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NEW MEXICO ENVIRONMENT DEPARTMENT



Hazardous Waste Bureau

BILL RICHARDSON Governor

2905 Rodeo Park Drive East, Building 1 Santa Fe, New Mexico 87505-6303

RON CURRY Secretary

DIANE DENISH Lieutenant Governor

Phone (505) 476-6000 Fax (505) 476-6030

JON GOLDSTEIN Deputy Secretary

www.nmenv.state.nm.us

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

May 15, 2009

David Gregory Project Director, Environmental Operations Los Alamos Site Office, Department of Energy 3747 West Jemez Road, Mail Stop A316 Los Alamos, NM 87544

David McInroy Remediation Services Deputy Project Director Los Alamos National Laboratory P.O. Box 1663, MS M992 Los Alamos, NM 87545

RE: APPROVAL WITH MODIFICATION WORK PLAN FOR R-22 WELL REDEVELOPMENT, PHASE 1 EPA ID #NM0890010515 HWB-LANL-MISC-GW

Dear Messrs. Gregory and Graham:

The New Mexico Environment Department (NMED) is in receipt of the United States Department of Energy and Los Alamos National Security, LLC (collectively, the Permittees) document entitled Fieldwork Plan for R-22 Well Redevelopment, Phase 1 (hereafter, the Request) dated April 27, 2009 and referenced by EP2009-0171.

NMED has reviewed the Request and hereby issues this Approval with the following modifications. If the Permittees fail to implement the modifications, the approval for this document will be automatically rescinded.

- A. Permittees did not specify the volume of water that will be removed from screen 5 during purging and sampling of that screen; however, the information provided in Table 2.3.1 of the Request implies that the purging time of screen 5 might be as short as 21 hours (total 25 samples collected, with 4 samples collected during the first hour, 2 samples during the second hour, and the remaining 19 samples collected hourly). This is inconsistent with the previous submittal from the Permittees regarding rehabilitation of R-22 (Fieldwork Plan for R-22 Well Rehabilitation and Conversion, dated January 30, 2009, EP2009-0014), in which the Permittees proposed to pump screen 5 for 60 hours, with 18,000



gallons of water removed. In order to assure that enough water is removed from screen 5 to account for interflow from other screens, and to increase the likelihood that fresh formation water is sampled, the Permittees must remove from screen 5 the volume of water that is the greater of the following:

1. the volume calculated by the Permittees in accordance with the methodology described in Section 2.3 of the Request, or
  2. 18,000 gallons, plus an additional 1,000 gallons for each day when screen 5 was not fully sealed from screens above it.
- B. Based on calculations of interflow between different screens of well R-22 presented in *Fieldwork Plan for R-22 Well Rehabilitation and Conversion*, dated January 30, 2009, EP2009-0014, close to 1,200 gallons per day might be produced from screens 1 and 2, and flow into screens below them, when the screens are in communication. Therefore, following specific capacity testing, and before installation of isolation packers between screens, the Permittees must remove from the open well a minimum of 1,200 gallons of water for each day when screens 1 and 2 were not fully sealed from screens below them.
- C. During any pumping event at R-22, and during a minimum three hours following each such event, the Permittees must measure and record water levels in all screens in the regional wells R-39 and R-41 at the frequency of at least every 30 minutes.
- D. The Permittees shall collect water samples from screens 1 and 5 at frequencies specified in Table 2.3.1 of the Request. However, the Permittees must utilize information from field parameter measurements to make a final selection of samples that will be sent for laboratory analyses. The remaining samples must be stored until the expiration of their holding times or the completion of R-22 redevelopment, whichever comes first.
- E. At the conclusion of the purging and sampling event at screen 5, the Permittees must collect from screen 5 several large-volume non-preserved and preserved, filtered and non-filtered water samples for archival purposes.

Should you have any questions, please contact Jerzy Kulis of my staff at (505) 476-6039.

Sincerely,



James P. Bearzi

Chief

Hazardous Waste Bureau

Messrs. Gregory and Graham  
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cc: D. Cobrain, NMED HWB  
M. Dale, NMED HWB  
T. Skibitski, NMED DOE OB  
S. Yanicak, NMED DOE OB, MS J993  
B. Olson, NMED GWQB  
L. King, EPA 6PD-N  
G. Rael, DOE LASO, MS A316  
D. Katzman, EP-LWSP, MS M992  
P. Huber, EP-LWSP, MS M992  
H. Shen, DOE LASO, MS A316

file: Reading and LANL General (Groundwater General)