ERID-521743

NEW MEXICO
ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau

Harold Runnels Building
1190 St. Francis Drive
PO Box 5469, Santa Fe, NM 87502-5469
Phone (505) 827-2918 Fax (505) 827-2965
www.nmenv.state.nm.us

SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

DAVE MARTIN
Secretary
BUTCH TONGATE
Deputy Secretary

EP2013-5005

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

December 21, 2012

IRM-RMS, LANL
U1300331

Anthony Grieggs, Group Leader
Los Alamos National Laboratory
Environmental Protection Division
Water Quality & RCRA Group
P.O. Box 1663, Mail Stop K490
Los Alamos, NM 87545

RE: Response to Notice of Intent to Discharge and Discharge Permit Required for Los Alamos National Laboratory Sewage Sludge Disposal, AI-856

Dear Mr. Grieggs:

The Ground Water Quality Bureau of the New Mexico Environment Department (NMED) received a Notice of Intent from you submitted on the behalf of Los Alamos National Laboratory (LANL) on August 2, 2012. The notice describes LANL's intent to compost biosolids at LANL's Sanitary Wastewater System (SWWS) Facility and to surface dispose the composted biolsolids for beneficial use. The notice satisfies the requirements of Subsection A of 20.6.2.1201 NMAC of the New Mexico Water Quality Control Commission (WQCC) Regulations, 20.6.2 NMAC. The composting facility at SWWS is located in Technical Area 46, approximately 2.5 miles south of Los Alamos, in Section 26, T19N, R06E, Los Alamos County. The proposed surface disposal area is located at the Technical Area 60 Sigma Mesa Staging Area, approximately 1.5 miles south of Los Alamos in Section 22, T19N, R06E, Los Alamos County.

NMED has reviewed the information provided in accordance with Subsection D of 20.6.2.1201 NMAC. **You are hereby notified that a Discharge Permit is not required for the composting facility at SWWS provided the composting facility is registered with the Solid Waste Bureau of the NMED. You are also hereby notified that a Discharge Permit is required for surface disposal of composted biosolids as proposed for Technical Area 60.**

NMED recognizes that LANL is seeking to compost and beneficially reuse the biosolids generated at the SWWS facility, however the proposed surface disposal of composted biolsolids at Technical Area 60 does not meet the United States Environmental Protection Agency's (USEPA) definition of "land application"; but rather fits the definition of "surface disposal" which is an activity carried out for the purpose of final disposal and without regard for the soil enhancing qualities of biosolids. NMED is supportive of beneficial reuse of biosolids at LANL, but suggests that composted biosolids material is more typically used in a deliberate manner to enhance soil by applying it at the agronomic uptake rate of vegetation actively growing at a site. If LANL wishes to submit an NOI for land application of composted biosolids from SWWS that proposes enhancement or reclamation at agronomic uptake rates, NMED is likely to not require a Discharge Permit.

To apply for a Discharge Permit, you must complete and submit three copies of the enclosed Discharge Permit application, along with the $100 filing fee. Please be advised that any discharge from this facility without prior written approval from NMED would be a violation of the WQCC Regulations.

Any appeal of this determination that a Discharge Permit is required must be made to the New Mexico WQCC within 30 days of receipt of this letter, in accordance with Subsection B of 20.6.2.3112 NMAC. A copy of the WQCC Regulations, 20.6.2 NMAC, is available at http://www.nmcpr.state.nm.us/nmac/_title20/T20C006.htm.

If you have any questions, please contact either Gerald Knutson at (505) 827-2996 or Clint Marshall, Program Manager of the Ground Water Pollution Prevention Section, at (505) 827-0027.

Sincerely,

Jerry Schoeppner, Chief
Ground Water Quality Bureau

JS:GK

enc: Applying for a Discharge Permit: General Information
Discharge Permit Application, General Form

cc: Robert Italiano, District Manager, NMED District II (via email at robert.italiano@state.nm.us)
DP Required File
John Offersen, NMED SWB (via email at john.offersen@state.nm.us)
Richard Powell, NMED SWQB (via email at richard.powell@state.nm.us)
John Kieling, NMED HWB (via email at john.kieling@state.nm.us)

