



GARY E. JOHNSON
GOVERNOR

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous & Radioactive Materials Bureau
2044 Galisteo
P.O. Box 26110
Santa Fe, New Mexico 87502
(505) 827-1557
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MARK E. WEIDLER
SECRETARY

EDGAR T. THORNTON, III
DEPUTY SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

March 13, 1996

Mr. Joseph C. Vozella, Chief
Environment, Safety and Health
Los Alamos Area Office
Department of Energy
Los Alamos, NM 87544

**RE: Notice of Deficiency, Status Report for SWMU 3-056(c)
Los Alamos National Laboratory (NM0890010515)**

Dear Mr. Vozella:

The Hazardous and Radioactive Materials Bureau (HRMB) of the New Mexico Environment Department (NMED) has reviewed Los Alamos National Laboratory's (LANL) status report for Solid Waste Management Unit (SWMU) 3-056(c) dated December 6, 1995, and determined it to be deficient. LANL has proposed a cleanup level for polychlorinated biphenyls (PCBs) of 10 ppm in soil to be adequately protective of human health and the environment. Based on discussions among representatives from the EPA Toxic Substances Control Act (TSCA), EPA Resource Conservation and Recovery Act (RCRA), and the NMED Surface Water Quality Bureau (SWQB), it appears that a cleanup level of less than or equal to 1 ppm for PCBs in soil remains appropriate. This is based primarily on a concern for release of PCBs to surface water from PCB-contaminated media at SWMU 3-056(c).

LANL shall provide a response to the enclosed list of deficiencies within forty-five (45) days from the receipt of this letter. Please address one copy of your response to me and one to each of the individuals listed below.



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Mr. Joseph C. Vozella
March 13, 1996
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Should you have any questions concerning this Notice of Deficiency, please contact either Mr. Robert Dinwiddie at 505/827-1561 or Ms. Teri Davis at 505/827-1558 concerning permitting or technical issues, respectively.

Sincerely,


Benito Garcia, Chief
Hazardous and Radioactive Materials Bureau

enclosures

cc: David Neleigh, Chief, US EPA Region 6
Ronald Kern, Technical Compliance Program Manager, NMED-HRMB
Barbara Hoditschek, RCRA Permits Program Manager, NMED-HRMB
Jim Piatt, Chief, NMED-SWQB

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List of Deficiencies
RFI Report for SWMU 3-056(c)
Los Alamos National Laboratory

1. LANL presented a position paper on Polychlorinated biphenyls (PCBs) to EPA on February 28, 1995. EPA provided comments to LANL on this paper on May 8, 1995. LANL appears to be using the original position paper without incorporating EPA's comments. When or does LANL intend to revise this position paper to incorporate EPA comments?
2. LANL should supply figures which correspond to all sample data submitted, and these figures should indicate sampling locations with sample numbers. This was done in Figure 4 for some of the sampling information, but was not done for additional sampling points.
3. LANL should differentiate as to which type of AROCHLOR is found in the soil.
4. LANL should develop a sampling plan with the NMED Surface Water Bureau for surface water including run-off events .
5. LANL needs to expand on the amount of work which has already occurred such as: the depth of excavation to date; depth to which excavation must continue to reach a level of less than 1 ppm for PCBs; ground water information for the site; how will the site be stabilized; and what run-on and run-off controls will be used at the site including information on a contingency plan should monitoring indicate a problem.
6. LANL has provided very rough cost estimates, and should provide additional detailed information on costs spent to date, as well as, cost estimates for the additional remediation and sampling work to be conducted.
7. **Ecological Risk Assessment**

General Comment: LANL's approach to evaluate the risk from PCBs to the environment at SWMU 3-056(c) cannot be fully assessed with the information supplied.

- a. EPA agrees with the use of a fate and transport model to evaluate effects of various PCB cleanup levels. However, the ECOTRAN model used is not familiar to us and we cannot evaluate its strengths and weaknesses of its use at this site without more information. A detailed description of the model including all input parameters, assumptions, and references should be submitted for approval prior to use.
- b. There is no justification presented for using a 239 acre ecosystem in the ECOTRAN model.

- c. The Oak Ridge Ecological Risk Screening Benchmark used to evaluate PCB concentrations protective of aquatic receptors (20.52 ppm) is over two orders of magnitude higher than those presented by Ontario (0.07) and Long and Morgan (0.18). The equilibrium partitioning approach used in the Oak Ridge method does not account for bioaccumulation up the food chain. It is based on how concentrations in the water partition between lipids in organisms and organics in the sediment. Also, the sediment organic content assumed should be 4%, not 1% as proposed.
- d. PCBs in soils generally are not taken up by most plants, but are accumulated by soil macroinvertebrates. Herbivores, such as the deer, and deer mice are not likely to have high exposure to PCB's. An insectivore (e.g. shrew) would be a good species to evaluate. To assess bioconcentration through the food chain a predator which feeds mainly on insectivores should be considered (possibly hawk or owl).
- e. The numbers presented in Table 1 are seven year averages. Please provide justification for using seven year average values. The range of values which were averaged should also be presented.

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Mr. Benito Garcia, Chief
Hazardous and Radioactive
Materials Bureau
New Mexico Environment Department
P.O. Box 26110
Santa Fe, NM 87502

**Re: Notice of Deficiency, Status Report for SWMU 3-056(c)
Los Alamos National Laboratory (NM0890010515)**

Dear Mr. Garcia:

The Environmental Protection Agency (EPA) has reviewed Los Alamos National Laboratory's status report for Solid Waste Management Unit (SWMU) 3-056(c) dated December 6, 1995, and determined it to be deficient in documenting a proposed cleanup level of 10 ppm in the soil to be adequate protection of human health and the environment. Based on discussions between representatives from both the EPA Toxic Substances Control Act (TSCA) and Resource Conservation and Recovery Act (RCRA) staff and the New Mexico Environment Department (NMED) Surface Water Bureau, it appears that a cleanup level of less than 1 ppm for Polychlorinated biphenyls (PCBs) in soil is still appropriate. This is based on a concern for run-off of PCBs to surface water.

LANL will not need to complete a new ecological risk provided they meet a cleanup level in soil of less than 1 ppm for PCBs. If LANL chooses to re-submit an ecological risk assessment for SWMU 3-056(c), and for any future eco-risk submittals, we offer comments to assist LANL.

The TSCA staff will authorize the additional soil excavated with a PCB concentration between 1 and 10 ppm to be sent to a non-TSCA facility provided that other Federal, State, and local requirements are met.

We request LANL to respond to the enclosed list of deficiencies within forty-five days of receipt of this deficiency letter which is being transmitted by NMED. Please send a copy of your response to Mr. Jim Piatt in the NMED Surface Water Bureau.

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

Sincerely,

David Neleigh, Chief
New Mexico and Federal
Facilities Section

Enclosure

bcc: Lou Roberts (6EN-AT)

Barbara Driscoll
6PD-N: BDRISCOLL:BD:F:\USER\SHARE\L3056C.NOD

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OWEN ROBERTS

K. Owen
2/6/96

2/8/96

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Los Alamos National Laboratory

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