



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
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DALLAS, TX 75202-2733

OCT 20 1994

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Hswa OU 1082
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Mr. Joseph C. Vozella
Assistant Area Manager
Environment, Safety and Health Branch
Department of Energy
Los Alamos Field Office
Los Alamos, NM 87544

Re: Notice of Deficiency, Second RFI Workplan OU 1082
Los Alamos National Laboratory (NM0890010515)

Dear Mr. Vozella:

The Environmental Protection Agency (EPA) has reviewed the RCRA Facility Investigation (RFI) Workplan for Operable Unit 1082 (OU 1082) dated July 6, 1994, and found it to be deficient. Enclosed is a list of deficiencies which need to be addressed within thirty (30) days of receipt of this letter. Sampling plans requested need to be provided within 60 days of receipt of this letter.

The format used for this workplan, as well as the first workplan for this OU, is extremely difficult to use and follow. EPA suggests a meeting to discuss better format options, as well as this Notice of Deficiency.

If you should have any questions or need additional information, please contact Barbara Driscoll at (214) 665-7441.

Sincerely yours,

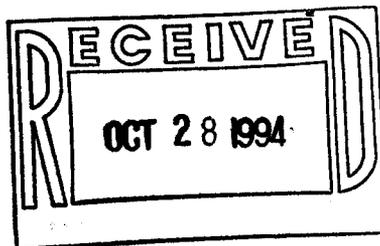
Handwritten signature: WK Honker

William K. Honker, P.E., Chief
RCRA Permits Branch

Enclosure

cc: Benito Garcia ✓
Bureau Chief, Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
Jorg Jansen
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**List of Deficiencies
Operable Unit 1082 (2nd Workplan)**

1. A schedule should be submitted which addresses the work to be conducted in this work plan. This schedule should provide information for each SWMU including dates for field work start, field work completion and final RFI report.

2. **5.0.2.4 Investigation Boundary, p. 5-0-12** - The depth boundary for sumps and drainlines will probably need to be deeper than the soil-tuff interface because of the potential for liquid releases.

3. EPA does not agree with the sampling approach outlined in Section 5.0.2.6 Design Criteria (DQO Step 6) with the exception of biasing samples at the likely points of highest potential contamination. Any statistical method used should not be used at anything other than a 95% confidence interval that contamination will be detected. EPA will review the sampling plans as written and will request additional samples or analyses on a site-by-site basis after reviewing the proposed work.

In addition, EPA does not believe that this sampling approach is efficient for characterization or remediation purposes due to the limited number of samples being submitted for analyses.

4. The following units will be added to the HSWA portion of the permit for investigation:

16-015(a,b)	16-029(m,n,o,p,r,w,y,z)
16-024(e)	16-029(a2,c2,d2,e2,h2)
16-025(p,q,r,u,v)	16-032(a,c)
16-026(w)	C-16-025 C-16-026

5. SWMU numbers should be included in background descriptions. It is confusing for LANL to use building numbers in text and never indicate which SWMU number is associated with which building. The reader has to find the building number on a figure and then determine the SWMU number. An example is on page 5-320 last paragraph which describes building number TA-16-42 and never indicates the SWMU number.

6. **5.18.1.1.3 40-Line PRSs, p. 5-321, last paragraph** - Text indicates that SWMU 16-025(n) encompasses the outfall from SWMU 16-025(r); however SWMU 16-025(n) is not indicated on Figure 5-60. EPA's review of Addendum 1, Chapter 5 PRSs shows that SWMU 16-025(n) is extremely far away from the area described. LANL shall clarify the location of 16-015(n) in relation to SWMU 16-025(r).