Steven Yanicak, NMED-DOE-Oversight Bureau (via email at steven.yanicak@state.nm.us)
Erik Galloway, NMED-DOE-Oversight Bureau (via email at erik.galloway@state.nm.us)
Gene Turner, LASO-EO, Los Alamos National Laboratory, P.O. Box 1663, Mail Stop A316, Los Alamos, NM 87545
Carl A. Beard, PADOPS, Los Alamos National Laboratory, P.O. Box 1663, Mail Stop A102, Los Alamos, NM 87545
Michael T. Brandt, ADESHQ, Los Alamos National Laboratory, P.O. Box 1663, Mail Stop K491, Los Alamos, NM 87545
Michael Saladen, ENV-RCRA, Los Alamos National Laboratory, P.O. Box 1663, Mail Stop K490, Los Alamos, NM 87545
Robert M. Gallegos, ENV-RCRA, Los Alamos National Laboratory, P.O. Box 1663, Mail Stop K490, Los Alamos, NM 87545
Robert Beers, ENV-RCRA, Los Alamos National Laboratory, P.O. Box 1663, Mail Stop K490, Los Alamos, NM 87545
Alison Dories, ENV-DO, Los Alamos National Laboratory, P.O. Box 1663, Mail Stop K491, Los Alamos, NM 87545

NEW MEXICO ENVIRONMENT DEPARTMENT
GROUND WATER QUALITY BUREAU

APPLYING FOR A DISCHARGE PERMIT
General Information

Who needs to apply?

Section 20.6.2.3104 NMAC of the New Mexico Water Quality Control Commission (WQCC) Regulations (20.6.2 NMAC) requires that any person proposing to discharge effluent or leachate so that it may move directly or indirectly into ground water must obtain a Discharge Permit. The requirement applies to a wide range of facilities that process, treat, store and/or dispose of wastewater, sludge, septage, leachate, contaminated soils, industrial waste, agricultural wastes, mine tailings, mine ore, waste rock or similar materials.

Specific exemptions are provided for in the regulations. The regulations are available on the New Mexico Environment Department's (NMED) website: www.nmenv.state.nm.us. Click on Ground Water Quality, then Regulations.

What are the exemptions?

Several exemptions are listed in Section 20.6.2.3105 NMAC. To confirm whether a Discharge Permit is required, it is best to contact the Ground Water Quality Bureau at (505) 827-2900 and/or to submit a Notice of Intent to Discharge (NOI). The NOI form is available on NMED's website: www.nmenv.state.nm.us.

Domestic sewerage systems that are designed to receive and do receive 2,000 gallons per day or less are among the exemptions. This category includes a single home on its own lot that discharges to its own liquid waste system. Such systems, however, are subject to the Liquid Waste Treatment and Disposal Regulations, 20.7.3 NMAC. Contact the nearest NMED Field Office for further information.

This exemption does not apply to an individual liquid waste treatment unit if is located on a property where the total design flow or total actual flow of domestic wastewater exceeds 2,000 gallons per day. All domestic wastewater discharges to a single lot must be included when determining which regulations apply. Even if you were previously issued a Liquid Waste Permit for a particular treatment unit, you may now need to apply for a Discharge Permit to cover all the domestic discharges to your property.

Is a pre-application meeting required?

No, but such a meeting is recommended if any part of the application process or requirements are unclear to you. At the least, a telephone conversation with one of the technical reviewers in the Ground Water Quality Bureau will likely be helpful.

What application forms do I need?

NMED updated the application form in May 2006. The form is designed to assist you in providing the information required by Sections 20.6.2.3106, 3107, 3108 and 3109 NMAC. The form has three parts.

- **Part A – Administrative Completeness** is the same for all applicants. This information is required for the initial public notice process.
- **Part B – Operational, Monitoring, Contingency and Closure Plans**. There are currently two versions of Part B: one for septic tank systems and one for all other types of facilities.
- **Part C – Site Information** is the same for all applicants.

What happens after I submit my application?

Your application will first be reviewed for Administrative Completeness. If you have provided all of the information requested in Part A of the application form, you will receive the necessary materials and instructions to complete public

(continued on reverse side)

notice requirements. As will be explained in the instructions you receive, you must submit proof to NMED that you have fulfilled these requirements.

If you have not provided all of the information in Part A, you will be notified of omissions. Your application will not move forward until NMED determines that it is administratively complete.

