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PETER MAGGIORE
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HSWA LANL 1/1071/6/0-030(g)

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

April 8, 1999

Mr. Theodore Taylor, Program Manager
Los Alamos Area Office
Department of Energy
528 35th Street, MS A316
Los Alamos, New Mexico 87544

Dr. John C. Browne, Director
Los Alamos National Laboratory
P. O. Box 1663, MS A100
Los Alamos, New Mexico 87545

**RE: Request for Supplemental Information
0-030(g) Sampling and Analysis Plan
Los Alamos National Laboratory
NM 0890010515**

Dear Mr. Taylor and Dr. Browne:

The RCRA Permits Management Program (RPMP) of the Hazardous and Radioactive Materials Bureau has reviewed the Sampling and Analysis Plan for Solid Waste Management Unit 0-030(g), Outfall Drainage Area 1999 (referenced by EM/ER:99-040) dated February 22, and found that the information provided was not sufficient. Los Alamos National Laboratory (LANL) must respond to the request for supplemental information noted in Attachment A within thirty (30) calendar days of the receipt of this letter.



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Mr. Taylor and Dr. Browne
Request for Supplemental Information SAP 0-030(g)
April 8, 1999
EM/ER: 99-040

Should you have any questions regarding this matter, please contact me, at (505) 827-1561 extension 1039 or Mr. John Kieling, RPMP's LANL Facility Manager, at (505) 827-1558 extension 1012.

Sincerely,



Robert S. (Stu) Dinwiddie, Ph.D., Manager
RCRA Permits Management Program
Hazardous & Radioactive Materials Bureau

RSD:nd

cc w/attachment:

J. Canepa, LANL EM/ER, MS M992
J. Davis, NMED SWQB
B. Garcia, NMED HRMB
J. Kieling, NMED HRMB
M. Kirsch, LANL EM/ER, MS M992
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J. Parker, NMED DOE-OB
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S. Yanicak, NMED DOE-OB, MS J993
File: Reading and HSWA LANL 1/1071/0-030(g)
Track: LANL, **doc. date**, NA, DOE/LANL, NMED HRMB/Dinwiddie, RE, File

ATTACHMENT A

Request for Supplemental Information SAP for Solid Waste Management Unit, Outfall Drainage Area 0-030(g)

General Comments:

1. As stated in the RPMP's review of the Revised Status Report for SWMU 0-030(g) dated February 9, 1999, RPMP is concerned with apparent lack of delineation of rate and extent of contamination beneath the former drainline. LANL should either address this issue with additional sampling at the outfall/drainage pipe or provide compelling evidence or a compelling argument that rate and extent of contamination have been determined in the final RFI report.
2. Clarify the discrepancy between LANL's response (EM/ER:98-191 dated June 10, 1998) to the Request for Supplemental Information (RSI), dated May 12, 1998 and the Revised Status Report for 0-030(g), dated December 23, 1998 (EM/ER:98-484). In the LANL response to comment #3 of the RSI, it is stated that no samples taken at this site were composited and the reported depth of the sample (3-8 ft below ground surface (bgs)), AAA 1909, in the RFI Report was incorrect; the actual sample depth was 2-2.5 ft bgs. However, the Revised Status Report SWMU 0-030(g) states repeatedly that the reported depth for this sample to be 3 to 8 ft bgs. Please clarify once again the depth and provide a copy of the field documentation (e.g., field notes or log book) indicating the actual depth for sample AAA 1909.
3. Considering the incomplete analytical suites of the previous sampling events, LANL should conduct full-suite analyses on all samples collected in the 0-030(g) outfall/drainage area and Acid Canyon. Full suite analyses should include isotopic radionuclides (alpha and gamma spectroscopy), TAL metals, PCBs and pesticides.

Specific Comments:

4. **Section 2.2.1.2, Sampling, Page 9**

LANL Statement: The 1993 analytical results from the samples collected in the outfall drainage showed concentrations in surface sediment (0-6 in.) above background for isotopic plutonium and americium.

RPMP Comment: The above statement refers to background values for isotopic plutonium and americium. There are no background values for these isotopes, only fallout values, please correct the above statement as well as similar references in the text.

5. **Section 2.2.1.2, Sampling, Page 9**

LANL Statement: The analytical results from 1993 indicate that the samples collected in the outfall drainage showed concentrations above background for isotopic plutonium and americium in surface sediment (0-6 in.).

