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

January 13, 1998

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

Re: TA-19 Potential Release Sites RFI Report
Los Alamos National Laboratory (EPA ID# NM0890010515)

Dear Mr. Garcia:

The Environmental Protection Agency (EPA) has reviewed the RFI Report for Potential Release Sites (PRSs) 19-001, 19-003, and C-19-001 located in Technical Area (TA) 19 at Los Alamos National Laboratory (LANL). PRS 19-001 is a septic system, comprised of a tank, piping, and outfall, which handled wastes from a retreat building. PRS 19-003 consists of a sewer drainline and outfall which handled wastes from a laboratory. PRS C-19-001 is soil which was beneath former laboratory structures.

LANL wishes to ultimately transfer this property for residential use and has proposed these sites for No Further Action (NFA). Phase I investigative results of PRSs 19-001 and 19-003 show several contaminants present at levels which are orders of magnitude greater than risk-based screening levels. EPA believes these sites require further investigation to determine extent of contamination and may also require interim action. Phase I investigative results of PRS C-19-001 show low levels of semivolatile organic contamination; however, LANL only sampled soils downgradient to and outside the boundaries of PRS C-19-001. In order to accurately determine whether contamination exists at PRS C-19-001, EPA believes that the soil which defines PRS C-19-001 must be sampled in addition to downgradient areas.

EPA does not recommend NFA for any of these sites. A list of deficiencies is attached. Should you have any questions, please contact Mr. David Vanlandingham at (214) 665-2254.

Sincerely,

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

1587

List of Deficiencies
RFI Report for Technical Area 16 Potential Release Sites
Los Alamos National Laboratory (NM0890010515)

General Comments

1. Chromium concentrations, although always reported in the form of total Chromium, must always be considered to be in the hexavalent chromium form unless laboratory analysis proves justification for otherwise. The hexavalent chromium Screening Action Level (SAL) of 31mg/kg should also be used in subsequent screens and risk assessments.

2. The LANL document *Risk-Based Corrective Action Process* (LA-UR-96-2811)nor the Multiple-Chemical Evaluation (MCE) outlined in this document have been approved by the Administrative Authority. EPA believes that the misapplication of the MCE to phase I investigation results often eliminates contaminants of concern (COCs) from further investigation before the extent of contamination has been delineated. EPA believes that, after adequate site characterization, the simplest way to account for additive effects due to multiple constituents is to compare contaminant concentrations against respective SALs divided by 10.

3. The comparison of site data to industrial preliminary remediation goals (PRGs) in screening assessments is inappropriate. Screening assessments compare site data to background data and SALs under various scenarios of human health and ecological exposure. Furthermore, PRGs approved by EPA Region IX are not approved by Region VI.

A comparison to PRGs is not utilized in the screening assessment to determine contaminants of concern, but is utilized after the nature and extent of contaminants of concern have been delineated to serve as a point of comparison in the remedy management process. At that time, PRGs should be utilized at sites which only have one contaminant as the risk driver for clean-up.

4. The format of this report is inconsistent with all prior LANL RFI submittals and is confusing. EPA believes that each PRS should be discussed separately rather than organizing all findings primarily by contaminant type (inorganic, organic, radiologicals). Because the analytical data for each PRS is spread throughout the report, the reviewer must piecemeal tables together to understand the total contamination found at a site.

Specific Comments

5. 5.1.7.1 Evaluation of Organic Chemicals at PRS 19-001.

LANL should add Estimated Quantitation Limits (EQLs) for all constituents (organic, inorganic, and radiologicals) to summary tables. Comparison of analytical data to EQLs helps determine the uncertainty of sample results.

6. 5.1.4.1 Field Activities.

EPA requests that LANL submit the analytical results for the drainline pipe material, sample 0119-97-0001. Phase I characterization is not adequate to determine that PAH contamination in both PRS 19-001 and 19-003 is due to leaching of the pipe material. Results may also indicate that contamination was waste-borne since contamination is found at points of pipe linkage out of which waste may have leaked. LANL should also sample in areas below the former solid drainline where pipe linkage did not exist to provide evidence regarding the source of polycyclic aromatic hydrocarbon (PAH) contamination.

Regardless of the origin of the contamination found at both PRS 19-001 and PRS 19-003, a phase I investigation has determined that a contaminant release to the environment has occurred. PAH detects are several orders of magnitude above human health screening levels, and the extent of contamination should be determined before risk assessments are performed. The Workplan specifically states that "if levels above action levels are observed, phase II investigations may be required to support a baseline risk assessment and Corrective Measures Study (CMS) (page 5-146)." The fact that LANL wishes to transfer this property further emphasizes the need for thorough characterization. EPA believes that LANL should determine the vertical and lateral extent of contamination at PRS 19-001, PRS 19-003, and their respective outfall areas.

7. 5.1.9 Risk-Based Screening Assessment.

LANL should not make conclusions regarding risk after a phase I investigation. The nature and extent of contamination have not been adequately characterized at any of these Potential Release Sites.

8. 5.1.9.1 PRS 19-001

Residential land use should also be assumed for the outfall drainage area to provide a conservative estimate of risk at both PRS 19-001 and 19-003.

9. EPA believes that a thorough review of the provided risk assessments is ineffectual at this time, as LANL has not determined the extent of contamination at any of these Potential Release Sites. NMED may wish to review and comment on these risk assessments in order to prevent deficiencies with future LANL submittals.

10. 5.1.9.2 Human Health Risk Assessment for PRS 19-003 Mesa Slope

LANL states that "soil contamination relating to the battery disposal area of PRS 19-002 will be revisited and will include the outfall area previously identified as part of PRS 19-003 since the outfall COPCs are associated with batteries and not the drain line." If LANL wishes to omit the Mesa Slope from further site and risk characterization of PRS 19-003, then EPA recommends that LANL submit a permit modification request to transfer the Mesa Slope area from PRS 19-003 to PRS 19-002.

11. The RFI Workplan for Operable Unit 1071 makes provisions for determining "specific data requirements for source characterization in Phase I investigations" which include "contaminants in potential release areas (pages 5-146 and 5-150)." However, LANL has conducted Phase I sampling for PRS C-19-001 only in drainage channel sediments which are downgradient and outside the boundary of PRS C-19-001. Soil which actually defines PRS C-19-001 and exists within the boundaries of PRS C-19-001 may contain higher contaminant concentrations and may act as a continuing source of runoff contamination to those downgradient soils where contamination below SALs were found. EPA recommends that LANL take one surface and subsurface sample at the former location of each building which comprised PRS C-19-001.