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

JUN 17 1996

0122
TA-00

Dr. Ed Kelley, Director
Water and Waste Management Division
New Mexico Environment Department
P.O. Box 26110
Santa Fe, NM 87502

Dear Dr. Kelley:

On April 10, 1996, you submitted to this office a request for the U.S. Environmental Protection Agency's (EPA) position on the management of lead-contaminated soil at the Department of Energy (DOE) Los Alamos National Laboratory (LANL) solid waste management unit (SWMU) 0-016, the inactive firing range at Guaje Pines Cemetery. The following responses are based on our review of LANL's Draft Voluntary Corrective Action (VCA) Plan of March 1996 and discussions with you and DOE/LANL on May 28, 1996.

Your first question asks about the relationship of treatment (by dry soil sieving) to the issue of dilution. It is our understanding that dilution, in this case, was used as a preliminary step in a treatment train which used soil washing as the ultimate remedy. Dry sieving was not contemplated nor approved as an appropriate remedy in the original VCA. If LANL wishes to change the remedy, it should be required to demonstrate that the new remedy will be as effective as the original remedy in removing lead from the soil and achieving target cleanup levels (originally set at 500 parts per million [ppm] total lead in soil). We recommend that the New Mexico Environment Department (NMED) require LANL to provide NMED with data which demonstrates to your satisfaction that soil sieving can meet target levels. Once the soil is adequately treated, dilution will no longer be an issue.

Your second question concerns the relative merits of dry soil sieving when compared to soil washing. While the two methods share similarities, there are also significant differences. However, the real issue is whether dry sieving can achieve the same cleanup levels as soil washing. EPA is not so much concerned with which remedy is used as it is with the final results that can be achieved with whatever remedy is selected. We will not prohibit the use of dry sieving if LANL can achieve the target cleanup levels using this technique.

Your third question involves the use of the Toxicity Characteristic Leaching Procedure (TCLP) for testing soil to determine whether or not it is a hazardous waste. In preparation for soil washing, LANL mixed soil that was originally determined to be a hazardous waste with non-hazardous soil. In so doing,

the hazardous characteristic of the lead-contaminated soil was essentially diluted out by the large volumes of non-contaminated soil. It would be inappropriate to use the TCLP to make a hazardous waste determination on this mixed and untreated material as a prelude to disposal.

However, LANL intends to treat all of this material, and if dry sieving is chosen as the remedy, LANL will in effect generate "new" waste streams. TCLP would be the appropriate way to make a hazardous waste determination for these new streams. In this regard, LANL must use TCLP to test all of the new waste streams that will be generated from the dry sieving process which LANL plans to relocate or dispose. (At some point X-ray fluorescence [XRF] has been considered in lieu of TCLP. Based upon discussions with NMED and LANL, however, this is no longer being considered. We concur that the data thus far does not support the use of such a substitution.) In addition, since there is very little correlation between the results of TCLP and total lead concentrations in soil, material which will be placed at the active firing range (or other NMED-approved site) must also meet a risk-based standard (preferably 500 ppm).

The process designed to remove bullets will also remove large amounts of gravel and soil of similar size. LANL has stated that they intend to "recycle" this material. LANL may send this material off site for reclamation; however, this material would not meet the definition of scrap metal and will not qualify for the exclusion granted at 40 CFR 261.6(a)(3)(ii). Therefore, regardless of whether this material is disposed or reclaimed, it must be managed as hazardous waste.

Because of the way soil was mixed in preparation for soil washing, lead concentrations in the soil stored at Guaje Pines may now show extreme spatial variation. Therefore, it is imperative that LANL develop a sampling and analysis plan which will fully account for this variability and ensure complete and adequate treatment of the entire pile. We recommend that NMED secure from LANL a plan which meets this criterion.

We hope we have addressed your questions. If you need further information or have any questions concerning this letter, please have your staff call Dr. Joel Dougherty of my staff at (214) 665-2281.

Sincerely yours,

Samuel Coleman, P.E.
Director
Compliance Assurance and
Enforcement Division