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TA-14

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

March 17, 2000

Dr. John Browne, Director
Los Alamos National Laboratory
Post Office Box 1663, MS A100
Los Alamos, New Mexico 87545

Mr. David A. Gurulé, Program Manager
Los Alamos Area Office
Department of Energy
528 35th Street, MS A100
Los Alamos, New Mexico 87544

RE: REQUEST FOR SUPPLIMENTARY INFORMATION (RSI) FOR MDA P (PRS 16-018)[PHASE II] SAP , VCA PLAN FOR PRS 16-016(C)-99, AND TA-16-387 CLOSURE PLAN
LOS ALAMOS NATIONAL LABORATORY NM08900101515
HRMB-LANL-99-001

Dear Dr. Browne and Mr. Gurulé:

The RCRA Permits Management Program (RPMP) of the Hazardous and Radioactive Materials Bureau (HRMB) has reviewed DOE/LANL's August 1999 (LA-UR-99-3630) Sampling and Analysis Plan for Material Disposal Area P (PRS 16-018) [Phase II], and Attachment 3 (E/ER:99-208) consisting of: a) a Voluntary Corrective Action Plan for Remediation of Consolidated PRS 16-016(c)-99 and b) a Closure Plan for the TA-16-387 Flash Pad (E/ER:99-208), and found them to be incomplete. A request for supplemental information is included as Attachment A.

These comments do not require any major revisions. DOE/LANL must respond to the request for supplemental information items listed in the Attachment within sixty (60) calendar days of receipt of this letter. If DOE/LANL does not submit a complete response within sixty (60) calendar days a Notice of Deficiency will then be issued.

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Should you have any questions or concerns about this letter please contact me, at (505) 817-1558 ext. 1012, or Lee Winn at (505) 827-1558 ext. 1029.

Sincerely,

John E. Kieling
Acting Program Manager
RCRA Permits Management Program

JEK/lw

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J. Ellvinger, LANL ESH-19, MS K490
File: Reading, and RED LANL TA-16 MDA P, & G/P/00

ATTACHMENT A

Request for Supplemental Information for the August 1999 (LA-UR-99-3630) Sampling and Analysis Plan for Material Disposal Area P (PRS 16-018) [Phase II], and Attachment 3 (E/ER:99-208) 1) consisting of: a) a Voluntary Corrective Action Plan for Remediation of Consolidated PRS 16-016(c)-99 and b) a Closure Plan for the TA-16-387 Flash Pad (E/ER:99-208)

General Comments (for all 3 documents):

1. A "protocol for determining how additional suites will be identified based on the Phase I waste characterization data," as described in Section 2.2.3.2, Waste Characterization, was not included in the report. Therefore, a complete evaluation of the report could not be made. LANL should submit a protocol for determining when the analytes are included in Phase 2 sampling suites. LANL should also present available Phase I data (as well as the general location of associated data). HRMB will evaluate the Phase I sampling data before determining the final Phase II confirmatory sampling suite.

2. "Spatially averaged contaminant concentrations" are not considered valid to support human health or ecological risk assessments. LANL should insert language within the document that reflects the discussion in Section 6.1.1.2 of the approved Closure Plan, i.e., maximum constituent concentrations.

3. All changes, modifications, or clarifications need to be specified in each of the three documents.

Specific Comments on the SAP for MDA-P:

1. **§ 1.1, paragraph 2, Page 4, Objectives and Scope.**
The geographic boundary between Canon de Valle and the MDA-P investigation is the toe of the slope, a boundary that is consistent with the geomorphic survey taken for the TA-16-260 Outfall . . .

   There is no problem assigning the toe of slope as the northern boundary of the site. However, there should be a discussion in the report on which LANL group will be responsible for investigating the soils, sediments, and surface waters downstream of the site.

   HRMB recommends that the MDA-P team work closely with the Canyons Focus Area and 260 Outfall Corrective Measures Study (CMS) teams to insure that none of the downstream areas are inadvertently missed.

2. **§ 1.1, paragraph 2, Page 4, Objectives and Scope.**
There is no outfall at MDA-P.

In Section 2.1.1, paragraph 5, page 10 is the following statement. "Drawing ENG-C 23442 indicates that an outfall is associated with the overflow line from the tank. [for PRS 16-006(e)]."

HRMB recommends that the existence of the outfall be clarified and its location indicated on Figure 1.2.

3. **§ 1.1, paragraph 1, Page 6, Objectives and Scope.**
With the possible exception of uranium, no radionuclides are suspected to have been associated with historical activities within the MDA P cluster.

The following statement from the MDA-P Team Meeting Minutes of 29 April 1998 indicates that both depleted uranium and thorium are suspected to have been present in the landfill debris. "Bob [Elliott] did relay that he personally remembered monitoring debris with residual levels of depleted uranium during this time period [the 50's, 60's, and 70's]. He went on to express that Thorium (oxides/solids) might also be expected within the landfill."

HRMB recommends that both depleted uranium and thorium be included as principal contaminants identified in Section 2.2.2.1.

4. **§ 1.4, paragraph 32, Page 8, Data Quality Objectives; § 3.1, paragraphs 1-5, Page 27, and; §3.1, Table 3-1, Page 28.**
Contaminant concentrations were to be compared to EPA Region 9 PRGs as the basis for determining whether residual concentrations were acceptable.

