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**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

June 26, 1998

Mr. Theodore Taylor, Program Manager
Los Alamos Area Office
Department of Energy
528 35th Street, MS A100
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: Notice of Deficiency for the Voluntary Corrective Action (VCA) Completion
Report for SWMUs 0-030(l), 0-030(m), 0-033(a)
Los Alamos National Laboratory (LANL) EPA I.D. NM0890010515**

Dear Mr. Taylor and Dr. Browne:

The RCRA Permits Management Program (RPMP) of the Hazardous and Radioactive Materials Bureau (HRMB) has reviewed LANL's August 1996 (LAUR 96-2901) Voluntary Corrective Action Completion Report for SWMUs 0-030(l), 0-030(m), 0-033(a), and Supplemental Information dated November 19, 1997 (EM/ER:97:486), and found them to be insufficient. Furthermore, two occurrences of improperly reporting data cast doubt on the validity of the entire RFI Report (see specific comments for details).

LANL must respond to the Notice of Deficiency items listed in the Attachment within thirty (30) calendar days of receipt of this letter. If DOE/LANL does not submit a complete response to the Notice of Deficiency within thirty (30) calendar days an enforcement action may be taken.

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



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Sincerely,

Stephanie Kruse

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

RSD:rw

cc w/attachments:

J. Canepa, LANL EM/ER, MS M992
J. Davis, NMED SWQB
B. Garcia NMED HRMB
M. Johansen, DOE LAAO, MS A316
J. Kieling, NMED HRMB
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D. Neleigh, EPA, 6PD-N
J. Parker, NMED DOE OB
S. Yanicak, NMED DOE OB, MS J993
File: Reading and HSWA LANL 1/1071/0
Track: LANL, 6/26/98, NA, DOE/LANL, HRMB/Dinwiddie, RE, File

ATTACHMENT
Notice of Deficiency on the
Voluntary Corrective Action Completion Report and Supplemental Information
for Potential Release Sites
0-030(l), 0-030(m), 0-033(a), 6th Street Warehouse

GENERAL COMMENTS:

1. The upper tolerance levels (UTLs) are greater than approved site-wide background levels in most cases for inorganics and radioactive isotopes.

NOD comment: LANL shall compare analytical results to appropriate background concentrations as listed in the "Inorganic and Radionuclide Background Data for Soils, Canyons Sediments and Bandelier Tuff at Los Alamos National Laboratory" (Ryti, R.T., *et alia*).

2. Volatile organic compounds (VOCs) were analyzed in waste characterization samples only. Solvents were present historically at the materials testing facility.

NOD comment: LANL shall investigate for VOCs.

3. Neither evaluation nor comments are included on the risk assessment portion because determination of nature and extent of contaminants of potential concern was incomplete. However, LANL shall follow the risk assessment requirements as described in the HRMB standard operating procedure (SOP) Risk-based Decision Tree (March 4, 1998).

4. Deviations from the workplan such as not performing the soil gas survey or conducting coring were not approved by NMED. All significant/substantial workplan deviations shall be approved in advance in accordance with the HRMB Position Paper - Variances from Approved Workplans (March 4, 1998).

"Examples of significant deviation from a workplan include: (1) the addition of a substantial area to the AOC/SWMU . . . ; and/or (2) a decrease in the number of samples and/or analysis is proposed" (HRMB Position Paper - Accelerated Corrective Action Approach, March 4, 1998).

NOD comment: NMED will not approve a deviation from the soil gas survey as described in the workplan. The purpose of the survey was to help determine the presence or absence of organic vapors (not the location of septic system structures) to aid in maximizing additional sampling locations. Coring may or may not be

required depending on the results of soil gas survey.

SPECIFIC COMMENTS:

PRS 0-030(1):

5. HRMB is not satisfied with the sampling and removal of the tank and the inlet piping to the septic tank. **HRMB requires that all confirmatory soil samples be off-site laboratory analyzed, not XRF analyzed.**

NOD comment: LANL shall perform confirmatory soil sampling using an off-site laboratory.

