



Department of Energy

Albuquerque Operations Office
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Los Alamos, New Mexico 87544

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When
Replying

Refer to: LAAMEO:BK:003

John Kieling
New Mexico Environment Department (NMED)
Hazardous and Radioactive Materials Bureau (HRMB)
2044 Galisteo
PO Box 26110
Santa Fe, NM 87502

RE: Task III Matrix and Proposed Modification to Module VIII of Los Alamos National Laboratory (LANL) RCRA Permit

Dear Mr. Kieling,

We are writing to provide you with a matrix which references applicable portions of the *Hydrogeologic Workplan*, submitted to NMED on December 6, 1997, with Task III.A.1&2, Module VIII, of the LANL RCRA Permit. The matrix is provided pursuant to requests you presented during meetings held to discuss the Class I Permit Modification to Module VIII which NMED intends to prepare in the near future.

As previously explained in our letter to Teri Davis, dated October 20, 1997, the *Hydrogeologic Workplan* is an umbrella document and integrating support for many other ER investigations, for instance, the Canyons Core Document, the Canyons Workplans and other RFI Workplans. These other investigations will implement in detail many of the Task III requirements in Module VIII. Therefore, the matrix which we are providing for information purposes only should not be considered a complete listing of investigations which will address Task III.A.1&2. In fact, Appendix IV of the *Hydrogeologic Workplan*, which provides the output of the DQO process, should be used as a supplement to the matrix we have attached.

In addition, please let us explain that interpretation of the attached matrix should be approached with flexibility due to the iterative approach upon which the *Hydrogeologic Workplan* has been developed. This approach allows for annual re-evaluation of the planning included in the document as newly obtained information and existing studies are integrated into the site-wide hydrogeologic conceptual model. Incorporation of the attached matrix into Module VIII would serve to potentially limit the technical and logistical flexibility that is required to implement the iterative approach. Instead, we continue to recommend the language we proposed for the modification provided to you in our letter to Teri Davis, October 20, 1997.



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We look forward to reviewing the draft language for the Class I Permit Modification. If you have any questions regarding this matrix, please call Dave Broxton at 667-2492 or Bonnie Koch at 665-7202.

Sincerely,



Bonnie Koch
DOE Ground Water Investigations
Office of Environment

Enclosure

cc w/o enclosure:

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<u>TASK III, A</u>	<u>Environmental Setting</u>	<u>Hydrogeologic Workplan</u>
<u>Task III, A1</u>	<u>Hydrogeology</u>	
Task III, A1a	Regional and Facility Geologic and Hydrologic Characteristics	Sec. 2.1.2; 2.1.3; 2.2; 3.3.2; 4.2.2.1
Task III, A1b	Analysis of Topographic Features Affecting Groundwater Flow	Sec. 2.1.3.1; 2.2.1; 2.2.2; 3.2.1 (3); 4.3.1.4
Task III, A1c	Analysis of Fractures Addressing Tectonic vs. Cooling Trends	
Task III, A1d	Description of Hydrogeologic Units as Migration Pathways	Sec. 2.2; 3.2.1 (3); 3.2.1 (4); 4.2.2.1; 3.2.1 (12); 3.3.2
Task III, A1e(i)	Extent of Hydrogeologic Units: Sand and Gravel Deposits	Sec. 2.2; 3.2.1 (3); 3.2.1 (5); 4.2.2.1
Task III, A1e(ii)	Extent of Hydrogeologic Units: Zones of Fracturing or Channeling	Sec. 2.2; 3.2.1 (3); 4.1.3 c
Task III, A1e(iii)	Extent of Hydrogeologic Units: Zones of High Permeability or Low Permeability	Sec. 2.2; 3.2.1 (3); 3.2.1 (4); 3.2.1 (12); 3.3.2; 4.1.3 c; 4.2.2.1
Task III, A1f	Description of Water Level or Fluid Pressure Monitoring	Sec. 2.1.3; 4.2.2.2
Task III, A1g	Description of Manmade Influences That May Affect Hydrogeology	Sec. 2.2.1
Task III, A1h	Analysis of Available Geophysical and Remote Sensing Information	Sec. 4.1.3 a; 4.1.1.6; 4.1.1.7
<u>Task III, A2</u>	<u>Soils</u>	
Task III, A2a	Surface Soil Distribution	
Task III, A2b	Soil Profile	Sec. 3.2.1 (3); 3.2.1 (5)
Task III, A2c	Transects of Soil Stratigraphy	Sec. 3.2.1 (3); 3.2.1 (5)
Task III, A2d	Saturated Hydraulic Conductivity	Sec. 3.2.1 (4); 3.2.1 (7); 3.2.1 (9); 4.1.3 f
Task III, A2e	Porosity	Sec. 4.1.3 f
Task III, A2f	Cation Exchange Capacity	
Task III, A2g	Soil pH	
Task III, A2i	Particle Size Distribution	Sec. 3.2.1 (3)
Task III, A2j	Depth to Water	Sec. 3.2.1 (6); 4.2.2.2
Task III, A2k	Moisture Content	Sec. 3.2.1 (1); 4.1.3 d
Task III, A2l	Effect of Stratification on UnSaturated Flow	Sec. 3.2.1 (5); 4.2.2.1
Task III, A2m	Infiltration	Sec. 3.2.1 (1); 3.2.1 (6); 4.2.2.1
Task III, A2n	Evapotranspiration	Sec. 3.2.1 (1); 3.2.1 (6); 4.2.2.5
Task III, A2o	Residual Concentrations of Contaminants in Soils	Sec. 4.1.3 b, i
Task III, A2p	Mineral and Metal Content	Sec. 4.1.3 g
Task III, A2q	Trace-elements to Identify Tuffs	Sec. 4.1.3 g, h
Task III, A2r	Water-Balance Scenarios	Sec. 3.2.1 (1); 3.2.1 (6); 4.2.2.5