RPMP Comment: Above statement should include uranium, lead, and mercury, which were also found above background and fallout values in the outfall area.

6. **Section 2.2.2.1, Nature and extent of Contamination, Page 9**

LANL Statement: The radionuclide contaminants detected above LANL background levels included isotopic plutonium and americium.

RPMP Comment: See specific comment 4.

7. **Section 2.2.2.1, Nature and extent of Contamination, Page 9**

LANL Statement: One of three replicate analyses (i.e., three analyses run on the same sample) of mercury reported a detection of 0.2 mg/kg in one sample. The other two replicate analyses were reported as not detected.

RPMP Comment: According to the RFI report (LANL 1995) and the raw data provided to RPMP, the results of three replicate analyses for sample AAB 0275 were 0.1, 0.1 and 0.2 mg/kg of mercury, none of the results were qualified as non-detect. Please revise the statement to reflect the possible detection of mercury.

8. **Section 2.2.2.1, Nature and extent of Contamination, Page 9**

LANL Statement: Lead was not detected in the two samples for which analyses were conducted.

RPMP Comment: This statement is not accurate, lead was detected in both samples (AAB 0275-22 mg/kg and AAB 0278-11 mg/kg); however, one sample did have a value below the background concentration. LANL's Draft background paper titled "Inorganic and Radionuclide Background Data for Soils, Canyon Sediments, and Bandelier Tuff", September 22, 1998, indicates the background value for lead in canyon sediment is 19.7 mg/kg. Please clarify the discrepancy between Table A-1 of the RFI report (LANL 1995) and the above comment.

In addition, Table A-1 indicates that all eleven outfall samples were analysed for TAL metals, but the data only indicates results for two samples. Clarify if full suite of analyses were performed on all eleven samples or only two samples (i.e. AAB 0275 & AAB 0278). Provide the results for the other nine samples or the rationale for not analyzing all samples for TAL metals when the waste indicated the presence of these contaminants.

9. **Section 2.2.3.2, Discussion of Geomorphic Mapping and Analyses, Page 10**

LANL Statement: It is also assumed that all chemicals of potential concern (COPCs) along this drainage were identified during previous sampling events.

RPMP Comment: See general comment # 3.

10. **Figure 2.2-1, Geomorphology and proposed sample location, 0-030(g) drainage and Acid Canyon, Page 12**

RPMP Comment: The proposed number of samples illustrated on Figure 2.2-1 may not be sufficient to define the rate and extent of contamination (e.g. a potentially important data gap exists between sample locations 4 and 6 in the drainage area). RPMP recommends at least two additional sample locations. One location between sample locations 4 and 6 in the c2c unit (this sample should include a vertical profile if possible) as well as an additional sample(s) in the c1 unit upgradient of sample location 5. In addition, RPMP also suggests that an additional sample(s) be collected in the vicinity of sample location AAB0275, due to the lack of information of sample characteristics (i.e., grain-size, thickness of the unit sampled, etc.) from previous investigations of the immediate outfall area.

11. **Section 2.2.3.2, Sampling Design, Page 15**

LANL Statement: COPCs previously detected in the drainage include PCBs, pesticides, mercury, and isotopic plutonium and americium.

RPMP Comment: The statement should be modified to include uranium and lead. In addition, the proposed analyses for pesticides and PCBs should include all associated constituents such as chlordane [alpha-], chlordane [gamma-], DDD, DDE, DDT, Dieldrin, Endosulfan, Endrin aldehyde and the various Aroclors identified in previous investigations.

12. **Section 2.2.3.2, Sampling Design, Page 15**

LANL Statement: Fourteen samples will be collected and analyzed for pesticides, PCBs, TAL metals, and isotopic plutonium and americium.

RPMP Comment: Although U-234, U-235, and U-238 were found in the 0-030(g) septic tank at elevated levels, isotopic uranium analyses have not been performed during previous investigations of the outfall/drainage area nor are proposed in this SAP. LANL should add isotopic uranium to the analyte list since uranium (total) was identified above background concentrations in the waste, at the mesa top and in the outfall/drainage area. The concentrations of uranium (total) identified in the drainage/outfall area ranged from 1.42 to 6.82 mg/kg (Sample AAB 3581 identified uranium (total) at 6.82 mg/kg). See also general comment 3 and specific comment 10.