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NEW MEXICO  
ENVIRONMENT DEPARTMENT

*Hazardous Waste Bureau*

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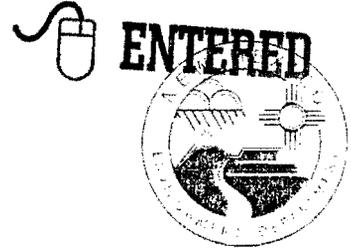
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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

May 5, 2009

David Gregory, Federal Project Director  
Department of Energy  
Los Alamos Site Office  
3747 West Jemez Road, Mail Stop A316  
Los Alamos, New Mexico, 87544

David McInroy  
Remediation Services Deputy Director  
Los Alamos National Security, LLC  
P.O. Box 1663, Mail Stop J591  
Los Alamos, New Mexico 87545

RE: APPROVAL WITH MODIFICATIONS  
LOS ALAMOS SITE MONITORING AREA 2 (LA-SMA-2)  
INTERIM MEASURE AND MONITORING PLAN TO MITIGATE  
CONTAMINATED SEDIMENT TRANSPORT IN LOS ALAMOS CANYON  
LOS ALAMOS NATIONAL LABORATORY  
EPA ID# NM0890010515  
LANL-HWB-08-004

Dear Messrs. Gregory and McInroy:

The New Mexico Environment Department (NMED) is in receipt of the Los Alamos National Security, L.L.C. and U.S. Department of Energy (the Permittees) document entitled *Los Alamos Site Monitoring Area 2 Interim Measure and Monitoring Plan* (IMP) dated November 2008 and referenced by LA-UR-08-6891/EP2008-0578. The IMP was submitted as part of a response to NMED's August 30, 2007 Approval with Direction (Approval) for the *Los Alamos and Pueblo Canyons Supplemental Investigation Report* dated December 2005 (LA-UR-05-9230/EP2005-0893). The Approval required the Permittees to control the migration of polychlorinated biphenyls (PCBs) from the drainages above Los Alamos Site Monitoring Area 2 (LA-SMA-2) and to identify the source of PCBs.

The Approval required the installation of a low-head weir in Los Alamos Canyon below its confluence with DP Canyon to capture contaminants from both canyons. The Permittees are



installing a grade control structure in DP Canyon in 2009 that is anticipated to reduce contaminant migration to Los Alamos Canyon from DP Canyon. This proposed action modifies the current requirement for construction of a low-head weir in Los Alamos Canyon but does not address the contribution of contamination to Los Alamos Canyon from the drainage above LA-SMA-2. The Permittees submitted the IMP to address contaminant migration from the drainage associated with LA-SMA-2. NMED hereby issues this Approval of the IMP with the following modifications.

The approach presented in the IMP includes an initial phase of surface water monitoring at the top of the LA-SMA-2 drainage and moving the LA-SMA-2 surface water sampling station to below an area of sediment deposition at the bottom of the drainage. The new location of the LA-SMA-2 monitoring station is proposed to be directly upstream of the 24-inch culvert that crosses beneath Omega Road. The area of sediment deposition is currently enhanced by the presence of juniper bales intended to decrease surface water flow velocities. The culvert ultimately discharges surface water to the main Los Alamos Canyon stream channel. Sampling of the drainage is proposed to be included as part of a larger investigation in the *Investigation Work plan for Upper Los Alamos Canyon Aggregate Area* (LANL 2006. 091016). The proposed approach does not meet the requirement to mitigate contaminant migration required by NMED's 2007 Approval with Direction. The Permittees must therefore conduct the following actions to mitigate contaminant migration to and within Los Alamos Canyon from the drainage above LA-SMA-2.

**1. Source Removal**

The Permittees must remove contaminated sediments in all areas of sediment accumulation from the drainage below SWMU-01-001(f). The Permittees must collect samples from the limits of each excavation to demonstrate that the soil cleanup levels established for PCBs in Section VIII.B.1.a of the March 1, 2005 Consent Order (Order) are achieved. No less than one sample from each excavated area and a minimum of one sample for every 100 square feet must be collected from the limits of each excavation and submitted to a laboratory for analysis of PCBs to confirm that all PCB-contaminated material has been removed from the drainage.

**2. Prevention Contaminant Migration from Above the LA-SMA-2 Drainage**

The Permittees must take all measures necessary to prevent contaminants from the mesa top from migrating into the drainage below SWMU-01-001(f). These measures must include prevention of contaminant transport from the portions of SWMU-01-001(f) that have not yet been addressed through Upper Los Alamos Canyon Aggregate Area work otherwise approved by NMED.

**3. Construction of Surface Water Retention Ponds**

In order to prevent future migration of contamination originating from the catchment above the LA-SMA-2 drainage, the Permittees must improve the area of surface water retention and sediment deposition at the base of the drainage where the juniper bales are currently located.

Two connected surface water retention basins must be constructed to depths of approximately four feet below the ground surface at the locations depicted in Figure 1.0-1 of the IMP. The spillway from the upper (westernmost) basin must be at an elevation sufficient to allow surface water to pond for a distance of approximately 150 feet upstream of the discharge from the drainage. In addition, the juniper bales must be covered with geotextile fabric to enhance their ability to trap fine-grained sediments.

#### 4. Remediation Waste Disposal

The Permittees shall characterize all waste generated during the removal actions in the drainage and construction of the surface water retention ponds for the presence of Target Analyte List metals, volatile organic compounds, semi-volatile organic compounds, PCBs and radionuclides for disposal at an appropriate disposal facility.

#### 5. Schedule

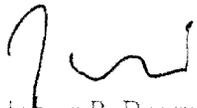
The schedule for submittals required by this letter is listed below.

- a. The improvements to the surface water retention structures and construction of the monitoring stations must be completed no later than **August 1, 2009**.
- b. Documentation that the construction of the retention structures, enhancements to the juniper bales and emplacement of the monitoring must be submitted to NMED by **September 1, 2009**.
- c. Removal of the contaminated sediments from the drainage below SWMU-01-001(f) must be completed by **December 31, 2009**.
- d. A report summarizing the results of the sediment removal, sampling, and waste disposal activities must be submitted to NMED by **May 1, 2010**.

Messrs. Gregory and McInroy  
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May 5, 2009

Please contact Dave Cobrain of my staff at (505) 476-6055 if you have questions.

Sincerely,



James P. Bearzi  
Chief  
Hazardous Waste Bureau

JPB:dc

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file: Reading and LANL General (Los Alamos and Pueblo Canyons, Surface Water)