TA 46 James

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APR 2010

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

April 6, 2010

Donald L. Winchell, Jr., Manager
Los Alamos Site Office
Department of Energy
528 35th Street, Mail Stop A316
Los Alamos, NM 87544

Richard S. Watkins, Associate Director
Environment Safety, Health, & Quality
Los Alamos National Security, LLC
Los Alamos Research Park
4200 Jemez Road, Suite 400
Los Alamos, NM 87544

RE: Discharge Permit Application Status:
DP-857, Los Alamos National Laboratory-Sanitary Wastewater System (SWWS), and
DP-1589, Los Alamos National Laboratory -Septic Tank/Leachfield Disposal Systems

Dear Mr. Winchell and Mr. Watkins:

The New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) issues Discharge Permits pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978 §§74-6-1 through 74-6-17, and the New Mexico Water Quality Control Commission (WQCC) Regulations, 20.6.2 NMAC. NMED's purpose in issuing Discharge Permits, and in imposing the requirements and conditions specified in Discharge Permits, is to control the discharge of water contaminants into ground and surface water, so as to protect ground and surface water for present and potential future use as domestic and agricultural water supply and for other uses and to protect public health.

DP-857 was originally issued on July 20, 1992 and authorized the discharge of up to 600,000 gallons per day (gpd) of sanitary wastewater to the Los Alamos National Laboratory (LANL) Sanitary Wastewater System (SWWS) facility and discharge of treated wastewater to Canada Del Buey for disposal, for use as cooling water at the TA-3 power plant, and for irrigation of the treatment facility grounds. DP-857 was subsequently renewed on January 7, 1998. On November 5, 2001, LANL proposed modifying DP-857 to allow up to 300,000 gallon per day of treated and disinfected wastewater from SWWS to be utilized for cooling water at the Super Computing Complex (SCC) at TA-3 following further treatment in a reverse osmosis/ultra-

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filtration system, known as the Sanitary Effluent Reclamation Facility (SERF), and discharge of residual (blowdown) water or treated wastewater to NPDES Outfall 03A027. The modification proposal also sought authorization for the operation of evaporative lagoons located at Sigma Mesa for the disposal of the reverse osmosis reject water from SERF. The modification was issued by NMED on October 1, 2002 for a maximum daily discharge volume of 300,000 gpd.

On August 29, 2002 (prior to issuance of the modification discussed above), NMED received a letter from LANL requesting the renewal of DP-857. At that time, permit renewals/modifications were requested in letter form (rather than through the submission of an application). The Renewal letter referenced the following eight documents:

1) Original Discharge Plan Application, April 10, 1992.
2) Request for Discharge Plan Modification, July 31, 1995.
3) Discharge Plan Renewal Request, April 10, 1997
4) Response to Request for Addition Information, August 18, 1997.
5) Response to Request for Additional Information, November 25, 1997.
6) Change in Sludge Disposal Practices, February 24, 1998.
7) Proposed Amendments to DP-857, October 22 1998.
8) Request for Minor Modification, November 1, 2001.

A draft renewal permit was mailed to LANL on April 18, 2005. However, NMED's draft renewal permit inadvertently proposed authorizing the discharge of up to 600,000 gpd to multiple locations, including SERF, the cooling water blow down outfall (Outfall 03A027) and the Sigma Mesa evaporative basins(rather than 600,000 gpd of sanitary wastewater to SWWS and 300,000 gpd of treated wastewater to SERF). Since the change in volume is a modification of the permit, not a renewal, these changes require modification to the Discharge Permit.

On May 18, 2005, NMED notified interested parties that the draft permit renewal was available online for review and published notice of the availability of the draft on May 26, 2005. On June 24, 2005, NMED received a request from Concerned Citizens for Nuclear Safety to extend the public comment period to 60 days (an additional 30 days). On June 24, 2005, NMED received comments on the draft permit from LANL. On July 17, 2005, NMED published notice that the comment period had been extended until August 24, 2005. On August 26, 2005, NMED received comments from Amigos Bravos and Concerned Citizens for Nuclear Safety. On December 19, 2005, NMED responded to the comments submitted by Amigos Bravos and Concerned Citizens for Nuclear Safety.

Following this sequence of events, LANL submitted the following additional information to NMED, either through meetings or in response to requests from NMED:

1) On November 20, 2007, NMED received a recycled wastewater flow path schematic at a meeting at the Laboratory. At the meeting, LANL officials detailed the desire to increase the discharge of treated water to SERF in an effort to reduce the Laboratory's overall potable water use. Increasing the discharge to SERF beyond the currently permitted 300,000 gpd requires modification of DP-857.

