Los Alamos Environmental Restoration Records Processing Facility

ER Record I.D.# 52268

DATE RECEIVED: 01/26/96 PROCESSOR: em

LOS ALAMOS

LOS ALAMOS NATIONAL LABORATORY
ENVIRONMENTAL RESTORATION
Records Processing Facility
ER Record Index Form
RPF USE ONLY

PAGE COUNT: 12

RECORD CATEGORY (P/R): P INITIALS: YCA

RECORD PACKAGE NO.: —

FILE FOLDER: —

CORRECTION (Y/N): N CORRECTED NO.: — CORRECTED BY: —

AR (Y/N): Y INITIALS: YCA

AR DESCRIPTION (D/G): —

PRIVILEGED Y/N: N

ELECTRONIC INDEX INITIALS: YCA

MISCELLANEOUS:

This form is subject to change

30823

indfrm 01/18/95

(12)

United States Government

Department of Energy

memorandum

Albuquerque Operations Office
Los Alamos Area Office
Los Alamos, New Mexico 87544

DATE: JAN 2 3 1996

REPLY TO ATTN OF: LAAMEP:2ET-007

SUBJECT: Notice of Deficiency for RCRA Facility Investigation (RFI) Report for OU-1132, TA-39 Submitted to the Environmental Protection Agency (EPA) on April 28, 1995

TO: Jorg Jansen, Project Manager, EM/ER, LANL, MS-M992

The EPA has reviewed the RFI Report for Technical Area 39, submitted on April 28, 1995, and found it to be deficient. Attached is the list of NODs in which Field Unit 2 must respond. LAAO is requesting a draft response be submitted for Field Project Coordinator review on March 12, 1996. The response is due to EPA on April 9, 1996. Please have Field Unit 2 coordinate with Everett Trollinger of my staff for this response.

Should you have any questions, please contact Everett Trollinger at 667-5801.

T. J. Taylor

Theodore J. Taylor
Program Manager
Environmental Restoration Program

Attachments

cc w/attachments:
B. Garcia, Bureau Chief
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
2044 Galisteo St., Bldg. A
P. O. Box 26110
Santa Fe, New Mexico 87505
N. Weber, Bureau Chief
Agreement in Principle, DOE Oversight
New Mexico Environment Department
2044 Galisteo St., Bldg. A
P. O. Box 26110
Santa Fe, New Mexico 87505
N. Naraine, EM-453, HQ
T. Taylor, AAMEP, LAAO
E. Trollinger, AAMEP, LAAO
J. White, ESH-19, LANL, MS-K490
G. Gould, ESA-DE, LANL, MS-G787

Received by ER-RPF
JAN 2 6 1996

S. Yanicak, DOE Oversight Bureau
NMED, LANL, MS-J993
S. Anderson, DOE Oversight Bureau
NMED, LANL, MS-J993
RPE, LANL, MS-M707
D. Griswold, ERD, AL

cc w/o attachments:
W. Spurgeon, EM-453, HQ
J. Vozella, AAMEP, LAAO
T. Baca, EM-DO, LANL, MS-J591
G. Rael, ERD, AL

File 1.4.2.6.1.20.1.4

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

DEC 3 1 1995

Rec'd at LLAO 11/10/95 2:32 p.m.

Emmett - Pls draft memo to Jorg and work with Bonnie to identify any major issues a.k.a. "show stopper" Ted

Mr. Theodore J. Taylor
Program Manager
Department of Energy
Los Alamos Area Office
Los Alamos, NM 87544

Re: Notice of Deficiency, RFI Report Technical Area 39
Los Alamos National Laboratory (NM0890010515)

Dear Mr. Taylor:

The Environmental Protection Agency (EPA) has reviewed the RCRA Facility Investigation (RFI) Report for Technical Area 39, and found it to be deficient. Enclosed is a list of deficiencies which Los Alamos National Laboratory has ninety (90) days from the date of this letter to respond to.

P.S. Pls work with Bonnie on any inconsistencies with the RFI Report guidance that has been issued.

Should you have any questions, please feel free to contact Ms. Barbara Driscoll at (214) 665-7441.

