

4560A LANL 1/1079/31 / 31-001



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**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

June 15, 1998

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, Mail Stop A100
Los Alamos, New Mexico 87545

**RE: Request for Supplemental Information on
VCA Report for PRSs 21-013(c), 21-013(d), 21-013(e) and 31-001
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 (HRMB) has reviewed the VCA Report for Potential Release Sites (PRSs) 21-013(c), 21-013(d), 21-013(e) and 31-001 dated February 26, 1996, referenced by LA-UR-96-259, and found it to be insufficient. 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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Should you have any questions regarding this matter, please contact me or Mr. John Kieling, RPMP's LANL Facility Manager, at (505) 827-1558.

Sincerely,


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

RSD:ND

cc w/attachments:

J. Canepa, LANL EM/ER, MS M992
J. Davis, NMED SWQB
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M. Johansen, DOE LAAO, MS A316
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J. Parker, NMED DOE OB
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File: Reading and HSWA LANL 1/1106/21, 1/1079/31/31-001
Track: LANL, June 15, 1998, NA, DOE/LANL, RPMP/Dinwiddie, RE, File

ATTACHMENT A
Request for Supplemental Information
VCA Report for Potential Release Sites
21-013(c), 21-013(d), 21-013(e) and 31-001

General Comments:

LANL shall submit all the RFI, VCA and confirmatory sample data with associated quality assurance/quality control data for each PRS. Provide the site map with the location of debris/soil piles at the site. The sample locations, depths, backgrounds, SALs and detection limits should also be included in the data.

Site specific comments:

PRS 21-013(c), Surface Disposal Area

1. **Description, p.1**
LANL should investigate the purpose of the excavated trench found on the site. Was it used for the disposal of liquid or solid wastes? Samples should have been taken from the bottom of the trench during the RFI and VCA sampling.
2. **RFI History, p. 1**
The text states that sampling intervals were to be 0-to-6 in, 0-to-2.5 ft, 2.5-to-5.0 ft and 5.0-to-7.5 ft, clarify whether the samples (except the ones at 0-to-6 in depth) were composited. To determine the nature and extent of contamination LANL shall use discrete samples taken at various depths.
3. **RFI History, p. 2**
The statement in paragraph 2, "The radiation survey was performed using alpha, beta/gamma, and low energy gamma radiation detection instruments. Detection levels were consistent with the local TA-21 background radiation levels.", contradicts the statement in paragraph 5, "All ten of the 0-to-6 in samples were shipped to an off-site analytical laboratory for a full suite of analyses because of a concern that elevated alpha radiation screening results from the radiation survey indicated possible airborne radioactive contamination from the nearby former filter building TA-21-153 that served facilities at DP east." Please explain the discrepancy.

4. **RFI History, p. 2**

"The assessment of the field and mobile radiation screening results of the deeper samples indicated that there was no significant change in radiation levels from the 0-to-2.5 ft, 2.5-to-5.0 ft, and 5.0-to-7.5 ft intervals", this would be applicable to radiochemicals but not be applicable to the non-radioactive chemicals, which might not be co-distributed with the radio-chemicals. Was any investigation done to assess the distribution of non-radioactive chemicals at different depths?

PRS 21-013(d), Surface Disposal Area

1. **Description p.11**

Provide explanation for the term "cold dump" and what was the nature of material scraped and removed from it prior to the VCA. LANL shall determine the nature of the constituents of the "cold dump" material (e.g. whether RCRA regulated constituents, radiochemicals, etc.) and analyze for those contaminants in the confirmatory samples.

2. **RFI History, p. 11**

If the samples taken at 0-to-2.5 ft, 2.5-to-5.0 ft and 5.0-to-7.5 ft were composited, then LANL shall resample these locations and take discrete samples at different depths to characterize the nature and extent of contamination.

3. **RFI History, p. 12**

LANL states that due to the location of PRS 21-013(d) and PRS 21-013(e), the sampling plan was combined and redrawn for the two PRSs and a new grid with 26 sections was laid out. Out of the 26 grid sections only 18 were sampled. Provide the selection criteria used for these 18 sample locations.

4. **RFI History, p. 12**

LANL states that "The additional eight grid sections would only be sampled if radiation survey results indicated the presence of contamination." According to the workplan the site was used for disposal of non-radioactive chemicals and/or materials; therefore, the radiation survey would not identify the presence of these chemicals. Additionally any localized spills or discarded chemicals would not be detected.