A technical reviewer will review Parts B and C of the application form for technical completeness. You will be notified by telephone or letter if additional information is required. When all the necessary information has been received and evaluated, NMED will propose a draft Discharge Permit if the application meets the criteria established in the WQCC Regulations. You will receive a copy of the draft, and a 30-day public comment period will be initiated when NMED publishes the notice in a local newspaper. NMED will also notify any interested parties that were identified when you provided the initial public notice.

Anyone may offer comments or request a hearing during the 30-day comment period. A hearing will be held in response to a request if NMED determines there is substantial public interest. Whenever possible, NMED prefers to resolve concerns about the draft Discharge Permit without going through a formal hearing process.

What are the applicant's public notice requirements?

An applicant for a new Discharge Permit, for a Discharge Permit Modification, or for a Discharge Permit Renewal and Modification must post one or more signs at the facility, post a flyer offsite, notify property owners with 1/3 mile of the property boundary, notify the discharge site owner(s), and publish a 3 x 4 inch display ad in a local newspaper.

An applicant for a Discharge Permit Renewal (without Modification) must notify the discharge site owner(s) and place a 2 x 3 inch display ad in a local newspaper.

This is just a summary of the requirements. For a full description, see Section 20.6.2.3108 NMAC. NMED will provide the materials and full instructions for completing the public notice requirements after you submit an application.

How long will it take to process my application?

You should submit your application at least six months in advance. Processing times vary, but delays can result if the information you submit is incomplete, or if a public hearing is held due to substantial public interest in your facility or operation.

Do I need a Discharge Permit Modification?

You need a Discharge Permit Modification if the quantity, quality or location of the discharge will change significantly from what your current Discharge Permit authorizes. Contact the Ground Water Quality Bureau to discuss whether any anticipated changes would require a Modification. Except for the public notice requirements, the application process, information requirements, and application forms are the same whether you are applying for a new Discharge Permit, renewing your Discharge Permit, or requesting a Modification.

What fees do I pay for a Discharge Permit?

You must include a $100 non-refundable filing fee with your application. An additional fee will be assessed prior to permit issuance to cover a portion of NMED's costs for application review, permit development and issuance. The permit fees are listed in Section 20.6.2.3114 NMAC. They currently range from $1,150 to $13,000, depending on the type and volume of discharge. The permit fee may be paid in full at the beginning of the permit term or in annual increments. If you choose to withdraw your application prior to permit issuance, you will be assessed half of the permit fee.

What if I have questions? Contact the Ground Water Quality Bureau in Santa Fe at (505) 827-2900.

NEW MEXICO ENVIRONMENT DEPARTMENT
GROUND WATER QUALITY BUREAU

DISCHARGE PERMIT APPLICATION

Type of Application. Check appropriate box.

- ☐ Application for new Discharge Permit -- new facility
- ☐ Application for new Discharge Permit -- existing (unpermitted) facility
- ☐ Application for Discharge Permit Renewal
- ☐ Application for Discharge Permit Modification
  "Modification" is defined as a change to the permit requirements that result from a change in the location of the discharge, a significant increase in the quantity of the discharge, or a significant change in the quality of the discharge.
- ☐ Application for Discharge Permit Renewal and Modification

For an existing Discharge Permit, please indicate: DP Number _____ Expiration date _____

Checklist of Application Components.

☐ Part A: Administrative Completeness.	*Instructions for completing the application are included on the form itself and on Supplemental Instructions for Parts A and B.* *You may fill out the application manually, or a Microsoft Word version may be downloaded from www.nmenv.state.nm.us (Ground Water Quality) and filled out electronically.*
☐ Part B: Operational, Monitoring, Contingency and Closure Plans, with required attachments. *Choose appropriate option*: ☐ Septic Tank System ☒ General – Various Facility Types	
☐ Part C: Site Information, with required attachments.	
☐ $100 Filing Fee, payable to the New Mexico Environment Department. *Required from all applicants.* An additional fee will be assessed prior to permit issuance. Permit fees are listed in Section 20.6.2.3114 NMAC.	

Certification. Signature must be that of the person named in Item A-3 of Part A of the application.

I certify under penalty of law that I am knowledgeable about the information contained in this application. The information is, to the best of my knowledge and belief, true, accurate and complete.