7. These comments apply to all sampling plans in Chapter 5:

a. Field screening should also include the use of a PID or HNU, and should not rely only on the high explosive (HE) spot test kit or radiation field screening. Because the detection limit of the HE spot test kit is greater than screening action levels and practical quantitation limits (PQLs), LANL should not solely rely on this to indicate areas of potential contamination. EPA will require a certain number of samples be submitted for laboratory analysis whether field screening indicates a problem or not.

b. Surface soil sampling in areas that have been historically backfilled or have possibly received moderate sedimentation should be taken down to 24 inches or to the soil/tuff interface, whichever is encountered first.

c. All sumps samples shall be analyzed for VOAs, SVOCs, metals and HE. All cores placed at the former location of sumps or septic tanks shall extend to three feet below the depth of the tank. The entire core should be screened along one foot increments.

d. If positive field screening hits are obtained on a single augered core then LANL shall submit samples for laboratory analysis as follows: the shallowest positive interval, the deepest positive interval, and the interval below the deepest positive interval.

e. All samples with positive field screening results shall be submitted for laboratory analysis with the exception of the analysis procedures for augered cores as outlined in deficiency 7(d).

5.18.4.2.1 Surface Sampling, p. 5-341 through 5-346

8. SWMUs 16-025(j, k, p, q) and 16-034(a) - A minimum of three samples shall be submitted for laboratory analyses.

9. SWMUs 16-025(g,h,i), p. 5-341 - These buildings were all used for HE machining (Table 5-80) which according to DQO Step 6, paragraph one, page 5-335, produces the greatest contamination; however you indicate that the likelihood of contamination is low. LANL should explain why these buildings are considered to have a low likelihood of contamination.

A minimum of three samples should be submitted for laboratory analyses.

10. SWMU 16-025(v), p. 5-345 - See deficiency #7(d).

11. SWMU 16-025(l), p. 5-345 - See deficiency #7(d). In addition, this site originally had a basement. LANL should address sampling the location of the basement.

12. SWMU 16-025(u), p. 5-345 - All samples with positive field screening results shall be submitted for laboratory analysis with a minimum of six samples submitted for laboratory analysis if no positive field screening results.

5.18.4.2.2 Subsurface Sampling

13. Within each subsurface core, how will LANL determine which sample interval will be submitted for laboratory analysis if there are no positive field screening results for any of the 12-inch intervals?

14. SWMU 16-025(r), p. 346 -

a. Core samples with positive field screening should be submitted for laboratory analysis as indicated in Deficiency #7d. If no positive field screening results are indicated then at least 3 samples shall be taken, one at the surface and two at the location of the sump.

b. LANL shall provide a better figure or an explanation showing the location of the proposed cores. Text indicates that one core will be located near the former sumps, where will the other core be located? What is the depth of the sumps and their composition?

c. A minimum of three surface samples should be submitted for laboratory analysis from within the building footprint.

15. SWMU 16-005(c), p. 5-346 - Text on page 5-313 indicates that this unit discharged to a leach field. Where is the leach field located? LANL shall provide a better figure.

16. SWMUs 16-029(m-p), p. 5-347 - LANL shall provide a better description of sample collection for these units. Is LANL going to be using cores in the areas of the sumps?

17. SWMUs 16-024(e), 16-025(e,f), p. 5-348 - A minimum of two samples should be submitted for laboratory analysis from each sump.

18. SWMU 16-032(c), p. 5-349 - LANL shall submit at least one of the samples located under the rock lined drainage ditch for laboratory analysis.

19. SWMU 16-029(z), p. 5-349 - LANL shall submit at least one sample for laboratory analysis from the location of each of the former sumps.
20. SWMU 16-032(a), p. 5-350 - LANL should also field screen additional samples at the connection points where two lines come together and at the outfall or end of the drainline near building 45. One sample should be submitted for laboratory analysis from each sump, and an additional four samples should be submitted from investigation of the former line.
21. SWMU 16-026(q), p. 5-350 - LANL shall submit at least one sample for laboratory analysis from the location of each of the former sumps. Figure 5-64 does not show the location of the former drain lines. LANL shall also field screen additional samples at the joints and connection points for the drain lines. An additional four samples shall be sent for laboratory analysis from those samples field screened.
22. 5.18.4.2.3 Drainage Sampling, p. 5-350 - Is LANL submitting all five samples collected in the drainage for laboratory analysis?
23. 5.19.1.2.2 Potential Pathways and Exposure Routes, p. 5-364 - In the first paragraph LANL discusses solvents associated with SWMU 16-032(b) although there is no discussion of this SWMU in this section of the workplan. LANL also discusses SWMU 16-032(b) as being a solvent storage area in the second paragraph on page 5-366. In Chapter 6, SWMU 16-032(b) is described as being a no further action unit. LANL needs to clarify what unit they are discussing in this section of the workplan (Section 5.19).
24. SWMUs 16-024(b,c,d), 16-025(d) and 16-034(l), p. 5-377 - Even though these units are not currently listed in the HSWA portion of the permit for investigation, taking no samples from four field screened locations is not acceptable for no further action. The field screening technique used for HE does not have adequate sensitivity to detect many HE compounds at or below their action levels. Therefore, LANL should take at least one sample for laboratory analysis from these sites.
25. SWMU 16-015(d), p. 5-388 - Was there a sump associated with this building as there was with SWMU 16-015(c)?
26. SWMU 16-025(c2), 16-034(m,n,o) and SWMU 16-025(y), p. 5-416 - LANL shall submit a minimum of two samples for laboratory analysis from these building footprints.
27. SWMUs 16-024(k,l,m,n,o,p,q,r), p. 5-416 - A minimum of one sample from each magazine shall be submitted for laboratory analysis.