It is not clear if the document is referring to EPA Region 9 or Region 6. Also, some of the tabulated PRG values are not consistent with the most current PRG tables.

The 1999 Region 6 Human Health Medium-Specific Screening Levels (MSSLs) or the 1999 Region 6 PRGs are the appropriate screening levels to be applied to the SAP and the other two documents.

5. **§ 2.1.1, paragraph 1, Page 10, Site Description.**
The depth of the waste pile is approximately 12 to 14 feet.

During the November 4, 1999 ER Monthly Meeting, Mr. Ken Bostick stated that the

depth of the landfill debris [in the western lobe] was 20 to 30 feet.

HRMB recommends that the text be revised accordingly.

6. **§ 2.1.2, paragraph 1, Page 11, Operational History.**
The pile was removed by the 1970's.

In order to assess how much of the barium nitrate pile may have migrated off site, HRMB recommends LANL provide documentation or an estimate of the volume of the pile prior to its removal.

7. **§ 2.1.3, paragraph 3, Page 11, Waste Characteristics.**
According to site personnel, no depleted uranium was known to have been placed in MDA-P.

See Specific Comment No. 3 above. While the statement may be technically correct, depleted uranium is a suspected radionuclide.

HRMB recommends that LANL clarify the text accordingly.

8. **§ 2.2.2.1, paragraph 1, Page 13, Nature and Extent of Contamination.**
The fill from TA–51 was taken from an area categorized as "clean."

HRMB recommends LANL document and clarify the meaning of "clean" fill.

9. **§ 2.2.2.1, paragraph 3, Page 13, Large-Scale Lateral Extent.**
In the area of the decontamination pad, barium was elevated in tuff below contaminated surface fill, indicating that infiltration of barium from fill into tuff may have occurred.

§ 2.2.2.2, paragraph 2, Page 16, Chemical Fate.
Because large pieces of barium nitrate have been discovered within MDA P, it is possible that migration of soluble barium from MDA P may also be of concern.

§ Attachment 1, paragraph 2, Page 1-17, 1988 McLin data.
The report states that "at least some of the barium has been mobilized by infiltrating precipitation, and has penetrated to a depth of approximately 19 feet, or at least six feet below the landfill bottom."

§ Attachment 1, paragraph 3, Page 1-17, 1988 McLin data.
The four lysimeters located within MDA P produced minimal amounts of water during routine sampling over a nine month period.

HRMB is concerned that the extent of barium in the tuff below the landfill has not been adequately characterized. The presence of at least some water in the subsurface indicates there might be a driving force for the transport of barium and other contaminants. LANL should provide more data on the vertical extent of the barium, how much barium will remain at depth after excavation, and contingency plans for dealing with the barium remaining at depth.

10. **§ 2.2.2.1, paragraph 4, Page 14, Nature and Extent of Contamination within MDA P PRS Cluster.**
The presence of elevated chromium in the tuff samples, when chromium was not observed above background in soil samples, is unexpected and anomalous relative to observations in the baseline samples.

Chromium should be added to the list of COPCs and to Table 2-6 on page 25.

11. **§ 2.2.2.2, paragraph 2, Page 17, Chemical Transport.**
Investigation of the MDA P for guiding Phase I activities has shown that a pre-existing drainage channel exists beneath MDA P.

Because it may represent a preferred pathway for contaminants, HRMB requests additional data on the location and depth of the drainage channel. The location of the channel should be indicated on one of the figures, such as Figure 2.1.

12. **§ 2.2.3.2, Figure 2.1, Page 23, Media Characterization.**

As presented, the figure is not clear. HRMB suggests using a larger scale or multiple figures to clearly show all of the proposed sampling locations.

13. **§ 2.2.3.2, paragraph 3, Page 25, Media Characterization.**
After Phase II confirmatory sampling has been completed, four boreholes will be drilled in Canon de Valle between MDA P and the watercourse to a depth of 20 feet, as described in approved Closure Plan for MDA P.

Locations of the proposed boreholes should be indicated on Figure 2.1. As stated on page 4-6 of the approved Closure Plan, HRMB has not agreed on the number of boreholes needed.

Specific Comment on the VCA Plan for 16-016(c)-99:

1. **§ 6.0, paragraph 1, Page 3-7, Basis for Cleanup Levels.**
   The PRGs proposed for PRS 16-016(c) are the same as those proposed in this Phase II SAP for MDA-P.

   Cleanup levels, whether PRGs or MSSLs, must be consistent between the documents.

Specific Comments on the Closure Plan for TA-16-387:

1. **§ 2.2.1, paragraph 1, Page 7, Phase I Activities.**
   One composite sample per container will be collected in accordance with ER-SOP-6.15, . . .

   "Container" is not defined. Please specify size and type of container.

2. **§ 2.2.1, paragraph 2, Page 8, Phase I Activities.**

   The primary PRGs are: 530 mg/kg for 2,4,6-Trinitotoluene (2,4,6-TNT), 270 mg/kg for Hexahydro-1,3,5—trinitro-1,3,5-triazine (RDX), 2,000 mg/kg for barium, and 2,000 mg/kg for lead.

3. PRG values are not consistent between documents. See General Comment No. 3 and Specific Comment No. 4 above.