Sincerely,

David W. Neleigh, Chief
New Mexico and Federal
Facilities Section

Enclosure

cc: Mr. Benito Garcia
New Mexico Environment Department
Mr. Jorg Jansen
Los Alamos National Laboratory, MS M992

cc Jnr

List of Deficiencies
RFI Report for Technical Area 39
Los Alamos National Laboratory

GENERAL COMMENTS:

1. **Sites in Aggregate 2:** The report should provide additional information concerning current and historical waste handling practices, and characteristics of the current and historical wastes. Waste information should include waste types and characterization data, rates of waste generation, waste management practices from generation to disposal, and references to—or records of—these activities (U.S. EPA OSWER 1989, 1994). Chemical analysis of the wastes should be performed to provide compound-specific information (U.S. EPA OSWER 1989). For example, no information is presented concerning the (1) characteristics and volumes of the wastes stored in Areas 1, 2, and 3, (2) age of Area 3, (3) length of time that wastes are stored in these areas, (4) frequency of waste disposal, (5) records of waste management, (6) ultimate fate of wastes from these areas, or (7) historic drainage pathways, previous structures, and the addition or removal of paved parking or storage areas. According to EPA guidance and policy directives (U.S. EPA OSWER 1989, 1994), the respondent should collect and present unit-specific data necessary to characterize each contaminant source—that is, each PRS. The report should be revised to include this information. If no records are available, LANL should so state.

2. <u>Analytical Data</u>

   Samples are designated as AAA3602, AAA3603, and so forth. However, several sample numbers are missing from this sequence (for example AAA3604, AAA3608, AAA3621, AAA3631, AAA3636, AAA3640, AAA3644, AAA3649, AAA3652, AAA3655, AAA3658, AAA3662, and others). Explain the numbering system and the absence of these sample numbers.

3. <u>Field Screening Data</u>

   According to the RFI report, field screening data were collected during field activities. However, the report fails to present or discuss these data. Present this information to support the selection of sampling locations. Also, include copies of field notes with the field screening data to enable a thorough assessment of field screening procedures and results.

4. Figures 1-2, 1-3, and 1-4 are confusing, because several sets of numbers used to identify or describe different facilities—such as building numbers, PRS numbers, and TA numbers—are not explained in the figure legends. For each

figure, provide a definition in the legend for the numbering systems used. Also, present a single map indicating the boundaries of the north, central, and south portions of OU 1132 shown on these figures.

SPECIFIC COMMENTS:

5. **Executive Summary, page 1**

According to the report, "twenty-seven Potential Release Sites (PRS) have been identified. Of these, seven were recommended for No Further Action (NFA)." On page 2 of the Executive Summary, eight PRSs are listed for NFA. This discrepancy should be clarified.

6. **Chapter 1, Aggregate 2: Storage Areas, Section 1.2.2.1, page 1-7**

According to the RFI report, "an amount of soil sufficient for the specified number of sample containers was collected in the bowl, mixed, and apportioned among the containers." EPA guidance documents recommend placing aliquots for the analyses of volatile organic compounds (VOC) directly into sample jars, without mixing, to avoid the loss of volatile components to the atmosphere (EPA 1995). As a result, analytical data for VOCs may not be representative of actual conditions. Explain how this sample collection method accurately represents the actual level of VOCs in the soil.

7. **Chapter 1, Analytical Methods, Section 1.2.4.3, page 1-9**

The RFI report indicates that, because no visibly contaminated areas were found, only subsurface samples were analyzed for VOCs. However, discolored soil was identified near PRS 39-007(a) (Section 4.1.7, p. 4-32), and oil stains were identified immediately east of PRS 39-007(d) (Section 4.1.8, p. 4-37). Explain this discrepancy.

8. **Chapter 3, Organics, Section 3.2.2.3, page 3-5**

EPA has already recommended that LANL collect data from background locations at its facility for use in data comparisons for PAHs.

