



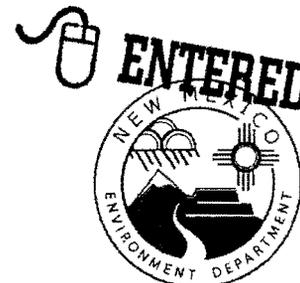
SUSANA MARTINEZ  
Governor

JOHN A. SANCHEZ  
Lieutenant Governor

14  
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

RAJ SOLOMON, P.E.  
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

May 25, 2011

George J. Rael, Assistant Manager  
U.S. Department of Energy  
National Nuclear Security Administration  
Los Alamos Site Office  
3747 West Jemez Rd, MSA316  
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 MODIFICATIONS  
RELIABILITY ASSESSMENT FOR WELL R-47i  
LOS ALAMOS NATIONAL LABORATORY  
EPA ID#NM0890010515  
HWB-LANL-11-029**

Dear Messrs. Rael and Graham:

The New Mexico Environment Department (NMED) has reviewed the United States Department of Energy (DOE) and Los Alamos National Security, L.L.C.'s (collectively, the Permittees) document entitled *Reliability Assessment for Well R-47i* (Assessment) dated March 2011 and referenced by EP2011-0018. The Assessment was submitted in response to NMED's Approval with Direction for the *Completion Report for Intermediate Aquifer Well R-47i*, dated July 2, 2010. The approval required the performance of a reliability assessment for well R-47i. NMED has reviewed the Assessment and hereby issues this Approval with the following comments and modifications.

1. As part of the reliability assessment, analytical results and field data from four sampling events at intermediate well R-47i were used to determine the representativeness of groundwater samples obtained from the well. The determination was based on comparing data from R-47i with analytical results

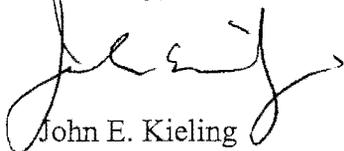


compiled from background wells completed in the Puye Formation and the Cerro Toledo interval. Well R-26 screen 1 was one of the background wells used in the Assessment. The well was equipped with a no-purge sampling system when data were collected that were subsequently used for comparison in the Assessment. The no-purge sampling system at R-26 screen 1 was recently removed and will be replaced with an active purge sampling system. Samples and associated analytical results obtained from the no-purge system at R-26 screen 1 may not be reliable or representative of background groundwater conditions. The no-purge data from R-26 screen 1 must not be used as part of the background comparison data set for assessing the representativeness of samples obtained from intermediate or regional aquifer monitoring wells in the future.

2. For future sampling events at R-47i, the Permittees must continue purging the well if dissolved oxygen concentrations are either increasing or decreasing along a general gradient or trend. Once the dissolved oxygen measurements are stable and do not indicate an increasing or decreasing trend, then samples may be collected assuming all other water quality stability requirements are satisfied.
3. Generally, NMED agrees with the assessment methodology for determining the representativeness of groundwater samples collected at R-47i, as presented in Assessment Section 3.1. However, some refinement of the methodology may be required prior to assessing the reliability of additional groundwater monitoring wells at the Facility based on data acquired during future monitoring and testing.

No revision of this Assessment is necessary. Please contact Michael Dale at (505) 661-2673 if you have any questions.

Sincerely,



John E. Kieling  
Acting Chief  
Hazardous Waste Bureau

Messrs. Rael and Graham  
May 25, 2011  
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cc: D. Cobrain, NMED HWB  
M. Dale, NMED HWB  
N. Dhawan, NMED HWB  
J. Kulis, NMED HWB  
T. Skibitski, NMED DOE OB  
S. Yanicak, NMED DOE OB, MS M894  
B. Olson, NMED GWQB  
L. King, EPA 6PD-N  
D. Hickmott, EES-DO, MS D462  
S. Paris, EP-CAP, MS M992  
J. McCann, EP-CAP, MS M992  
W. Woodworth, DOE-LASO, MS 316  
H. Shen, DOE-LASO, MS A316

File: Reading and LANL 2011 – R-47i Reliability Assessment