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Los Alamos National Laboratory/University of California
Environmental Stewardship (ENV)
Remediation Services (RS), MS M992
Los Alamos, New Mexico 87545
(505) 667-0808/FAX (505) 665-4747

National Nuclear Security Administration
Los Alamos Site Operations, MS A316
Environmental Restoration Program
Los Alamos, New Mexico 87544
(505) 667-7203/FAX (505) 665-4504

Date: April 13, 2005
Refer To: ER2005-0198

Mr. James Bearzi
NMED – Hazardous Waste Bureau
2905 Rodeo Park Drive East
Building 1
Santa Fe, NM 87505-6303



SUBJECT: AUTHORIZATION-BASIS REQUIREMENTS ASSOCIATED WITH INVESTIGATION AT MDA T

Dear Mr. Bearzi:

As requested by John Young of your staff, this letter provides further information in support of DOE/UC's proposed borehole locations for sampling soils to determine the nature and extent of contamination at MDA T.

MDA T is one of 10 potential release sites at Los Alamos National Laboratory categorized as a nuclear environmental site (NES) and is classified as a Nuclear Hazard Category 2 facility, in compliance with the Nuclear Safety Management regulations of 10 CFR 830 and DOE STD 1027-92, Change Notice No. 1, *Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Order 5480.23, Nuclear Safety Analysis Reports*. DOE issued a Safety Evaluation Report (SER) in February to allow characterization activities. Although the SER allows for characterization activities such as drilling, surveillance, and maintenance, these documents also place restrictions on any activities that are likely to intrude into waste-disposal units. Explicit within the SER is the restriction of subsurface investigations to small boreholes that will be located so that there is a high degree of certainty that they will not contact any disposal units.

Uncertainty and variability of the boundaries of the absorption beds and disposal shafts as well as the uncertainty of shafts variation for vertical, uncertainty of installation of perfectly vertical boreholes and the need to maintain a safe distance from the nuclear disposal units preclude drilling within 20 feet within the disposal shafts and within 10 feet of the absorption beds. The close spacing of individual shafts and shaft-absorption bed limits also precludes the installation of boreholes between these features. The drawings for MDA T, including those presented in the investigation work plan, are conceptual and do not represent "as-built" accuracy. Historic drawings of the absorption beds and disposal shafts at MDA T are construction drawings and do not represent the final as-built conditions. Records of the construction and installation of the absorption beds and disposal shafts are incomplete and provide locally conflicting information. The



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depth of the disposal shafts is uncertain and precludes consideration of drilling boreholes under the shaft field. For example, in 1996 during a RCRA Field Investigation, one of the shafts was penetrated by an angle borehole, even though calculations indicated that the angle hole would miss the shaft by 20 feet. If a similar occurrence should take place during the investigations of an NES, it is considered a Safety Basis violation and would result in a significant delay in completing the investigation.

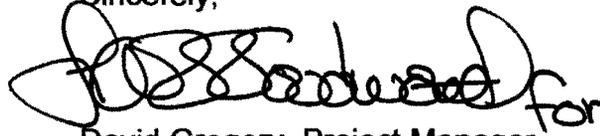
Thank you for allowing us the opportunity to clarify the reasoning behind our selection of sampling locations and how this rationale relates to federal safety-basis requirements. Our goal for this and other investigations is to provide all necessary information to choose and defend the selection of remedies or other appropriate actions.

Sincerely,



David McInroy, Deputy Project Director
Environmental Stewardship
Los Alamos National Laboratory

Sincerely,



David Gregory, Project Manager
Department of Energy
Los Alamos Site Offices

DM/DG/GLE/ds

Cy:

A. Dorries, ENV-ECR, MS M992
B. Criswell, ENV-RS MS M992
D. McInroy, ENV-RS, MS M992
R. Rager, ENV-ECR, MS M992
E. Rainey, ENV-ECR, MS M992
K. Rich, ENV-ECR, MS M992
D. Gregory, LASO, MS A316
L. Woodworth, LASO, MS A316
B. Rich, ADO MS A104
C. Voorhees, NMED-OB
J. Young, NMED-HWB
L. King, EPA Region 6
ENV-RS File, MS M992
IM-9, MS A150
RPF, MS M707