Signature: _____ Date: _____

Printed Name: _____

Title: _____

Send three complete copies of this application and the filing fee to:

Program Manager
Ground Water Pollution Prevention Section
New Mexico Environment Department
PO Box 5469
Santa Fe, NM 87502

Form updated May 2006

GROUND WATER DISCHARGE PERMIT APPLICATION
PART A: ADMINISTRATIVE COMPLETENESS
All Facilities

A-1. **Facility Information.** See Supplemental Instructions to determine what constitutes the "facility." The physical location of the facility must be provided. If the facility does not have an address, the location can be described by road intersections, mile posts, or landmarks, as appropriate.

Facility Name _____

Former Names (if any) _____

Physical address/location *(mandatory)* _____

_____ County _____

Mailing address _____

_____

Contact person _____

Title _____

Telephone number(s) _____

Fax number _____ E-mail address _____

A-2. **Type of Discharge and Type of Facility.** See Supplemental Instructions.

Type of discharge: ☐ Domestic ☐ Agricultural ☐ Industrial ☐ Mining

Type of facility: _____

_____

A-3. **Applicant Information.** The applicant is the person or entity (e.g., corporation, partnership, organization, municipality, etc.) legally responsible for the discharge and for complying with the terms of the Discharge Permit. If the applicant is an entity, then the name and title of a contact person must be provided. This application must be signed by the applicant or contact person named here.

Applicant Name _____

Mailing address _____

_____

Contact person _____

Title _____

Telephone number(s) _____

Fax number _____ E-mail address _____

A-4. **Consultant Information (if applicable).** If the consultant is a company or organization, then the name and title of a contact person must be provided.

Consultant/Firm Name _____

Mailing address _____

_____

Contact person _____

Title _____

Telephone number(s) _____

Fax number _____ E-mail address _____

A-5. **Permit Contact Information (if applicable).** If someone other the applicant listed in Item A-3 or a consultant listed in Item A-4 is a primary contact for this application and/or facility, list here.

Permit Contact Name _____

Title _____

Mailing address _____

_____

Telephone number(s) _____

Fax number _____ E-mail address _____

A-6. **Ownership.**

The applicant owns (check as appropriate): ☐ the facility ☐ some discharge sites ☐ all discharge sites

If other parties own the facility or any of the discharge sites, attach their names and contact information.

A-7. **Discharge Quantity.**

Your Discharge Permit will specify a maximum discharge volume, which is typically expressed as the maximum number of gallons per day that may be treated and/or disposed of. Please indicate below the maximum discharge volume for your facility. You must show how it was determined in Part B of your application. For further explanation, see Supplemental Instructions for Part B.

Maximum discharge volume: _____ gallons per day (or other units: _____)

A-8. **Processing, Treatment, Storage and Disposal System.** Briefly describe how wastewater, sludge, etc. is processed, treated, stored, and/or disposed of at your facility. See Supplemental Instructions for examples of system components.

A-9. **Discharge Locations.** List the locations of your facility and of all components of your processing, treatment, storage and/or disposal system. Examples of components include septic tanks, lagoons, leachfields, irrigation sites, mine stockpiles, etc. Additional examples are listed in the Supplemental Instructions. Latitude and longitude are optional unless township, range and section are not available.

Components	Township	Range	Section(s)	Latitude	Longitude
Facility					

A-10. Discharge Quality.

Indicate the expected quality of the discharge -- wastewater, leachate, sludge, etc. -- generated, stored, treated, processed and/or discharged at your facility. List the contaminants of concern and the expected concentrations. *Not all facilities need to characterize influent quality.* See Supplemental Instructions for typical contaminants and additional guidance.

Expected or Known Contaminants	**Expected concentration range** Indicate units: mg/L, CFU/100 ml, etc.	
	Incoming (Influent)	Final (Effluent)

For **new** septic tank systems, you may either fill out the chart above or simply check one of the following options:

- ☐ typical domestic wastewater
- ☐ low-strength domestic wastewater (large gray water component; e.g., laundromat, spa, etc.)
- ☐ high-strength domestic wastewater (low water use; e.g., RV park, low-flow toilets at campground, etc.)

A-11. Ground Water Conditions.

All applicants must provide the depth to and pre-discharge TDS concentration of the ground water that could be affected by the discharge. Refer to Supplemental Instructions for details on how to obtain these values.