9. **Chapter 3, RCRA Risk-Based Screening Action Levels, Section 3.3, page 3-5**

The report indicates that screening action levels (SAL) are based on regulatory levels—including maximum contaminant levels and proposed RCRA Subpart S (Corrective Action for SWMUs) risk-based methodology. Because LANL has indicated that off-site disposal of contaminated soil is a potential

remedy, characterization of contaminated soil may depend on the toxicity characteristic rule analysis or other analytical requirements that may be imposed by the disposal facility (OFR 1995). Therefore, although certain chemicals may be eliminated as contaminants of concern (COC) for risk purposes, they may be COC for disposal purposes.

10. Chapter 4, PRS 39-002(a), Section 4.1.1, page 4-1

According to the report, because Area 3-PRS-002(a)-is an asphalt-covered parking lot, it was not sampled. However, based on the figures presented in the report, surface runoff from Area 3 probably drained into the southern ditch. Explain why this drainage pathway was not sampled.

Also, provide additional information concerning the physical characteristics of, and the waste handling practices at, Areas 1, 2, and 3. Information concerning physical characteristics should include historic drainage pathways, previous structures, and the addition or removal of paved parking or storage areas. Waste information should include waste types, rates of waste generation, the ultimate fate of waste materials, and references to-or records of-these activities. If no records are available, LANL should so state.

11. Chapter 4, PRS 39-002(a), Section 4.1.1.1, page 4-2

According to the report, the storm drain east of Area 1-PRS 39-002(a)-was not sampled. Figures presented in the report indicate that drainage from Area 1 might have transported contaminants into this storm drain. The report should explain why this storm drain was not sampled. The report should also explain when the storm drain was installed, the extent of the associated storm system, and where runoff from this storm drain discharges.

12. Chapter 4, PRS 39-002(a), Section 4.1.1.1, page 4-2

Two surface soil samples (AAA3602 and AAA3603) were collected from ID # 39-1051, and three (AAA3605, AAA3605, and AAA3606) were collected from ID # 39-1053. Explain whether these were grab samples or composite samples. Also explain why multiple samples were collected at one location.

13. Chapter 4, PRS 39-002(a), Figure 4-1, page 4-3

Designate Areas 1, 2, and 3 on Figure 4-1.

14. Chapter 4, PRS 39-002(b), Section 4.1.2, page 4-10

The report does not include sufficient background information to support the limited biased sampling strategy used to characterize the potential contamination at this PRS. Although current physical characteristics generally support the selection of these biased sampling locations, the existing conditions may not be representative of historical conditions. Therefore, biased sampling locations this PRS may not characterize the complete nature and extent of contamination.

Provide additional information concerning the physical characteristics of, and the waste handling practices at, PRS 39-002(b). Information concerning physical characteristics should include historical drainage pathways, previous structures, and the addition or removal of paved parking or storage areas. Waste information should include waste types, rates of waste generation, the ultimate fate of waste materials, and references to—or records of—these activities. If no records are available, LANL should so state.

15. Chapter 4, PRS 39-002(b), Section 4.1.2, page 4-10

According to the report, polychlorinated biphenyls (PCB) were used in explosives tests and were recovered from electric transformers. Provide historical and information concerning the handling and disposal of PCBs at this PRS. Also, specify whether PCBs are currently being used.

16. Chapter 4, PRS 39-002(b), Section 4.1.2.5, page 4-14

According to the report, LANL recommends NFA for this PRS and defers cleanup until the nearby firing site has been decommissioned. PCB contamination was discovered during the RFI at this site; based on the information provided in the report, this contamination may have resulted from transformer oil spills. According to the Toxic Substances Control Act (TSCA) (OFR 1995), cleanup of PCB been within 24 hours of the discovery of the spill. Explain the delay in cleaning up the PCBs found at this PRS.

17. Chapter 4, PRS 39-002(c), Section 4.1.3, page 4-15

The report does not include sufficient background information to support the limited "biased" sampling strategy used to characterize the potential contamination at this PRS. Although current physical characteristics generally support the selection of these biased sampling locations, the existing conditions may not be representative of historical conditions. Therefore, biased sampling

locations this PRS may not characterize the complete nature and extent of contamination.

Provide additional information concerning the physical characteristics of, and the waste handling practices at, PRS 39-002(c). Information concerning physical characteristics should include historical drainage pathways, previous structures, and the addition or removal of paved parking or storage areas. Waste information should include waste types, rates of waste generation, the ultimate fate of waste materials, and references to—or records of—these activities. If no records are available, LANL should so state.