5. **RFI History, p. 13**

Provide explanation for deviating from the workplan and not doing the field survey for organic vapors when historical information indicated that non-

radioactive chemicals were disposed off at the site. The approval to drop the survey was not obtained from the Administrative Authority. Additionally LANL states that "Elevated organic vapor readings noted during sample collection were attributed to organic matter that was encountered during the drilling." Provide rationale for this statement when field survey for organic vapors was not done. Describe what type of organic matter was found and at what concentrations.

6. **RFI History, p. 13**

LANL states that "RFI data was collected prior to remediation, and did not include the areas beneath the waste piles (the focus of the VCA effort)." The areas underneath the waste piles should be investigated. Also provide a figure showing the location of waste piles at the site.

7. **Corrective Action, p. 13**

Specify what agency approved the VCA plan for PRS 21-013(e), on basis of which VCA plan for PRS 21-013(d) was prepared.

8. **Corrective Action, p. 13**

Provide all field screening results to support the statement "Field Screening did not indicate the presence of radioactivity or volatile organic vapors above background levels." Include the detection limits of instruments and backgrounds used for each chemical.

9. **Table 2, p. 18**

Provide rationale for collecting confirmatory samples for this particular PRS at the depth of 0-to-3 in when 0-to-6 in has been used in the past. This was not specified in the work plan. Are the samples 0-to-3 in from where the soil was removed?

10. **Table 2, p. 18, 19**

Two analytes Benzo(a)pyrene and Dibenzo(a,h)anthracene are above their respective PRGs in sample # VCXX-95-0049, but the text (p. 14) states that "Evaluation of the confirmatory analytical data confirmed that there was no detectable residual contamination above PRGs present at the site." Please explain.

PRS 21-013(e), Surface Disposal Area

1. **RFI History, p. 22**

If the samples taken at 0-to-2.5 ft, 2.5-to-5.0 ft and 5.0-to-7.5 ft were composited, then LANL shall resample these locations and take discrete

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samples at different depths to characterize the nature and extent of contamination.

2. **RFI History, p. 23**

The report states that debris piles were scattered in the site. Were these piles sampled and included in the 18 grid sections investigated? The debris piles have the potential of containing contaminated waste and should be investigated. The area beneath the waste piles should also be investigated. Provide a site map with locations and outlines of debris piles.

3. **RFI History, p. 24**

Thorium-228 exceeded its SAL, but according to the report the sample value is considered to fall within background levels. LANL shall use Alpha spectroscopy to detect the presence of thorium-228 instead of gamma spectroscopy which would reduce the large uncertainty associated with results.

PRS 31-001, Septic System Outfall

1. LANL shall delineate the contamination under the former septic system and in the outfall area to the point where the canyons investigation begins.

2. **VCA Report, Corrective Action, p. 33**

Please submit all previously-obtained site characterization data including RFI and VCA field screening results for RCRA regulated chemicals.

3. **Response to Comments regarding Response to Additional Information Request, PRS 31-001, Nov. 14,1997;EM/ER:97-481, p. 1&2**

The RFI report (p. 1) states "It is not documented which chemicals were received and stored at TA-31... but an undocumented spill may have released chemicals into the septic system". In the response letter LANL states that "These PAHs were not retained as COPC because there was no evidence that they were produced by Laboratory operations at the site." Clarify the discrepancy in these statements.

The nature and extent of contamination for polycyclic aromatic hydrocarbons (PAHs) has not been defined. LANL states that "PAHs were most likely removed during excavation." This statement is not supported by any data since confirmatory samples were not analyzed for PAHs. Additionally, PAHs were found above their SAL values in sample # AAA4679. LANL's argument that since this sample was located 6.8 ft below ground surface there would be no exposure pathways to the recreational user is not valid since no other samples

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were taken (e.g. at surface and different depths) to determine the lateral and vertical extent of contamination. LANL shall do additional sampling to define the extent of contamination under the former septic system line and shall perform confirmatory sampling for PAHs detected during the RFI.

4. **RFI Report, Background Comparison, p. 15**
Please provide a copy of the study on which urban background for PAH were based for this site.
5. **RFI Report, Screening Action Levels Comparison, p. 29 and Figure 4, p.14**
Lead should not have been eliminated based on an average value but retained as a COPC based on the maximum value reported (e.g. 460 mg/kg) as shown in Fig. 4. Since lead was found to be below background values in the confirmatory samples, this issue does not need any further consideration. However, lead and mercury detected in samples underneath the former septic tank and line should be considered in risk evaluation.
6. **RFI Report, Screening Action Levels Comparison, p. 29**
LANL shall investigate the vertical and lateral extent of tetrachloroethylene (PCE) contamination found under the former septic system line and delineate the contamination. The presence of degradation products of PCE should also be investigated.
7. Human health and ecological risk evaluation for all contaminants shall be performed based on HRMB approved Risk Based Decision Tree.

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