



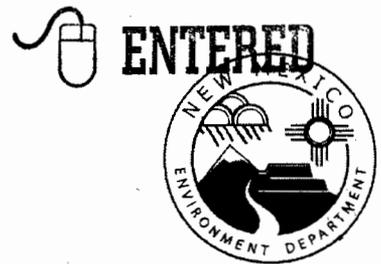
SUSANA MARTINEZ  
Governor

JOHN A. SANCHEZ  
Lieutenant Governor

21  
NEW MEXICO  
ENVIRONMENT DEPARTMENT

*Hazardous Waste Bureau*

2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6303  
Phone (505) 476-6000 Fax (505) 476-6030  
[www.nmenv.state.nm.us](http://www.nmenv.state.nm.us)



DAVE MARTIN  
Secretary

BUTCH TONGATE  
Deputy Secretary

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

March 30, 2012

Peter Maggiore  
Assistant Manager, Env. Projects Office  
Los Alamos Site Office, DOE  
3747 West Jemez Rd, MS A316  
Los Alamos, NM 87544

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

**RE: APPROVAL WITH MODIFICATION  
COMPLETION REPORT FOR REGIONAL AQUIFER WELL R-64  
LOS ALAMOS NATIONAL LABORATORY  
EPA ID#NM0890010515  
HWB-LANL-11-090**

Dear Messrs Maggiore and Graham:

The New Mexico Environment Department (NMED) is in receipt of the United States Department of Energy (DOE) and Los Alamos National Security, L.L.C.'s (collectively, the Permittees) document entitled *Completion Report for Regional Aquifer Well R-64* (Report) dated December, 2011 and referenced by EP2011-0334. NMED has reviewed the Permittees' Report and hereby approves the Report with the following modification.

Purge water extracted in excess of six casing volumes from R-64 during the last two sampling events, conducted on December 8, 2011 and March 26, 2012, contained significant amounts of fine-grained solid material. An aliquot of the solid material collected during the December sampling event was analyzed by the Permittees using x-ray diffraction. X-ray analysis indicated that the solid material was bentonite, indicative of backfill-sealant material used at R-64 (David T. Vaniman e-mail correspondence dated December 21, 2011). The contact between the top of the lower bentonite seal and the bottom of the 10/20 silica filter pack is located at 1310.8 ft below ground surface (bgs). The base of the screen is set at 1305.5 ft (bgs) or a distance of 5.3 ft from the top of the lower bentonite seal. A finer-grained (e.g., 20/40) sand interval was not emplaced at the



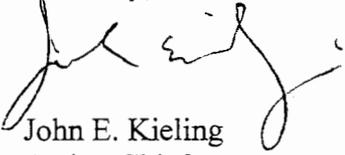
Messrs. Maggiore and Graham  
March 30, 2012  
Page 2

base of the filter pack. It is probable that bentonite from the lower seal is infiltrating into the screened interval during well purging.

The presence of bentonite sealant in groundwater withdrawn from R-64 indicates that the integrity of well is compromised. Therefore, the Permittees must conduct corrective actions at R-64 in order to repair the well. A corrective-action work plan containing proposed actions to rehabilitate the well must be submitted to NMED by **May 31, 2012**.

Please contact Michael Dale at (505) 661-2673 if you have questions.

Sincerely,



John E. Kieling  
Acting Chief  
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB  
N. Dhawan, NMED HWB  
B. Wear, NMED HWB  
J. Kulis, NMED HWB  
M. Dale, NMED HWB  
T. Skibitski, NMED DOE OB  
J. Schoeppner, NMED GWQB  
S. Yanicak, NMED DOE OB, MS M894  
L. King, EPA 6PD-N  
C. Douglas, EP-CAP, MS M996  
H. Shen, DOE-LASO, MS A316

File: Reading and LANL 2012 – Approval R-64 Well Completion Report