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U.S. Department of Energy
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Date: April 28, 1999
Refer to: EM/ER:99-104

Mr. Benito Garcia
NMED-HRMB
P.O. Box 26110
Santa Fe, NM 87502

SUBJECT: TECHNOLOGY FEASIBILITY DEMONSTRATION ASSOCIATED WITH PRS 15-004(f)

Dear Mr. Garcia:

This letter provides a summary of the discussion on April 8, 1999, regarding Potential Release Site (PRS) 15-004(f) (E-F Site) between representatives of the New Mexico Environment Department Hazardous and Radioactive Materials Bureau (NMED-HRMB), the Department of Energy Los Alamos Area Office (DOE LAAO), and the Los Alamos National Laboratory Environmental Restoration (ER) Project. Per HRMB's direction, the ER Project will proceed with a technology feasibility demonstration using material from PRS 15-004(f), which is listed on Table A of the Hazardous and Solid Waste Amendments Module of the laboratory Hazardous Waste Facility Permit. The ER Project plans to determine the feasibility of using the Segmented Gate System (SGS) technology for remediation of firing sites that are contaminated with both uranium and high explosives. This innovative technology involves assaying material and sorting it into uranium-contaminated and non-contaminated (below a screening level) components. It has been successfully used at a PRS at Technical Area 33 to remediate uranium-contaminated material and to reduce the volume of generated radioactive waste.

A brief summary of the site-specific activities associated with the technology feasibility demonstration is provided below:

- Initially, 10 cubic yards of material to be processed during this demonstration will be screened by manual methods to remove oversize pieces (> 6 in.).
- Sorted material (< 6 in.) will then be prepared on-site using a high-production, portable sorting plant (Tornado Star). The use of the Tornado Star is required to sort material into defined size fractions to virtually eliminate the possibility of detonating pieces of High Explosives (HE). HE spot tests will be used to determine whether any safety issues remain.
- Once the material is determined to be nonexplosive, samples will be collected to ensure that Resource Conservation and Recovery Act hazardous waste will not be transported to and processed by the SGS plant (contract limitations do not allow the SGS plant to handle/process hazardous waste).



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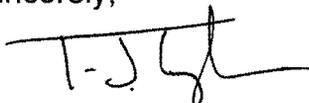
- The material will then be transported to the SGS plant, which will be situated within the boundary of PRS 33-007(b). It will be evenly distributed on a conveyor belt that will pass under two banks of radiation detectors that will map the contamination and separate material containing radioactivity (above 50 pCi/g).
- Subsequent to processing by the SGS, each of the segregated material streams will be sampled to evaluate the efficiency of the segregation process. Sampling results will also be used to determine the disposition of the material.

We appreciate your continued support in evaluating performance-based corrective actions and the opportunity to explore this technology to determine the feasibility of using it for remediation of other uranium- and HE-contaminated firing sites at our facility. If you have any questions, please call Dave McInroy at (505) 667-0819 or Joe Mose at (505) 667-5808.

Sincerely,


Julie A. Canepa, Program Manager
LANL/ER Project

Sincerely,


Theodore J. Taylor, Program Manager
DOE/LAO

JC/TT/VR/em

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