2) In response to a request for additional information, NMED received a list of sanitary (domestic wastewater) holding tanks that serve various remote sites within the Laboratory property on January 14, 2008. The contents of these tanks are transferred to SWWS for treatment and pumping records were included with the submittal. The tanks are currently permitted under NMED Liquid Waste Program permits but are required to be included in either a new a ground water Discharge Permit which covers septic and holding tanks at LANL or in a modification of DP-857.

3) On April 9, 2009, LANL submitted the Section, Township and Range location for structures related to the SWWS facility in response to a request for additional information from NMED. The locations identified by LANL include areas that were not originally included in the public notification provided by NMED on May 26, 2005. Specifically, the public notification identified Section 26, T19N, R06E as the location of the "facility", while the information provided on April 9, 2009 indicated that structures and outfalls associated with this permit are located at:

   - TA-46 SWWS Plant-Section 26, T19N, R06E;
   - NPDES Outfall 001-Section 16, T19N, R06E;
   - NPDES Outfall 03A027-Section 34, T19N, R06E; and
   - the Sanitary Effluent Reclamation Facility (SERF) Evaporation Basins on Sigma Mesa (TA-60)-Section 22, T19N, R06E.

   NMED will need to properly identify the locations of the discharges authorized by DP-857 when publishing the availability of a revised draft renewal (and modification) permit for the SWWS/SERF facilities.

4) On April 20, 2009, NMED received a list from LANL of the sources and characteristics of discharges to the SWWS facility. The discharges identified by LANL include sources other than those described in the original permit for the SWWS facility or in subsequent modifications of DP-857. Although much of what is described in the information submitted on April 20, 2009 is already authorized under DP-857, the discharge of all sources described requires a modification of DP-857.

5) Throughout 2009, NMED and LANL have discussed various revisions to NMED's *Los Alamos National Laboratory Drilling, Development, Rehabilitation and Purge Water Decision Tree - Revised 3/12/2010* guidance document and it has become clear that LANL has the intention of discharging a variety of source waters to the SWWS facility for treatment/disposal or through other appropriate permitted pathways (e.g. Sigma Mesa Evaporative Basins) when those source waters do not qualify for land application pursuant to NMED's *Los Alamos National Laboratory Drilling, Development, Rehabilitation and Purge Water Decision Tree - Revised 3/12/2010* guidance document. These discharges include sources and waste types that differ from those described in the original permit for the SWWS facility or in subsequent modifications of DP-857. Discharge of this waste to SWWS requires a modification of DP-857.

Given the inappropriately proposed permitting action (renewal rather than renewal/modification) for DP-857, LANL's stated desire to increase the volume of treated wastewater that can be discharged through the SERF facility, LANL's need to include the sanitary holding tanks in DP-857, LANL's need to discharge source waters other than "sanitary" wastewater to the SWWS facility for treatment and disposal, LANL's need for flexibility in discharging a variety of wastewaters to the Sigma Mesa evaporative lagoons and/or SERF for treatment/disposal, and other changes at LANL that have occurred during the long period of permit renewal processing, NMED views LANL's August 29, 2002 request for renewal of DP-857 to be inconsistent with the current and planned discharge activities associated with the SWWS and SERF facilities. **Therefore, NMED requires that LANL submit a comprehensive and up-to-date application for renewal and modification of DP-857 within 90 days of the date of this letter (by July 6, 2010).**

When submitted, the application should address:

- The volume, source and characteristic of all wastewaters that LANL intends to discharge to the SWWS facility for the foreseeable future.
- The volume, source and characteristic of all wastewaters that LANL intends to discharge to the SERF facility for the foreseeable future,
- The volume, source and characteristic of all wastewaters that LANL intends to discharge to the Sigma Mesa Evaporative Lagoons for the foreseeable future,
- The location of all holding tanks, treatment systems, NPDES outfalls and final discharge locations (i.e. land application sites, Sigma Mesa evaporative basins, others) associated with discharges to or from the SWWS/SERF facilities, clearly identified on a scaled map,
- The location for each holding tank, NPDES outfall, discharge location and treatment facility associated with discharges to or from the SWWS/SERF facilities, by Section, Township and Range , and;
- All other information sought in NMED's application for Discharge Permit Renewal and Modification form.