6. HRMB is not satisfied with the sampling performed in the outfall area of this PRS for the following reasons:

- (a) Samples were only taken to a six-inch depth, therefore, the site was not adequately characterized;
- (b) Samples were not analyzed at an off-site laboratory. The use of XRF analyses is not acceptable for determining the horizontal and vertical extent of contamination in RFI investigations;
- (c) Only two (2) sample locations are downgradient of the outfall;
- (d) The two samples taken were forty (40) feet from the outfall and were taken within five (5) feet of each other; and,
- (e) It is not clear whether the samples were taken in the drainage way of the outfall effluent.

NOD comment: LANL shall submit a sampling and analysis plan (SAP) that addresses the above concerns about outfall sampling.

7. LANL's response to Request for Supplemental information item number 4 is unacceptable. The original item stated, "Page 27, Field Activities: LANL should explain why no confirmatory samples were obtained from beneath the vitrified clay pipe."

"LANL's response: No confirmatory samples were collected from beneath the vitrified clay pipe because the contaminants that were detected under the pipe, in the tank, and in the outfall did not exceed 1 on the hazard index (part of a human health screening assessment). Therefore, no additional samples were necessary. "

NOD comment: This is an unacceptable rationale for two reasons:

- a) an adequate risk assessment cannot be performed until the nature and extent of contamination is documented, and
- b) defining the nature and extent of contamination has not been completed (the basis for much of this NOD).

LANL shall include sampling beneath the vitrified clay pipe location with the new SAP.

8. In LANL's November 19, 1987 Supplemental Information submittal regarding the NMED comment 7. Page 34, Conclusions and Recommendations:

- a. LANL should obtain and submit confirmatory samples from beneath the septic tank and exiting pipe to a laboratory for inorganic analyses. Field screening (XRF) is not acceptable for determining the nature or extent of contamination.
- b. LANL should obtain confirmatory samples from beneath the removed piping.

LANL Response:

". . . No confirmatory samples were collected from below the tank's exit piping because the contaminants that were detected in the tank and in the outfall did not exceed 1 on the hazard index"

NOD comment: LANL shall include sampling below the tank's exit piping in the new SAP.

NOD comment: LANL failed to address item 8.b. above. LANL shall include sampling below the removed piping in the new SAP.

9. In LANL's November 19, 1987 Supplemental Information submittal regarding Table C-2, Part II, "Radionuclide Data Equal to or Less than Background Threshold Concentrations in Site-Characterization Samples from PRS 0-030(I)."

In all but one sample location, LANL failed to analyze for or report concentrations of Plutonium-239, -239, -240, and Uranium -234, 235, -236, -238.

NOD comment: In the new SAP, LANL shall describe resampling, if necessary, and analyzing for these omitted constituents.

10. In LANL's November 19, 1987 Supplemental Information submittal regarding Table C-5 (Amended) "Radionuclides with Concentrations that Exceed Background Threshold Concentrations in Confirmatory Data for PRS 0-030(l)."

Tritium was detected at a concentration of 511 pCi/g at a depth of 5-5.5 feet below the tank. This value exceeds the screening action level (SAL) of 260 pCi/g. However, the largest tritium value in the RFI Report is 36.0 pCi/g. There is a discrepancy between the value reported in the RFI Report and the data table value.

NOD comment: LANL shall explain and correct this discrepancy.

PRS 0-30(m):

11. Confirmation samples for organics taken underneath the septic tank and underneath the pipeline were not analyzed at an off-site laboratory. The use of XRF analysis data alone without performing any off-site analytical laboratory analysis is unacceptable. Also, the investigation samples taken underneath the exiting pipe used only XRF analysis, with no off-site laboratory analysis. Again, this is unacceptable.

Did the PRS have an outfall? If yes, please describe location and proposed sampling.

NOD comment: In the new SAP, LANL shall address these concerns about the confirmation sampling performed underneath the septic tank and the pipeline.

12. In LANL's November 19, 1987 Supplemental Information submittal regarding Table C-8, Part II "Radionuclides Data Equal to or Less than Background Threshold Concentrations in Site-Characterization Samples from PRS 0-030(m)."

Concentrations of Tritium, Plutonium-239, -239, -240, and Uranium -234, 235, -236, -238, shown in the data table were omitted from the RFI Report. These constituent concentrations are above background values and should have been included in RFI Report.

NOD comment: LANL shall explain and correct this discrepancy.