28. SWMU 16-029(y), p. 5-417 - LANL shall submit one sample from each sump for laboratory analysis and three samples from the drainage line.

29. SWMUs 16-029(v,b2,c2,d2,e2), p. 5-417 - LANL shall submit one sample from each sump for laboratory analysis, and four samples from each drainage ditch of which one will be from the drainage area between the building and the sump.

For SWMU 16-029(c2), LANL shall submit for laboratory analysis a minimum of one sample from each sump, and four samples from each of the drainage areas on the east and west of the building.

30. SWMU 16-029(a2), p. 5-418 - LANL shall submit for laboratory analysis one sample from each sump and two additional samples from the drainage ditch.

31. SWMU 16-005(e), p. 5-418 - LANL shall submit at least one sample from each of the four subsurface cores for laboratory analysis.

32. SWMU 16-025(w), p. 5-419 - LANL shall submit a minimum of two samples for laboratory analysis. Field screening should be conducted every foot below the first six inches, and not just on the last six inches of the core.

33. 5.20.4.2.3 Drainage Samples, p. 5-419 - In addition to the six laboratory samples indicated, LANL shall also collect a sample at the intersection of each of drainage ditches for 16-029(b2, e2, d2 and v). At each intersection location a six inch sample shall be collected from the 12-18 inch interval, and submitted for laboratory analysis. This may require sampling into the tuff.

5.21.4.2.1 Subsurface Sampling

34. SWMU 16-015(a), p. 5-434 - LANL shall submit a minimum of two samples from the building footprint and drain line (total of four) for laboratory analysis.

35. SWMU 16-015(b), p. 5-434 - LANL shall submit for laboratory analysis a minimum of two samples from the location of the sump, two from the drain line, and one from the building footprint.

5.22.4.2 Sampling

36. SWMU 16-005(a), p. 5-452 - LANL shall submit one sample from the septic tank location and two samples from the drain line locations for laboratory analysis.

37. SWMU 16-005(k), p. 5-456 - The background description for this SWMU indicates that a machine shop was hooked up to this system. Therefore, solvents and metals may also be of concern. LANL shall submit a minimum of two samples for laboratory analysis.

38. SWMU 16-005(k), p. 5-456 - Text on page 5-444 indicates that the line from the grease trap drained to an outfall ditch. This ditch should also be located and sampled with one sample being sent for laboratory analysis. LANL shall provide a better figure of this unit noting the position of the former grease trap and drainage ditch.

5.23.4.2 Sampling

39. SWMUs 16-026(m,n,o,p) and 16-029(q), p. 5-475 - LANL shall add VOAs to the laboratory analysis for these SWMUs. What is the depth of sample collection for these drain line? Text on page 5-462 indicates that these drain lines are still in place. LANL shall submit for laboratory analysis at least two samples from each drain line. This will mean at least four samples will be sent for laboratory analysis from each SWMU, as these SWMUs consist of more than one drain line.

40. SWMU 16-029(k), p. 5-475 - Samples collected from the location of sumps and drainlines should be collected at depth to soil tuff or below the depth of the drain line or sump. Following is the minimum number of samples which should be submitted for laboratory analysis from this SWMU: one sample from each sump location; four samples from the drain lines; and two samples from the drainage ditch.

