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Date: December 15, 1997  
 Refer to: EM/ER:97-537

Dr. Robert Dinwiddie  
 NMED-HRMB  
 P.O. Box 26110  
 Santa Fe, NM 87502



**SUBJECT: RESPONSE TO REQUEST FOR SUPPLEMENTAL  
 INFORMATION FOR VCA COMPLETION REPORT  
 FOR PRS 1-001(f) IN TA-1 (FORMER OU 1078)**

Dear Dr. Dinwiddie:

Enclosed is the Los Alamos National Laboratory's response to the New Mexico Environment Department Hazardous and Radioactive Materials Bureau's request for supplemental information for the Voluntary Corrective Action Completion Report for Potential Release Site 1-001(f) in Technical Area 1.

If you have any questions, please contact Gary McMath at (505) 665-4969 or Bonnie Koch at (505) 665-7202.

Sincerely,

Julie A. Canepa, Program Manager  
 LANL/ER Project

Sincerely,

Theodore J. Taylor, Program Manager  
 DOE/LAEO

JC/TT/rfr

Enclosure (1) Response to Request for Supplemental Information for VCA  
 Completion Report for PRS 1-001(f) in TA-1 (Former OU 1078)



LSWA CANL 1/10/98/1

76

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EM/ER File (CT# C374), MS M992  
EM/ER File, MS M992

**Response to  
Request for Supplemental Information  
Voluntary Corrective Action Completion Report  
PRS 1-001(f)  
February 2, 1996**

**INTRODUCTION**

To facilitate review of this response, the New Mexico Environmental Department's (NMED's) comments are included verbatim. The comments are divided into general and specific categories as presented in the letter. Los Alamos National Laboratory's (LANL's) responses follow each NMED comment.

**GENERAL COMMENTS**

**NMED Comment**

1. *Page 1, first paragraph: LANL should clarify what chemical contamination if any was associated with the upper and lower bench.*

**LANL Response**

1. Uranium was detected at concentrations above the screening action level (SAL) value at PRS 1-001(f). Additionally, lead and mercury were detected at concentrations slightly above upper tolerance limit (UTL) values and significantly below SAL values. Background comparison/evaluation, screening assessment, and risk assessment details for this site are provided in the *RFI Report for Potential Release sites 1-001(b ,f), 1-003(c), and 1-007(j) TA-1, Aggregates C and D (LA-UR-96-962)*. Based on these results, PRS 1-001(f) is recommended for NFA on the basis of NFA Criterion 5, which states the PRS has been characterized in accordance with current state or federal regulations and that chemicals of potential concern (COPCs) are not present in concentrations that would pose an unacceptable risk. Because of the proximity of the site to the Ridge Park Village Condominiums, a voluntary corrective action (VCA) was conducted to remove soils with elevated levels of uranium from the upper and lower bench areas of the site.

**NMED Comment**

2. *Page 3, second paragraph: LANL should clarify what the corresponding cancer risk level is equivalent to the 15 mrem/yr dose level.*

**LANL Response**

2. LANL wishes to clarify that, as stated in the *Risk-Based Corrective Action Process* and the Atomic Energy Act, DOE retains statutory authority for approving the methodology for performing radiological assessments and for evaluating the adequacy of recommendations regarding radionuclide cleanup levels. Nevertheless, LANL is committed to providing NMED a clear description of the methods and rationale used in radiological assessments.

LANL is aware that both EPA and NMED have issued statements relating annual dose rates and cancer risk. EPA has in several instances associated an annual dose rate of 15 mrem/yr for 30 yr with a lifetime excess cancer risk of approximately three in ten thousand (memorandum from Stephen D. Luftig, Director, Office of Emergency and Remedial Response, OSWER No. 9200.4-18, *Establishment of Cleanup Levels for CERCLA Sites with Radioactive Contamination*). NMED has associated a dose of 10 mrem/yr for 70 yr with a risk of fatal cancer, nonfatal cancer, and hereditary effects that "approaches  $10^{-3}$ " (memorandum from Benito J. Garcia, Hazardous and Radioactive Materials Bureau to Mr. Joseph Vozella, January 23, 1997).

LANL recognizes that dose-to-risk conversions such as those performed by EPA and NMED may be accomplished using risk factors and guidance provided in Publication 60 of the *International Commission on Radiological Protection*. However, at the present time, LANL has not formulated a policy for performing such calculations and presenting the results. As described in Chapter 10 of *Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A)*, Interim Final, (EPA 1989, ER ID Number 8021), cancer risk estimates for chemicals and radionuclides may employ potentially incompatible exposure and carcinogenicity models. For this reason, caution must be exercised when providing cancer risk estimates for both radionuclides and chemicals in ER Project reports because these estimates cannot be simply be summed without qualification. Cancer risk estimates for chemicals and radionuclides may employ potentially incompatible exposure and carcinogenicity models. For this reason, caution must be exercised when providing cancer risk estimates for both radionuclides and chemicals because these estimates cannot be simply summed without qualification.