18. Chapter 4, PRS 39-002(c), Section 4.1.3.5, page 4-20

Based on the elevated concentrations of uranium, lead, and PCBs the report recommends a voluntary corrective action (VCA) for this PRS. The report indicates that concentrations of uranium are 38 times greater than their SAL, and that lead concentrations are about 400 times greater than their SAL. At PRS 39-002(a), contamination of similar magnitude was recommended for expedited corrective action (ECA). Consequently, the report should explain the recommendation of a VCA, instead of an ECA, at this PRS.

19. Chapter 4, PRS 39-002(d), Section 4.1.4, page 4-20

The report does not include sufficient background information to support the limited "biased" sampling strategy used to characterize the potential contamination at this PRS. Although current physical characteristics generally support the selection of these biased sampling locations, the existing conditions may not be representative of historical conditions. Therefore, biased sampling locations this PRS may not characterize the complete nature and extent of contamination.

Provide additional information concerning the physical characteristics of, and the waste handling practices at, PRS 39-002(d). Information concerning physical characteristics should include (1) historical drainage pathways, (2) previous structures, (3) whether the electric closet was used to house PCB-containing transformers, (4) whether the electric closet is connected to a drainage system, and (5) the addition or removal of paved parking or storage areas. Waste information should include waste types, rates of waste generation, the ultimate fate of waste materials, and references to—or records of—these activities. If no records are available, LANL should so state.

20. Chapter 4, PRS 39-002(d), Section 4.1.4.5, page 4-24

According to the report, LANL proposes NFA for this PRS. However, the report indicates that an electric closet (sump) is located near the firing area and that it may receive debris from explosives tests. If the sump is connected to a drainage system, action should be taken to prevent wastes from the explosives tests from being introduced into the sump.

21. Chapter 4, PRS 39-002(e), Section 4.1.5, page 4-24

If the paved area between the storage area and the unpaved area was not paved at one time, contaminants may have accumulated in the area that is now covered with asphalt. Provide additional justification for the selection of sampling locations.

Also, provide additional information concerning the physical characteristics of, and the waste handling practices at, PRS 39-002(e). Information concerning physical characteristics should include historical drainage pathways, previous structures, and the addition or removal of paved parking or storage areas. Waste information should include waste types, rates of waste generation, the ultimate fate of waste materials, and references to—or records of—these activities. If no records are available, LANL should so state.

22. Chapter 4, PRS 39-002(f), Section 4.1.6, page 4-28

If the paved area between the storage area and the main stream channel was not at one time covered with asphalt, contaminants may have accumulated in the area that is now covered with asphalt. Provide additional justification for the selection of sampling locations.

Also, provide additional information concerning the physical characteristics of, and the waste handling practices at, PRS 39-002(f). Information concerning physical characteristics should include historical drainage pathways, previous structures, and the addition or removal of paved parking or storage areas. Waste information should include waste types, rates of waste generation, the ultimate fate of waste materials, and references to—or records of—these activities. If no records are available, LANL should so state.

23. Chapter 4, PRS 39-002(f), Section 4.1.6.4, page 4-32

The report states that "copper was the only COC; it was detected at a maximum concentration of 3200 milligrams per kilogram (mg/kg), 200 mg/kg above its SAL. A difference of this magnitude is not considered to constitute a potential

this magnitude is not considered to constitute a potential human health risk." Any concentration over the SAL should be considered a potential risk, because the SAL is a breakpoint. EPA recommends that copper be evaluated as a potential health risk.

24. Chapter 4, PRS 39-007(a), Section 4.1.7, page 4-32

According to the report, transformer oil was stored at this PRS. LANL should provide historical and current information concerning the handling and disposal of PCBs at this PRS.

Also, provide additional information concerning the physical characteristics of, and the waste handling practices at, PRS 39-007(a). Information concerning physical characteristics should include historical drainage pathways, previous structures, and the addition or removal of paved parking or storage areas. Waste information should include waste types, rates of waste generation, the ultimate fate of waste materials, and references to or records of these activities. If no records are available, LANL should so state.