Indicate the depth to the most shallow ground water beneath the discharge site. If there are multiple discharge sites, indicate the range of depths.

Depth to water (feet): _____

Reference:

- ☐ Measurement, nearby monitoring well
- ☐ Measurement, nearby supply well
- ☐ Well log from nearby well (attach copy)
- ☐ Office of the State Engineer http://www.ose.state.nm.us/
- ☐ Report or study (give citation here and attach relevant portion):
- ☐ Other (describe):

Indicate the total dissolved solids (TDS) concentration of most shallow ground water beneath the discharge site. Attach copies of analyses.

TDS (mg/L): _____

Reference:

- ☐ Analysis from upgradient monitoring well
- ☐ Analysis from on-site supply well
- ☐ Analysis from shallow nearby supply well
- ☐ Concentration provided in previous Discharge Permit application
- ☐ Report or study (give citation here and attach relevant portion):
- ☐ Other (describe):

A-12. Public Notice. See Supplemental Instructions.

a) The public notice packet including instructions and materials should be sent to:

☐ Applicant ☐ Consultant ☐ Other: _____

_____

b) Copies of the public notice packet (excluding sign) should be sent to:

☐ Applicant ☐ Consultant ☐ Other: _____

_____

c) The applicant is required to provide public notice of this application by placing a display ad in a newspaper of general circulation near the location of the proposed discharge. Indicate newspaper you intend to place the ad in:

Newspaper: _____

d) *For new or modification applications only:* The applicant must post a sign for 30 days in a conspicuous location at or near the facility, as approved by NMED. One sign must be posted for each 640 contiguous acres or less of the discharge site. An additional notice must be posted at an off-site location conspicuous to the public. Describe the locations below where you intend to post the notices. You may also attach sketches or photographs.

At or near facility: _____
2 by 3 feet in size

_____

_____

Off-site location: _____
flyer size

_____

_____

Supplemental Instructions for Part A
All Facilities

Please note: Discharge Permits are required for a wide range of facilities that process, treat, store and/or dispose of wastewater, sludge, septage, leachate, contaminated soils, mine tailings, industrial waste, mine ore, waste rock, or other similar materials. For the purposes of this application form, the term "discharge" applies to any of these materials whether they are actually discharged or whether they represent only a potential discharge that could occur due to factors such as poor maintenance, improper installation, equipment failure or accidents.

A-1. Facility Information.

The "facility" may be identified as:

a) a treatment facility, such as a municipal wastewater treatment plant;
b) the source of the discharge, such as a subdivision, dairy, or waste rock pile;
c) a disposal facility or operation, such as for sludge or septage;
d) the discharge location or recipient of reclaimed wastewater for reuse, such as a golf course or cement plant;
e) a storage and/or processing facility with off-site disposal;
f) a collection of facilities, such as numerous comfort stations at a state park; or
g) a project or operation, such as a construction project or a system to distribute reclaimed wastewater throughout a city.

A-2. Type of Discharge and Type of Facility.

Characterize the type of discharge, wastewater, sludge, leachate, etc. generated, processed or received by your facility as domestic, agricultural, industrial or mining. Examples of a variety of facility types are categorized below.

Domestic Waste

"Domestic" waste contains human excreta or originates from typical residential plumbing fixtures.

- Municipal wastewater treatment plant
- Septage disposal

- Sludge disposal
- Mobile home/RV park
- Campground/park
- School/educational facility
- Restaurant
- Subdivision/apartment complex
- Unincorporated community
- Lodging/resort/spa
- Residential facility
- Commercial/shopping complex
- Laundromat
- Facility using reclaimed domestic wastewater

Agricultural Waste

- Dairy
- Food processing
- Slaughter facility
- Nursery/greenhouse
- Manufacture/processing of agricultural chemicals
- Feedlot
- Livestock truck washout

Industrial Waste

- Manufacturing
- Power plant
- Military installation
- Vehicle/equipment wash
- Mortuary
- Hydrocarbon landfarm
- Ground water remediation
- Ethanol plant
- Asphalt plant

Mining Discharges

- tailing impoundment
- mine dewatering
- waste rock pile
- smelter slag
- in-situ leach
- leach piles
- pipelines
- collection ponds
- concentrator – other beneficiation

This listing is only a guide, as there can be crossover between categories. For example, a golf course might use treated industrial wastewater for irrigation. The type of facility in that case is "golf course" and the type of waste is "industrial." A mining operation may need a permit for its restroom and shower facilities. In that case, the type of facility is a "mining operation" and the type of discharge is "domestic waste."

