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State of New Mexico  
ENVIRONMENT DEPARTMENT  
DOE OVERSIGHT BUREAU  
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October 2, 1996

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Department of Energy  
Los Alamos Area Office  
MS A316  
Los Alamos, NM 87544

SUBJECT: Review of Los Alamos National Laboratory's (LANL)  
Corrective Action Report for TA-18 Septic Tank Leach  
Field

Dear Mr. Johansen:

This conveys New Mexico Environment Department (NMED), Department of Energy Oversight Bureau's (DOE OB) review of the referenced report. The following comments are provided for the purpose of communicating the results of the DOE OB review. These comments are not provided or intended for the purpose of representing the regulatory position of the New Mexico Environment Department.

COMMENTS

1). Page 6, Section 3.3.2.1, First Paragraph, First Sentence

Does this statement imply that data exist concerning the most western extent of perched ground-water within Pajarito Canyon? That is, what data exist to show that the western extent of the aquifer lies 1-mile to the west of TA-18? DOE OB staff have observed perennial flow from several springs located in Pajarito Canyon (approximately 4 mi west of TA-18) that may supply recharge to a suspected saturated alluvium aquifer which may extend eastward to monitoring well PCO-3. Saturated alluvium in Threemile Canyon also exists and laterally extends an unknown distance. Characterization of these zones should be performed.

Post-It® Fax Note	7671	Date	10/23	# of pages	4
To	John Rogers	From	Steve Yanick		
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2). Page 6, Section 3.3.2.1, First Paragraph, Second Sentence

In addition to the several springs referenced above, TA-18 Spring, located in Threemile Canyon approximately 100 ft northwest of Kiva 2, discharges (perennially) at 1.57 gallons per minute (measured on November 17, 1995), and Threemile Spring, located approximately 0.75 mi west of Kiva 2, was measured at 7.6 gpm on November 17, 1995 (on May 13, 1996, this spring was discharging at <0.1 gpm). The source of recharge to ground water within canyon alluvium west and east of Kiva 2 may be from these springs.

3). Page 6, Section 3.3.2.1, First Paragraph, Third Sentence

Discharging or pumping of ground water from the Building TA-18-30 basement to the environment may require a Water Quality Control Commission discharge permit and/or a notice of intent to discharge.

4). Page 6, Section 3.3.2.1, First Paragraph, Fifth Sentence

This statement appears to be incorrect due to the following: ground water was encountered at a depth interval of 125 to 145 ft during the drilling of SHB-4 (Gardner et al., 1993), and ground water was encountered at a depth of 335 ft during the drilling of supply well PM-2 (Copper, 1965). These suspected zones need additional characterization and monitoring.

5). Page 9, Section 3.4, Second Paragraph, Third Sentence

It would be helpful to illustrate locations and the identity of the two nearby boreholes used for site-specific background concentrations. Additionally, it should be stated in the text and shown on Figure 3-4 that monitoring wells TW 18-1195 and TW 18-1196 have been plugged and are no longer useful as a data source.

6). Page 14, Section 3.5.2, General Comment

DOE OB recommends the addition of one monitoring well located west-northwest of the leach field in order to identify and quantify any contaminants which may be entering ground water within the leach-field area; assuming flow direction is generally west-northwest to east-southeast. In addition, DOE OB recommends the following: MW-12 be moved approximately 20-30 ft south-southwest of its current location; MW-14, MW-12 and our proposed upgradient well be drilled first in order to determine flow direction, which would better define the most adequate

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(strategically located to intercept contaminants) placement of MW-13; 2 to 3 hand-held pneumatic-auger boreholes (preferably to ground water and completed as piezometers) be installed along the septic line from the septic tank to the fence north of Building 116. These stations would help determine if contaminant releases have occurred along the septic line. Quarterly monitoring is initially recommended in order to determine seasonal fluctuations in ground-water levels as they may relate to contaminant concentration variations.

7). Page 14, Section 3.5.2, Second Paragraph, Fifth Sentence

DOE OB recommends the addition of the more common high explosive (HE), and radionuclide (notably uranium) parameters to the proposed sampling and analysis listed in Table 3-5. The DOE OB has current data which indicate that HE and its breakdown products were detected in a spring (Threemile Spring referenced in Comment 2) that discharges to the main drainage of Threemile Canyon west of the PRS area. Table 3-3 (Data Comparison for PRS 18-003(d) (concluded)) presents only a limited amount (one sample #AAB4604) of radionuclide parameter ground-water data to conclude that there is no ground-water radionuclide concern. The sludge samples AAA5826 and AAA5827 that show elevated uranium concentrations would support the argument for its inclusion in the proposed sampling and analysis for these wells.

Please feel free to contact Michael Dale of our staff at 672-0449 if any question arise.

Sincerely,



Steve Yanicak, LANL POC  
Department of Energy Oversight Bureau

SY:mrđ

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