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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

July 12, 2016

Jody Pugh
Assistant Manager
National Security Missions
NNSA/Los Alamos Field Office
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Los Alamos, NM 87544

John McCann
Acting Division Leader
Environmental Protection & Compliance Division
Los Alamos National Laboratory
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Los Alamos, NM 87545

RE: RESPONSE
TRANSMITTAL OF FINALIZED TECHNICAL BASIS DOCUMENTATION
LOS ALAMOS NATIONAL LABORATORY
EPA ID #NM0890010515
HWB-16-MISC

Dear Ms. Pugh and Mr. McCann:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) and the Los Alamos National Security, LLC (LANS) (collectively, the Permittees) *Transmittal of Finalized Technical Basis Documentation* (Technical Basis) dated and received June 16, 2016, and referenced by EPC-DO-16-138, LA-UR-16-23438. The Technical Basis provides justification for the decision to not sample unremediated nitrate salt waste.

The Permittees originally proposed in the *Unremediated Nitrate Salt-Bearing (UNS) Sampling and Analysis Plan,* dated September 17, 2015, to sample one unremediated nitrate salt-bearing waste container per remediation year for solids and liquids. The Permittees proposed this sampling in response to the DOE Accident Investigation Board's (AIB) Report (*See Accident Investigation Report-Phase I, Radiological Release Event at the Waste Isolation Pilot Plan on February 14, 2014*) which cited failure to conduct adequate hazardous waste characterization as a contributing cause of the drum breach at the Waste Isolation Pilot Plan in February 2014, and

was also self-reported by the Permittees (*See Second Addendum ADESH-14-019/LA-UR-14-28034*) to be a contributing cause of the breached drum.

Since issuance of the DOE AIB Report and the Permittees' Second Addendum, the Permittees used their model, Waste Stream Analyzer to estimate the original constituents within the nitrate salt bearing waste stream, which was based on generator knowledge and limited sampling of solid nitrate salt-bearing waste, to produce surrogate waste samples. Surrogate waste testing included both bench-scale (impact, friction, thermal) and full-scale (thermal runaway, and effects of pressure) testing. Surrogate waste testing has also included mixing/blending tests, as well as stabilization tests. Based on the results of these studies, and at the recommendation of a peer review team the Permittees concluded that they "have demonstrated that our material is bounding, and that our understanding of the drum breach within the mine is adequate" and therefore "proposes to move forward without the execution of the UNS [unremediated nitrate salt-bearing] waste sampling plan". The Permittees have also expressed concern for worker safety during the sampling of UNS waste; in particular, the unnecessary radioactive exposure of workers repeatedly opening drums for sampling.

Although these studies and tests have provided additional information, the actual sampling of UNS waste, in particular UNS liquids, has not been performed. Sampling of this material would provide information on the leached metals and pH of the waste stream relevant to waste characterization. Additionally these samples may help to confirm the assumptions made in the Waste Stream Analyzer model, and the surrogate waste samples.

NMED concurs that the understanding of the nitrate salt-bearing waste stream has improved over time. However, NMED recommends that samples be collected. NMED recommends that six confirmatory solid samples be collected from remediated nitrate salt-bearing waste containers (including sister drum # 68685) and the liquid samples be collected from two UNS containers during treatment when the containers are opened within the glovebox and the waste is accessible. This will avoid unnecessary exposure to workers and confirm assumptions made regarding the composition of UNS waste.

Should you have any questions, please contact Siona Briley, of my staff, at (505) 476-6049.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
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File: LANL-2016. Nitrate Salt-Bearing Waste Technical Basis, June 2016.