A-7. Discharge Quantity.

Refer to the Supplemental Instructions for Part B for information on how to calculate the maximum discharge volume for your facility.

A-8 and A-9. Treatment, Storage, Disposal System.

The following are examples of treatment, storage and disposal methods:

Treatment Methods

- Septic tank
- Grease interceptor
- Oil/water separator
- Manure separator
- Wetlands
- Lagoon (indicate whether aerated and type of liner)
- Trickling filter
- Activated sludge (extended air, SBR, etc.)
- Sand filter
- Membranes
- Sludge drying bed
- Disinfection (specify type)
  - chlorination
  - UV/ozone
- Water treatment plant

Storage Methods

- Above/below ground tank
- Storage lagoon (indicate type of liner)
- Holding tank
- Pit toilet
- Stockpile
- Tailing impoundment

Disposal Methods

- Leachfield
- Infiltration gallery
- Evaporation lagoon (indicate type of liner)
- Evaporation tank
- Impoundment
- Discharge to waters of the US (NPDES permit required)
- Ongoing land application (specify type)
  - subsurface irrigation
  - sprinkler irrigation
  - flood irrigation
  - drip irrigation
  - surface spreading (solids)
  - surface injection (solids)
- Temporary uses of reclaimed wastewater

- Ongoing use of reclaimed wastewater for:
  - manufacturing
  - construction or dust control

A-9. Discharge Quality.

Untreated wastewater entering a treatment facility (also referred to as "influent") must be characterized so that the treatment process can be evaluated. It is not necessary to provide influent quality for systems providing minimal treatment prior to discharge or disposal, such as systems relying on crop uptake for treatment (e.g., dairies), septic tank – leachfield systems, storage/processing facilities or evaporative systems. The final quality of the waste or wastewater disposed of or discharged must be characterized for all facilities.

For most agricultural and domestic facilities, the contaminants of concern include nitrate as nitrogen (NO_3-N), total Kjeldahl nitrogen (TKN), total dissolved solids (TDS), and chloride (Cl). For domestic facilities with advanced treatment, additional contaminants include total suspended solids (TSS), biochemical oxygen demand (BOD_5), and fecal coliform bacteria. Contaminants of concern at industrial and mining sites include pH, metals, and organic compounds. List all that apply.

A-10. Ground Water Conditions.

The depth to ground water beneath your facility and/or discharge site must be provided. This is true even if your facility or operation is intended to have no discharge. Discharge Permits are required for "no-discharge" lagoons, storage tanks, etc. because of the potential for a discharge to occur due to factors such as improper installation, poor maintenance, equipment failure or accidents.

The best way to determine the depth to water is to measure it in an on-site or nearby monitoring well. If a monitoring well is not available, the measurement may be from a water supply well. If there is a well but it is not possible to access it for a measurement, you could refer to the well log for that well and/or others in the vicinity. Well log information is available on the website of the State Engineer's office:

http://www.ose.state.nm.us/.

Be aware that water levels have dropped in many areas of the state, so more recent well logs in those areas are more reliable.

There may be a significant discrepancy in the depth to water in different wells, even when falling water levels is not a factor. One reason for this is that a water supply well may rely on a deep aquifer rather than water in the "first" or most shallow aquifer. Discharge Permits are intended to protect all ground water, so it is important to report the most shallow depth in the vicinity of your site.

The total dissolved solids (TDS) concentration of the ground water prior to discharge must be provided. As explained for the depth to water, this is true even if your facility or operation is intended to have no discharge. The TDS value provides a general indication of the quality of the ground water that could be affected by your operation.

The best way to obtain a pre-discharge TDS concentration is to sample an on-site or nearby well before your facility begins operating. It is better to sample a shallow rather than a deep well, if possible. It may be that a neighboring facility has existing analytical data for its Discharge Permit. (If so, be sure to obtain data from a non-impacted well.)

If there are no wells in your vicinity or it is not possible to sample them, you may find general TDS concentrations in reports available from sources such as a university, the State Engineer's Office (http://www.ose.state.nm.us/) or the US Geological Survey (http://nm.water.usgs.gov/). If you are renewing or modifying your Discharge Permit, you may refer to the TDS concentration previously determined if there was a sound basis for it. Monitoring data or other information obtained since the permit was issued, however, may warrant listing a different value.