NMED concurs with the concept of utilizing SWWS for the treatment/discharge of a variety of wastewaters where these discharges are made within the scope of LANL's Waste Acceptance Criteria (WAC) for the SWWS facility, as set forth in NMED's *Los Alamos National Laboratory Drilling, Development, Rehabilitation and Purge Water Decision Tree - Revised 3/12/2010* guidance document. Similarly, NMED recognizes that LANL could safely dispose of a variety of waste streams by discharging them to SERF for treatment or to the Sigma Mesa evaporation basins for disposal. The discharge of sanitary wastewater from the various holding tanks to SWWS needs to be clearly included in the permit and flexibility for replacement/new tanks should be addressed in the application and any subsequent permit that NMED issues. However, all these discharge options need to be proposed by LANL in a comprehensive application for permit renewal and modification so that the ramifications can be fully considered by NMED and if appropriate, authorized under a modified/renewed permit.

In addition, on April 28, 2006, NMED received a ground water Discharge Permit application (DP-1589) from LANL for 14 septic tank/leachfield systems. On August 21, 2007, NMED received a letter from LANL titled: "Modifications, Ground Water Discharge Permit Application, Domestic Wastewater Septic Systems". The letter identified the following modifications to the septic systems addressed in the application for DP-1589:

1) Ten septic systems have been added to the discharge permit application,
2) Three inactive septic systems have been removed from the discharge permit application,
3) Three septic systems required modifications to the name or system description, and;
4) One septic system is scheduled for replacement.

Responding to LANL's request concerning the status of this application, NMED notified LANL staff in a recent meeting that LANL failed to complete the public notice requirements associated with the application. Furthermore, LANL's addition of new septic systems to the application constitutes a modification of the application and requires that the public notice accurately reflect the activities to be permitted.

Given these facts, NMED deems the Discharge Permit Application (DP-1589) received April 28, 2006 to be administratively incomplete pursuant to Section 20.6.2.3109.H NMAC of the New Mexico Water Quality Control Commission Regulations (20.6.2 NMAC). **NMED requires that LANL re-submit a complete and up-to-date application for DP-1589 for all septic tank discharges on LANL property within 90 days of the date of this letter (by July 6, 2010).**

When submitted, the application should address:

- The volume, source and characteristic of all wastewaters that LANL intends to discharge to the existing septic tank systems (and new systems anticipated to be constructed for the foreseeable future),
- The location of all septic tank systems on LANL property, clearly identified on a scaled map,
- The location of all existing or proposed new septic tank systems, by Section, Township and Range, and;
- All other information sought in NMED's Discharge Permit application form.

Alternately, LANL has the option of withdrawing the current application for DP-1589 and including the sanitary septic tank systems in the application for Renewal and Modification of DP-857. This would be preferable, as DP-857 would then become and all encompassing, "municipal and industrial wastewater reclamation facilities" permit.

Please note that the public notification requirements for applicants have changed and LANL will be required to fulfill the following notification for each application submitted for new permits, or renewal/modification of existing permits:

1. For each 640 contiguous acres or less of a discharge site, prominently posting a synopsis of the public notice at least 2 feet by 3 feet in size, in English and in Spanish, at a place conspicuous to the public, approved by the department, at or near the proposed facility for 30

days; one additional notice, in a form approved by and may be provided by the department, shall be posted at a place located off the discharge site, at a place conspicuous to the public and approved by the department; the department may require a second posting location for more than 640 contiguous acres or when the discharge site is not located on contiguous properties;

2. Providing written notice of the discharge by mail, to owners of record of all properties within a 1/3 mile distance from the boundary of the property where the discharge site is located; if there are no properties other than properties owned by the discharger within a 1/3 mile distance from the boundary of property where the discharge site is located, the applicant shall provide notice to owners of record of the next nearest adjacent properties not owned by the discharger;
3. Providing notice by certified mail, return receipt requested, to the owner of the discharge site if the applicant is not the owner; and
4. Publishing a synopsis of the notice in English and in Spanish, in a display ad at least three inches by four inches not in the classified or legal advertisements section, in a newspaper of general circulation in the location of the proposed discharge.

Because LANL is located on a contiguous piece of property, the "boundary of the discharge site" is in fact the property boundary of the Laboratory itself. If all discharges discussed in this letter are combined into DP-857, all Sections, Townships and Ranges occupied by the Laboratory should be identified as existing or potential discharge sites in the permit application and public notifications. Please prepare for the fulfillment of these requirements while compiling the discharge permit application(s) for submittal. The application can be found on-line at:

http://www.nmenv.state.nm.us/gwb/forms/NewMexicoEnvironmentDepartment-GroundWaterQualityBureau-Forms.htm

If you have any questions, please contact either Robert George at (505) 476-3648 or George Schuman at (505) 827-2945.

Sincerely,

William C. Olson, Chief
Ground Water Quality Bureau

WO:GK,RG

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