

TA-20

M E M O R A N D U M

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THROUGH: Bruce Swanton, Program Manager DOE/EM Oversight  
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FROM: Mary Perkins, NMED AIP/LANL

DATE: September 16, 1994

SUBJECT: Review of LANL's Operable Unit 1100 RFI Work Plan,  
submitted May 1994.

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The Hazardous Waste and Radioactive Materials Bureau (HRMB) Agreement in Principle (AIP) staff have completed the review of the operable unit (OU) 1100 RCRA facility investigation (RFI) work plan. This memo details the comments stemming from the review. For clarity, the memo contains numbered items listing comments that are keyed to a specific chapter/section number, bullet, table or figure in the RFI as well as to the page number e.g., Item 2. (4.4.4.4, b.5, T. 4-4-4, Fig. 4-4-4, pg. 4-17). The AIP program is submitting these comments and technical recommendations to the HRMB's RCRA Permits and Technical Compliance Programs due to eventual New Mexico Hazardous and Solid Waste Act (HSWA) authorization.

Item

1. **General Comment, Chapter 5:** Actual sampling locations were not identified prior to the drafting of the workplan;

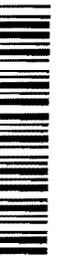
*"Land surveys will be used to demarcate, in the field, the study boundaries, surface features, and sample locations." Section 5.2.4.1.1, pg. 5-25*

nor do the generalized sampling locations which are presented appear to have been based on field surveys (land, geomorphic, and geophysical):

*"Soil sampling in Aggregate A PRS's will be biased toward locations expected to have the highest concentrations of PCOC's. The geophysical results will be used, to the extent possible, to bias horizontal sampling locations; and field observations of soil profiles to bias vertical sampling locations." Section 5.1.4.2, pg. 5-11*

Such preliminary work should have been completed prior to

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the drafting of the workplan. The reviewer can draw no conclusions regarding the potential for the workplan to accomplish its objectives without this data.

2. **General Comment** There are no specific dates or schedules for Phase I sampling and geophysical surveys in the RFI. A definitive schedule should be provided.
3. **General Comment** It is understood that any area of concern (AOC), or solid waste management unit (SWMU) scheduled for voluntary corrective action (VCA) is done at Los Alamos National Laboratory's (LANL) own risk. Under HSWA authority, the EPA or the state of New Mexico could revisit all potential release sites (PRS) for evaluation at any time in the future. Review of proposed VCA's by NMED/AIP staff may help in the designing and completing of adequate verification sampling and may help in communicating the objective and results of the VCA to the regulatory bodies, thereby reducing the possibility of revisiting the site in the future.
4. **General Comment (4.7.1 pg. 4-19 to 4-20, T. 4-5 pg. 4-21) Statistical Basis:** The Bayesian statistical approach utilizing the equation  $P=1-(1-f)^N$  on page 4-20 and Table 4-5 on page 4-21 to select the appropriate number of field screening and laboratory samples has not been approved by NMED or EPA. The method is not used consistently from OU to OU with in the Laboratory, or from PRS to PRS with in the same OU. The basis for making assumptions regarding the fraction of the site that may be contaminated is not defined. This comment also applies to the Design Criteria (DQO Step 6) in chapter 5.
5. **Specific Comment (5.2.1.1.1 pg. 5-13)** "The framework and mat, presumably installed to contain debris from the shots, failed after the first few shots according to a 1947 memo." What were the consequences of the failure?
6. **Specific Comment (5.2.3.4.2 pg.5-24) Vertical Boundaries:** "5 ft is the maximum depth associated with the likely exposure scenarios, such as excavation for construction activities." It is recommended LANL design the sampling plan to define the rate and extent of contamination rather than address likely exposure scenarios.
7. **Specific Comment (5.2.4.2 pg. 5-27) Sampling and Analysis:** LANL should define how the soil sampling will be

biased towards locations expected to have the highest concentrations of PCOCs in addition to the use of radiation survey results (see Item #1).

8. **Specific Comment (5.3.1.2 pg. 5-44)** "When PRS 53-005 was inspected as part of the workplan preparation, it was found to be clean." What is LANL's definition of "clean" during the inspection while the work plan was prepared?
9. **Specific Comment (5.3.4.2.1 and 5.3.4.2.2 pg. 5-53)** It is recommended samples be taken where there is any visible staining on the asphalt surrounding or directly under these waste accumulation areas.
10. **Specific Comment (5.3.4.2.6 pg. 5-60 and fig. 5-22 pg. 5-61)** How were the preliminary sampling locations for the boneyard determined if there has been no radiation survey to bias the locations?
11. **Specific Comment (5.6.4.2 pg. 5-84 and fig 5-31 pg. 5-86)** It is recommended LANL delineate the drainage channel and the sediment catchments and then clearly present them on fig. 5-31 along with concise sampling locations (see Item #1).

**SWMU's/AOC's Proposed For No Further Action (NFA)**

12. **General Comment** It is standard procedure of the AIP staff to evaluate NFA sites of greatest concern and then to provide technical comments to the EPA through the NMED RCRA Permits/Technical Compliance staff. A list of NFA sites to be visited will be submitted to the OU 1100 OUPL and NMED RCRA Permits/Technical Compliance staff following a comprehensive review of Chapter 6.
13. **General Comment** When proposing a SWMU/AOC for NFA to EPA based on archival data, the archival information and an assessment of its reliability should be provided for review. Archival data could possibly be submitted as an addendum to the RFI work plan (e.g., The OU 1100 addendum containing 7 sites proposed for NFA).