A-12. Public Notice.

The latest revision of 20.6.2.3108 NMAC, which specifies the applicant's public notice requirements, is effective as of July 16, 2006. Once NMED has determined that your application is administratively complete, **the instructions and materials necessary to complete the public notice requirements will be sent to you.**

GROUND WATER DISCHARGE PERMIT APPLICATION

PART B: OPERATIONAL, MONITORING, CONTINGENCY AND CLOSURE PLANS GENERAL FORM (VARIOUS FACILITY TYPES)

Operational Plan *[Section 20.6.2.3106.C, 3109.C NMAC]*

B-1. **Source(s) of the Discharge.** Describe what generates the wastewater, sludge or other discharges processed and/or disposed of at your facility. Identify all sources. Attach additional pages, if needed. See Supplemental Instructions.

B-2. **Discharge Quantity.** Describe the methods/calculations used to determine the maximum discharge volume listed in Item A-6 in Part A of your application. Attach additional pages, if needed. See Supplemental Instructions.

B-3. **Site Map.** Attach a site map showing the components of your proposed system and relevant surrounding features, clearly labeled, such as:

- treatment units
- lagoons
- tanks
- sumps
- manure separators
- land application fields
- domestic wastewater reuse areas
- pits
- stockpiles
- leachfields
- sludge drying beds
- roads
- buildings
- supply wells
- monitoring wells
- extraction/injection wells
- arroyos
- nearby water bodies such as ponds or canals
- property boundaries
- other permitted discharges
- required setbacks
- north arrow

If map is not to scale, mark distances on the map.

☐ Site map is attached.

B-4. **Flood Protection**. Describe the methods used to prevent flooding and run-off at the facility (tank protection, berms, diversion channels, etc.)

B-5. **Plans and Specifications.** For new facilities and for new components of existing systems, attach plans and specifications certified by a New Mexico registered professional engineer. *[Section 20.6.2.1202 NMAC]*

☐ Not applicable because no new facilities are proposed.

☐ Plans and specifications are attached.

☐ Plans and specifications were previously submitted. Submittal date(s): _____

B-6. **Description of Components.** Provide descriptive details of all components of your processing, treatment, storage and/or disposal system. Include all components listed under Item A-8 in Part A.

Component	Description (construction material, liner type, irrigation method, capacity, dimensions, area, etc.)

B-7. **Operational Plan.** Attach a detailed description of how you operate your processing, treatment, storage and/or disposal system.

Animal feeding operations: include stormwater management, nutrient management plans, method for mixing irrigation and wastewater.

Domestic wastewater treatment facilities: include pre-treatment, solids management, vegetation management for land application.

Facilities using reclaimed domestic wastewater above ground: include setbacks, irrigation schedules, employee training, public information, etc. as needed to comply with the *NMED Policy for the Above-Ground Use of Reclaimed Domestic Wastewater.* A copy of the policy is available on the NMED website www.nmenv.state.nm.us under Ground Water Quality.

☐ Operational plan is attached.

☐ Operational plan was previously submitted. Submittal date(s): _____

B-8. **System Maintenance**. Attach a description of the operations and maintenance procedures which ensure that your processing, treatment and disposal system functions properly; e.g., inspections, pumping schedules, equipment maintenance, etc.

☐ O & M procedures are attached.

☐ O & M procedures were previously submitted. Submittal date(s): _____

B-9. **Backflow Prevention.** If wastewater is used for land application or irrigation, describe methods used to protect wells from contamination by wastewater backflow. For new facilities or new systems at an existing facility, only air gap or reduced pressure valve assemblies are acceptable methods.

a) Clearly describe and/or sketch the location of air gaps or devices and attach specifications.

b) Describe how devices are maintained.

B-10. **Water Rights.** Animal feeding operations which land apply wastewater must attach documentation of irrigation water rights for the proposed land application fields, sufficient to sustain the intended crop rotation.

☐ Water right documentation is attached.

☐ Not applicable.