25. Chapter 4, PRS 39-007(a), Figure 4-7, page 4-34

The figure does not clearly show whether soil samples were collected from the stained soil. LANL should modify the figure to show the area of stained soil. LANL should also justify its selection of sampling locations, because sediment/soil samples were not collected from drainage pathways as they were at PRS 39-002(e) and 39-002(f).

26. Chapter 4, PRS 39-007(a), Section 4.1.7.5, page 4-36

According to the report, LANL recommends VCA, instead of ECA, for this PRS. High concentrations of PCBs were discovered at this site; based on the information presented in the report, this contamination may have resulted from transformer oil spills. According to TSCA (OFR 1995), cleanup of PCB spills must begin within 24 hours of the discovery of the spill. LANL should explain the delay in cleaning up the PCBs found at this PRS.

27. Chapter 4, PRS 39-007(d), Section 4.1.8, page 4-37

Justify the selection of analyses for the soil samples collected at this storage area. VOC analysis was not conducted for samples collected at this PRS, although the report indicates that (1) acetone, oil, and kerosene have been stored at this area, and (2) releases of these solvents have stained the soil next to the east side of the storage area. EPA recommends that the stained soil be analyzed for VOCs.

28. Chapter 4, PRS 39-007(d), Figure 4-8, page 4-38

The figure does not clearly show whether soil samples were collected from the stained soil. Modify the figure to show the area of stained soil.

29. Chapter 4, PRS 39-006(a), Section 4.2.1.1.1, page 4-45

Justify the changes to the RFI work plan sampling strategy for the active sand filter. Based on the information presented in the report, EPA has determined that LANL has failed to adequately characterize the depth of contamination. According to the report, LANL determined the sampling depth from engineering drawings. However, the work plan required subsurface sampling to a depth of 2 feet below the sand-tuff interface. Subsurface samples should have been (1) collected continuously from ground surface the total depth of the boring, and (2) field-screened until clean soil was encountered. Then, the samples for analysis should have then been selected from the soil that was most contaminated.

30. Chapter 4, PRS 39-006(a), Section 4.2.1.3.1, page 4-52

See deficiency #29.

Also, according to the report, LANL collected no samples from the sand media within the inactive sand filter. The filter has accumulated potentially hazardous contaminants and may be a source of contamination. EPA recommends that samples from within the inactive sand filter be collected to properly characterize its potential as a source of contamination.

31. Chapter 4, PRS 39-006(a), Section 4.2.1.3.6, page 4-54

The no further action recommendation for this PRS is based on partial data, because additional samples are needed to adequately characterize the inactive sand filter. After samples have been collected, the recommendations in this section should be modified to reflect the results of the additional sampling data.

32. Chapter 4, PRS 39-006(a), Section 4.2.1.4.1, page 4-55

According to the report, samples AAA6289 and AAA6290 were collected from boring ID# 39-1088. However, Figure 4-11 indicates that samples AAA6291 through AAA6294 were collected from this boring; Figure 4-10 indicates that samples AAA6289 and AAA6290 were collected from boring ID# 39-1087. Explain these discrepancies.

33. Chapter 4, PRS 39-006(a), Section 4.2.1.5.1, page 4-60

According to the report, LANL collected no samples from the contents of the septic tank. Potentially hazardous contaminants may have accumulated in this area. EPA recommends that additional subsurface soil samples be collected to adequately characterize the active septic tank.

34. Chapter 4, PRS 39-006(a), Section 4.2.1.5.5, page 4-62

The no further action recommendation for this PRS is based on partial data, because additional samples are needed to adequately characterize the active septic tank. After samples have been collected, the recommendations in this section should be modified to reflect the results of the additional sampling data.

35. Chapter 4, PRS 39-005, Section 4.2.3.1, page 4-66

According to the RFI report, "because the precise location of the former pit is not known, samples were collected from the location thought most likely to have been the site of the pit." No HE or HE metabolites were measured in the samples collected. Justify the selected sampling locations. Also, explain why a geophysical survey was not used to determine the location of the pit before sampling.