

TA09

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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

March 28, 2007

David Gregory, Federal Project Director
Department of Energy
Los Alamos Site Office
528 35th Street, Mail Stop A316
Los Alamos, New Mexico 87544

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

RE: APPROVAL WITH MODIFICATIONS
SOUTH CANYONS INVESTIGATION WORK PLAN
LOS ALAMOS NATIONAL LABORATORY, NM0890010515
HWB-LANL-06-0 18

Dear Messrs. Gregory and McInroy:

The New Mexico Environment Department (NMED) is in receipt of the United States Department of Energy and the Los Alamos National Security, LLC's (collectively, the "Permittees") document entitled *Response to the "Notice of Disapproval, South Canyons Investigation Work Plan*, dated March - 2007 and referenced by LA-UR -07 -17 45/EP2007 - 0159 (Response). NMED has reviewed this Response and hereby approves this document as modified below. As part of this approval, NMED also approves the *South Canyons Investigation Work Plan*, dated September 2006 and referenced by LA-UR-06-8979/EP2006-0777.

1. As part of their response to NMED comment #2, the Permittees recognize that major changes to the channels and floodplains may have occurred from recent (this past summer) flood events. As part of the Phase 1 sediment sampling report, the Permittees must provide a map depicting the reaches sampled and indicate sampling locations from the recently-deposited floodplain sediment.



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2. As part of their response to NMED comment #3, the Permittees propose adding the following reaches as part of the Phase 2 sampling rather than including the reaches as part of the Phase 1, as required by NMED: 1) Fishladder Canyon above the confluence with Canon de Valle; 2) in Fence Canyon above highway SR4; and 3) in Potrillo Canyon above highway SR4. The Permittees must add the reach in Fishladder Canyon to determine its contaminant contribution before potential dilution of water and contaminants from Canon de Valle. A previous investigation and remediation in Fishladder Canyon has already shown there to be a contaminant release above established site-specific cleanup levels. The Permittees must add the reaches in Potrillo and Fence canyons to determine if contaminants are migrating beyond the Facility boundary at these points. These reaches may contain contamination that has already migrated downstream of contaminant sources and the other identified reaches.

3. As part of their response to NMED comment #4, the Permittees did not provide all of the requested information. NMED questioned the use of radiological field screening as a useful tool during this investigation. In their response, the Permittees decided against using field screening to select samples during the sediment investigation based on prior experience. NMED concurs with the Permittees decision not to use radiological field screening; however, the Permittees failed to discuss how samples will be selected if not based on field screening. The Permittees state that "[a]ny field screening that is conducted will be conducted in accordance with Section IX.B.2.d of the Consent Order" but fail to specify what field screening methods would be used. The Permittees also state that "[t]he potential utility of field screening methods in Phase 2 investigations will be considered part of the evaluation of the Phase 1 analytical data" unless concentrations are "too low" for field screening to be useful. NMED does not concur with this proposal. The Permittees will evaluate Phase 1 data as indicated in NMED comment #5 of the notice of disapproval. In addition, it is not clear what the Permittees mean by "too low".

As requested in NMED comment #4, the Permittees were to "provide more specific information on sample numbers and decision criteria used to increase or decrease sample numbers." In their response, the Permittees provided a seemingly arbitrary number of samples, the basis for which was not provided. In addition, the decision criteria to be used to increase or decrease sample numbers, if needed, were also not provided.

Because of the inadequacy of the Permittees' response to NMED comment #4, the Permittees must include the following elements as part of its sediment investigation:

- The Permittees must identify stratigraphic units within each geomorphic unit. The Permittees must determine an adequate number of representative samples to collect from each stratigraphic unit based on volume and suspected or known contaminant levels. The Permittees may view ten samples as an initial estimate of samples that will be collected and that may be modified by the field team once the geomorphic survey is

complete. The Permittees must provide the results of the geomorphic survey, along with the thicknesses of each unit, in the Phase 1 sediment summary report.

- The Permittees must collect discrete samples from variable depths, depending on the thickness and variability of the geomorphic unit.
- The Permittees must perform sampling of pre-1942 sediments to determine potential contaminant transport pathways.
- The Permittees must survey each sample location.
- The Permittees must provide justification for all sampling decisions in the report summarizing this phase of work.

Also as part of their response to comment #4, the Permittees propose that the sediment sampling procedures described in Section IX.B.2.b.iii of the Consent Order not apply to this investigation. Because the Permittees are not drilling boreholes to collect samples, NMED concurs that the requirements for sampling during drilling do not apply. However, the remaining requirements for sampling conducted without the use of drilling methods will still apply.

4. In the response to NMED comment #7, the Permittees agree to provide brief descriptions of "all SOPs listed on p. 18" of the Work Plan. The Permittees must also include brief descriptions of any "additional procedures" that may be added "as necessary to describe and document quality-affecting activities." NMED believes it is inappropriate to identify "additional procedures" during rather than prior to an investigation. In addition, NMED must approve any procedures followed prior to the start of an investigation.
5. Even though the South Canyons Investigation Report is not due to be submitted until 2011, the Permittees must complete the installation of all intermediate and regional groundwater monitoring wells associated with this work plan no later than March 31, 2008 to support decisions for the South Canyons and corrective measures at SWMU 16-021(c) and other sites at TA-16.

The Permittees must address the modifications required in this approval and provide the rationale for all sampling activities listed in Items 1 through 3 of this letter in the Investigation Reports for the South Canyons. Noncompliance with the modifications outlined in this letter and in the Response may result in automatic rescission of the Work Plan approval and potentially subject the Permittees to an enforcement action. Furthermore, the Permittees shall not respond to comments in an approval with modifications unless NMED specifically requires a response, in which case the response must be limited to only those required by NMED. All submittals must be in the form of two paper copies and one electronic copy in accordance with section XI.A of the Consent Order.

Messrs. Gregory and McInroy

March 29, 2007

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Should you have any questions regarding this letter, please contact Darlene Goering of my staff at (505) 476-6042.

Sincerely,



James Bearzi

Chief

Hazardous Waste Bureau

JPB:dg

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