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Environmental Protection Division
Water Quality & RCRA (ENV-RCRA)
P.O. Box 1663, Mail Stop K490
Los Alamos, New Mexico 87545
(505) 667-7969/FAX: (505) 665-9344

Date: September 15, 2008
Refer To: ENV-RCRA-08-169
LA-UR: 08-04520

Ms. Jennifer Fullam
Ground Water Pollution Prevention Section
Ground Water Quality Bureau
New Mexico Environment Department
Harold Runnels Building, Room N2261
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502

Dear Ms. Fullam:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION, DP-1132, RADIOACTIVE LIQUID WASTE TREATMENT FACILITY

I have received your June 11, 2008, letter (Enclosure 1) requesting additional information for Los Alamos National Laboratory's November 8, 2007, Notice of Intent (NOI) for the discharge of treated effluent from the TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF) to proposed evaporation tanks. I have listed each of your requests below, along with the Laboratory's response.

1. *Submit 60% complete plans and specifications of the facility. Include detailed information regarding the construction of the evaporation tanks.*

As the Laboratory indicated in the November 8, 2007, NOI, detailed plans and specifications for the evaporation tanks will be submitted to your agency once they become available. To date, no contract has been signed by the Laboratory for the final design of the evaporation tanks.

2. *Submit information regarding ground water near the facility that is most likely to be impacted should a release occur. This should include the most shallow aquifers located down gradient of the facility prior to the Rio Grande.*

The proposed site is a mesa top location at Technical Area (TA)-52. The approximate elevation of the proposed site is 7160 ft above mean sea level (MSL). Two regional aquifer wells are located within approximately 1500 ft of the proposed site: Los Alamos County water supply well PM-5 (7095 ft above MSL), and the Laboratory's regional aquifer monitoring well R-14 (7062 ft above MSL).



The static water level at both PM-5 and R-14 is approximately 5900 ft above MSL; this places the depth of the regional aquifer at the proposed project site at approximately 1260 ft below ground surface (bgs). No perched zone of saturation was encountered during drilling at R-14 (*Hydrologic Tests at Characterization Well R-14*, LA-14107MS, August 2004). In 2008, a new regional aquifer monitoring well will be installed on the mesa top in the vicinity of the evaporation tanks. The well, R-46, will be sited downgradient of Material Disposal Area (MDA) C and upgradient of water supply well PM-5 to ensure the safety of the supplied water.

Given the depth to ground water at the proposed project site (1260 ft bgs), the potential for impact to groundwater, should a release occur, is low. The nearest shallow aquifer (alluvial) is in Mortandad Canyon, approximately one mile away via the Ten Site Canyon watercourse. The depth to alluvial ground water in Mortandad Canyon at the Ten Site Canyon confluence is approximately 40 ft.

3. *Submit procedures for the operation and maintenance of the evaporation tanks. Please include estimated cleaning timelines and methodologies.*

In accordance with Laboratory requirements, a Standard Operating Procedure (SOP) will be prepared before the evaporation tanks are placed into service. The SOP will provide detailed instructions for the operation and maintenance of the facility. A copy of the SOP will be submitted to your agency once it is available for release.

4. *Submit information on the concentration of waste in the tanks due to evaporation.*

Treated effluent discharged to the evaporation tanks from the TA-50 RLWTF will have a composition of approximately 99.95 percent water and 0.05 percent solids; product from the reverse osmosis (RO) treatment unit has, on average, a Total Dissolved Solids (TDS) concentration of less than 500 mg/L (0.05 percent solids). Airborne dust and dirt blowing into the tanks will be the primary source of solids. When solids are removed from the tank, they will be characterized and managed in accordance with the applicable waste management requirements.

5. *Submit seismic studies conducted in accordance with 40 CFR § 264.18 (a).*

Conducting seismic studies in accordance to 40 CFR § 264.18 (a) is not a requirement of the New Mexico Water Quality Control Commission (NM WQCC) regulations. The proposed evaporation tanks will receive treated effluent from the TA-50 RLWTF. The tanks are therefore exempt from RCRA requirements as part of a Clean Water Act (CWA) wastewater treatment facility permitted by the Environmental Protection Agency (EPA) under NPDES Permit No. NM0028355. The specifications package that you will receive as part of the project's final design (see request #1) will include the seismic standards used in the engineering design of the evaporation tanks.

Please contact Bob Beers (505-667-7969) if you have any questions or need any additional information.