41. SWMUs 16-029(l,s,t,u), p. 5-475 - LANL shall submit a minimum of one sample from each sump for laboratory analysis.

5.24.4.2.1 Sampling

42. SWMUs 16-024(f,g,h) and 16-034(c,d,e), p. 5-496 - LANL shall submit a minimum of two samples for laboratory analysis from each of these units.

43. SWMUS 16-034(b), p. 5-496 - LANL shall submit two samples from each drainage trough and three from the building footprint for laboratory analysis.

44. SWMU C-16-017, p. 5-497 - LANL shall submit at least one sample from this structure for laboratory analysis.

45. SWMU 16-005(j), p. 5-497 - LANL shall submit at least two of the corehole samples from the location of the former sump, and four samples from the drainage area for laboratory analysis.

5.25.4.2.2 Subsurface Sampling

46. SWMUs 16-029(x), 16-031(c), p. 5-518 - LANL shall submit a minimum of five samples from the swale area for laboratory analysis. Any of the swipes from the manholes which have positive field screening results should also be sent for laboratory analysis.

Chapter 6

47. SWMU 16-006(h), p. 6-31 - Is this an electric pump? LANL should examine if this unit ever handled hazardous waste or hazardous constituents.

48. SWMU 16-017, p. 6-31 - This unit may not be deferred. LANL shall provide a description of each of the buildings and the potential for contamination from HE or other hazardous constituents. This SWMU may need to be broken into additional SWMUs. LANL should provide the SWMU number which represents each of the structures in Table 6-10 for which sampling has already been proposed as part of this workplan. EPA will evaluate the information provided and determine if the sites are to be added to the HSWA portion of the permit or not.

49. SWMU 16-029(g2), p. 6-31 - More information needs to be provided on this unit. Was the unit a sump or pit for this shake table. Did any releases occur in the pit?

50. LANL may request removal of the following units from the HSWA portion of the permit by a Class 3 permit modification:

16-006(i)
16-005(i)
16-032(d)
16-005(b)
16-031(g)
16-025(g2)

51. SWMU 16-034(g), p. 6-34 - EPA is not approving NFA for this unit. EPA will reevaluate this unit when additional information is provided on SWMU 16-017. See deficiency #48.

52. SWMU 16-026(i2), p. 6-34 - Is this SWMU the same SWMU as 16-006(a)?

53. SWMU 16-028(a), p. 6-36 - Does the "south drainage" area have a SWMU number, if not then it should be numbered 16-028(a).

54. SWMU 16-025(c), p. 6-37 - LANL shall provide excerpts from the cited documentation which substantiates that there were no contamination problems.

55. SWMU 16-005(f), p. 6-39 - Did another septic system serve building TA-16-260? Is TA-16-272 also a building or is it part of the septic system? LANL needs to provide additional information on this building as well as the documentation information.

56. SWMU 16-032(e), p. 6-41 - LANL shall submit the sampling information indicated (Fresquez, 1991).

57. The following SWMUs do not need to be added to the HSWA portion of the RCRA permit:

16-023(a)	C-16-040	C-16-033	C-16-059	C-16-054
25-001	C-16-021	C-16-037	C-16-042	C-16-056
16-032(b)	C-16-022	C-16-038	C-16-043	C-16-057
C-25-001	C-16-024	C-16-066	C-16-045	
C-16-004	C-16-029	C-16-003	C-16-048	
C-16-032	C-16-027	C-16-007	C-16-052	
C-16-039	C-16-023	C-16-055	C-16-053	

58. SWMUs C-16-025 and C-16-026, p. 6-45 - It is recommended that these two sites be investigated during phase I sampling as the cabinet shop and repair shop operations may have involved the use or storage of solvents, pesticides and organics.

59. SWMU C-16-003, p. 6-48 - LANL should submit enough information in the NFA request for EPA to evaluate the site. Instead LANL has cited Section 6.1.5.3 of the first RFI workplan for OU 1082. EPA will reconsider the NFA request for this site based on the sampling information provided for 16-005(n) or LANL may provide additional information which allows EPA to evaluate this unit.