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received 3/5/07 by [unclear]  
for HAW.



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**State of New Mexico  
ENVIRONMENT DEPARTMENT**

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**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

March 5, 2007

David Gregory  
Federal Project Director  
Los Alamos Site Office, Department of Energy  
528 35<sup>th</sup> Street, Mail Stop A316  
Los Alamos, NM 87544

David McInroy  
Remediation Services Deputy Project Director  
Los Alamos National Laboratory  
P.O. Box 1663, Mail Stop A100  
Los Alamos, NM 87545

**RE: APPROVAL WITH DIRECTION FOR THE ADDENDUM TO THE WORK PLAN  
FOR SANDIA CANYON AND CAÑADA DEL BUEY  
EPA ID #NM0890010515  
HWB-LANL-06-027**

Dear Messrs. Johansen and McInroy:

The New Mexico Environment Department (NMED) is in receipt of the United States Department of Energy (DOE) and Los Alamos National Security, LLC (collectively, the Permittees) document entitled *Addendum to the Work Plan for Sandia Canyon and Cañada del Buey* (hereafter, the Work Plan) dated January 30, 2007 and referenced by LA-UR-99-3610. NMED has reviewed the Work Plan and hereby issues this notice of approval with the modifications outlined below.

1. In the Scope of *Sediment Investigation (modified)*, the *Work Description* states "In addition to total chromium, chromium(VI), and other metals, analyses would include iron(II), manganese(IV), phosphorus, total nitrogen, sulfate, sulfur, and total organic and inorganic carbon." Two redox indicators, including nitrate and sulfide, are not included as monitoring parameters. Nitrate provides an important line of evidence indicating the change of the redox conditions in the sediment,



while sulfide provides critical redox information to evaluate the behavior and fate of chromium in the wetland. Therefore, the Permittees must add nitrate and sulfide as additional monitoring parameters in the Work Plan. Nitrate and sulfide may be used as substitutes for total nitrogen and sulfur which are currently listed in the Work Plan.

2. In the Scope of *Surface Water and Groundwater Sampling (modified)*, the Permittees must collect sediment samples for stable chromium isotope analysis at locations where surface water samples will be collected, including E121, E122, adjacent to SCA-1, E123, at new temporary gage station, E123.5, E1FW, E1E, and E200. Reduction of hexavalent chromium in the surface water would most likely occur in the sediments. The chromium isotope fractionation (i.e., the chemical fingerprint) is more likely to be preserved in sediments than in the surface water.
3. To perform the R-28 testing, it is estimated that a total volume of 9000 gallons of water will be pumped to the ground surface based on the information provided in the Work Plan. It is very likely that the purge water could contain chromium at a concentration high enough to restrict disposal without pretreatment. The Permittees therefore must prepare a plan as part of the Work Plan either to dispose of the purge water at a certified wastewater treatment plant or conduct on-site treatment first followed by disposal according to the procedures and requirements specified in the *Notice of Intent for the Drilling, Development, Rehabilitation, and Sampling Purge Water*.

The Permittees must incorporate the above comments into the Work Plan and submit a revised Work Plan to NMED for record within 30 days of receipt of this letter. If the Permittees fail to comply with the requirements specified in this letter, the approval for the Work Plan will be automatically rescinded.

The Permittees proposed submittal dates for the documents listed below in the cover letter for the Work Plan. With approval of this Work Plan, NMED also approves of the submittal schedule listed below.

- Phase 1 Sandia Canyon Sediment Investigation Report, no later than September 14, 2007
- Fate and Transport Report, no later than September 14, 2007
- R-35 Status Report, no later than September 14, 2007
- Sandia Canyon Investigation Report, no later than December 15, 2008

Messrs. Gregory and McInroy

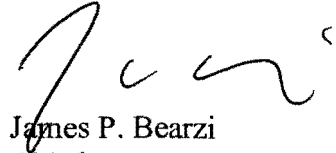
Approval with Direction -- Addendum to WP for SC and CdB

March 5, 2007

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Should you have any questions or comments, please contact Hai Shen at (505) 476-6039 or John Young at (505) 476-6038.

Sincerely,



James P. Bearzi

Chief

Hazardous Waste Bureau

JPB:hs

cc: D. Cobrain, NMED HWB  
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file: Reading and LANL General (Groundwater, IMIR for Cr, Sandia Canyon and Cañada del Buey)