Sincerely,



Anthony R. Grieggs, Group Leader
Water Quality & RCRA Group (ENV-RCRA)

BB/lm

Enclosure: a/s

Cy: William Olson, NMED/GWQB, w/enc, Santa Fe, NM
Robert George, NMED/GWQB, w/enc, Santa Fe, NM
Glenn Saums, NMED/SWQB, w/enc, Santa Fe, NM
James Bearzi, NMED/HWB, w/enc, Santa Fe, NM
Steve Yanicak, NMED/OB/LASO, w/enc, J993
Hai Shen, LASO/EO, w/enc, A316
Gene Turner, LASO/EO, w/enc, A316
Michael Mallory, PADOPS, w/enc, A102
Richard S. Watkins, ADESHQ, w/enc, K491
Susan G. Stiger, ADEP, w/enc, M991
Mike Saladen, ENV-RCRA, w/enc, K490
Bob Beers, ENV-RCRA, w/enc, K490
Peter J. Rice, STO-DO, w/enc, E518
Craig Douglass, RLW, w/enc, E518
Pete Worland, EWMO-RLW, w/enc, E518
Edward Artiglia, ES-PE, w/enc, P137
Phil Wardwell, LC-LESH, w/enc, A187
Ellen Louderbough, LC-LESH, w/enc, A187
Keith R. Orr, PP-WEP, w/enc, P137
ENV-DO File, w/enc., J978
ENV-RCRA, File, w/enc., K490
IRM-RMMSO, w/enc., A150

ENCLOSURE 1



BILL RICHARDSON
Governor
DIANE DENISH
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau

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Phone (505) 827-2918 Fax (505) 827-2965
www.nmenv.state.nm.us



RON CURRY
Secretary
JON GOLDSTEIN
Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

June 11, 2008

Anthony R. Grieggs, Group Leader
Environmental Protection Division
Water Quality & RCRA (ENV-RCRA)
P.O. Box 1663, Mail Stop K490
Los Alamos, NM 87545

RE: Request for Additional Information, DP-1132, Radioactive Liquid Waste Treatment Facility

Dear Mr. Grieggs:

The New Mexico Environment Department (NMED) received a ground water Discharge Permit application from you on April 16, 1996 for the above referenced facility and a Notice of Intent for the discharge of effluent water to evaporative tanks (zero liquid discharge facility) on November 8, 2007. The application proposes the discharge of up to 3.6 million gallons per year of industrial wastewater.

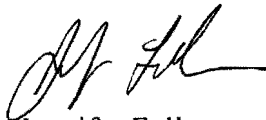
NMED has reviewed the Notice of Intent in accordance with the New Mexico Water Quality Control Commission Regulations (20.6.2 NMAC). The following additional information is necessary in order for NMED to determine if the zero liquid discharge facility will require a New Mexico Environment Department Ground Water Discharge Permit:

1. Submit 60% complete plans and specifications of the facility. Include detailed information regarding the construction of the evaporation tanks.
2. Submit information regarding ground water near the facility that is most likely to be impacted should a release occur. This should include the most shallow aquifers located down gradient of the facility prior to the Rio Grande.

3. Submit procedures for the operation and maintenance of the evaporation tanks. Please include estimated cleaning timelines and methodologies.
4. Submit information on the concentration of waste in the tanks due to evaporation.
5. Submit seismic studies conducted in accordance to 40 CFR § 264.18 (a)

Following submission of the requested additional information, NMED will act upon your Notice of Intent to discharge. Your cooperation is appreciated. If you have any questions, you may reach me at (505) 827-2909.

Sincerely,



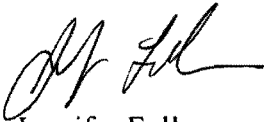
Jennifer Fullam
Environmental Scientist
Ground Water Pollution Prevention Section

cc: James Bearzi, NMED Hazardous Waste Bureau
John Young, NMED Hazardous Waste Bureau
Marcy Leavitt, NMED SWQB
Ralph Ford-Schmidt, NMED-DOE Oversight Bureau
Bob Beers, Environmental Protection Division, Water Quality & RCRA Ground , P.O.
Box 1663, Mail Stop K490, Los Alamos, New Mexico 87545
Mike Saladen, ENV-RCRA, Los Alamos National Laboratory, K490, Los Alamos,
NM 87545 (W/O enclosure)

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Following submission of the requested additional information, NMED will act upon your Notice of Intent to discharge. Your cooperation is appreciated. If you have any questions, you may reach me at (505) 827-2909.

Sincerely,



Jennifer Fullam
Environmental Scientist
Ground Water Pollution Prevention Section

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