36.

LANL

RESPONSE See response to specific comment #36.

SWMU PROPOSED FOR NO FURTHER ACTION

36. [19.1p1] "For those sites where records show that no documented releases have occurred..." This may not be sufficient criteria for NFA nomination.

LANL

RESPONSE EPA approved this workplan in May 1992 therefore this issue has been addressed.

37. [20.1.2b1] Has monitoring in the building been conducted?

LANL

RESPONSE Yes, refer to section 21.1.1.

38. [20.1.2b4] Have releases within the buildings been documented?

LANL

RESPONSE This is unknown at this time. This issue will be investigated.

39. [20.2.2b1, 21-028(b)] "These storage areas exhibit no evidence of routine releases..." What releases have occurred? Are there floor drains in which releases could have migrated? No evidence of "routine" releases does not appear to be a basis for NFA.

LANL

RESPONSE One time spills are not classified as SWMU's. These floor drains are being addressed else where in the workplan.

40. In general, a tour of NFA sites and possibly supplemental archival data will be necessary before NMED/AIP can comment on the adequacy of NFA recommendations. Observations made at NFA sites by AIP staff will be reported to HRMB as an addendum to this review.

SECTION 2, NON-HSWA ISSUES

Specific Comments

1. It is suggested that the node spacing to be used within radiological survey areas be indicated when using a tripod. The node spacing should represent a specified confidence level that contamination within a specified gridded area is not missed.

LANL

RESPONSE Yes, however the DQO concept was not developed at the time this workplan was written. This sampling plan will be reviewed and if necessary the sampling could be supplemented by field surveys and judgmental sampling.

NMED

RESPONSE It is recommended that this issue be addressed in the IWP.