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Hazardous Waste Bureau

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DAVE MARTIN
Cabinet Secretary

BUTCH TONGATE
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 14, 2011

George J. Rael, Assistant Manager
Environmental Projects Office
Department of Energy / National
Nuclear Security Administration
Los Alamos Site Office
Los Alamos, NM 87544

Michael J. Graham, Associate Director
Environmental Programs
Los Alamos National Security, LLC
P.O. Box 1663, MS M991
Los Alamos, NM 87545

**RE: APPROVAL WITH MODIFICATION
BANDELIER TUFF UNIT 4 (QBT 4) BACKGROUND STUDY REPORT
LOS ALAMOS NATIONAL LABORATORY
EPA ID #NM0890010515
HWB-LANL-11-069**

Dear Messrs. Rael and Graham:

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) *Bandelier Tuff Unit 4 Background Study Report*, dated September 2011 (referenced by LA-UR-11-5179/EP2011-0286) and the response to NMED's Notice of Disapproval, dated November 29, 2011 (referenced by EP2011-0351). NMED hereby issues this notice of approval with modification for the Report.

The *Phase II Investigation Work Plan for Sites at Technical Area 49 Inside the Nuclear Environmental Site Boundary (IWP)* proposes to collect ten samples from locations where some detections of inorganic chemicals were elevated in samples collected during 2009-2010 investigations. The constituents were determined to be naturally occurring. The Permittees propose to collect samples to determine if there is evidence of weathering of Qbt 4 and this data

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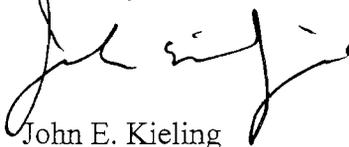


will be used to determine if elevated detections of inorganic chemicals can be attributed to background values (BVs).

The Permittees must provide details on how varying stages and degrees of weathering (as this can be very subjective) will be measured for this event. The Permittees must also provide justification that results from a sample set of ten would be sufficient to support their conclusion. Further, provide information on how the results will be used to either accept or reject the hypothesis that weathering is the cause of elevated detections of inorganic chemicals in Qbt 4, and explain whether soil BVs will be used instead of Qbt BVs.

The Phase II investigation report for sites at TA-49 inside the nuclear environmental site boundary is due to NMED by September 30, 2014. The Permittees must submit this supplemental information for NMED's approval by **January 30, 2014**, prior to implementing the IWP. Please contact Neelam Dhawan of my staff at (505) 476-6042 should you have any questions.

Sincerely,



John E. Kieling
Acting Chief
Hazardous Waste Bureau

cc: J. Kieling, NMED HWB
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File: LANL, Background Study Report for Bandelier Tuff Unit Qbt 4, 2011
LANL-11-069