B-11. **Past Ground Water Monitoring Results**. *This item applies only to existing facilities seeking renewal and/or modification of a Discharge Permit that required ground water monitoring.*

a) Attach a graph or a table showing all analytical results from ground water sampling at your facility. If preparing graphs, a separate graph should be developed for each constituent, except that nitrate and TKN may be shown on the same graph. Multiple wells may be shown on the same graph. See Supplemental Instructions for sample table and graph.

b) If the monitoring results indicate that ground water standards have been violated or that there is an upward trend approaching standards, attach a description of what actions you have taken or will take to address the elevated concentrations. Ground water standards are listed in Section 20.6.2.3103 NMAC. See the Supplemental Instructions for frequently referenced standards.

Monitoring Plan *[Section 20.6.2.3107.A NMAC]*

B-12. **Discharge Volumes.** Describe how and where the monthly discharge volume at your facility will be. For all measuring devices, provide type, location, and units of measure including multipliers (e.g., gallons, gallons x 100, acre-ft, etc.) See Supplemental Instructions. Attach additional pages, if necessary.

B-13. **Discharge Quality Monitoring.** Discharge Permits typically require that the discharge (treated wastewater, sludge, septage, etc.) be sampled on a regular basis. The frequency of sampling varies by type of facility, as do the contaminants of concern. Domestic and agricultural Discharge Permits typically require sampling for total Kjeldahl nitrogen (TKN), nitrate-nitrogen (NO_3-N), total dissolved solids (TDS) and chloride on a quarterly or semi-annual basis. *(continued on next page)*

The *NMED Policy for the Above-Ground Use of Reclaimed Domestic Wastewater* specifies additional sampling requirements for treatment facilities producing reclaimed wastewater for above-ground uses.

In the space below, provide a description or sketch of the sampling point(s) to be used for sampling the discharge at your facility.

Optional: In the space below (or as an attachment), you may propose revisions or additions to the standard discharge quality monitoring requirements. If you do, provide the rationale for your proposal.

B-14. **Ground Water Quality Monitoring.** Discharge Permits typically require that ground water samples be collected quarterly from properly constructed monitoring wells located downgradient from discharge locations. The samples must be analyzed for contaminants of concern. For most domestic and agricultural Discharge Permits, the typical contaminants of concern are total Kjeldahl nitrogen (TKN), nitrate-nitrogen (NO_3-N), total dissolved solids (TDS) and chloride.

Optional: In the space below (or as an attachment), you may propose revisions or additions to the standard ground water monitoring requirements. If you do, provide the rationale for your proposal.

For existing facilities:

Indicate number of existing monitoring wells: _____

Attach copies of monitoring well logs.

☐ Well logs attached. ☐ Well logs cannot be located.

☐ Well logs previously submitted. Submittal date(s): _____

Attach copy of monitoring well survey (typically not applicable if fewer than 3 monitoring wells).

☐ Survey attached. ☐ No survey has been conducted.

☐ Survey previously submitted. Submittal date(s): _____

B-15. **Other Monitoring.** In addition to discharge volumes, discharge quality monitoring and ground water sampling, Discharge Permits typically require the following monitoring, depending on the type of facility:

- inspection and pumping of septic tanks, grease tanks, lift stations
- inspection of leachfields
- inspection of lagoons
- process testing for treatment plants
- land application data sheets (LADS)
- tracking of chemical fertilizer applications to land application areas
- soil sampling (agricultural and selected other facilities land applying wastewater)
- harvested plant material testing (agricultural facilities)

Optional: In the space below (or as an attachment), you may propose revisions or additions to the other standard monitoring requirements for your type of facility. If you do, provide the rationale for your proposal.

Contingency Plan *[Section 20.6.2.3107.A.10 NMAC]*

B-16. **System Failure.** Describe your contingency plan in the event there is a failure of your wastewater or discharge system (e.g., wastewater back-up, pump failure, pipe breaks, tank overflow, leachfield failure, saturated fields etc.)

B-17. **Contingency Leachfield Location.** *This item applies only if your disposal system includes a leachfield.* Identify a location on your site map (Item B-3) for a contingency leachfield in the event that your leachfield must be replaced. If no land is available for a contingency leachfield at an existing facility, describe how you will address a failed leachfield. New facilities must provide for a contingency leachfield location.

B-18. **Other Contingencies.** Discharge Permits typically contain standard contingencies to address:

- exceeding wastewater quality limits
- violation of ground water or surface water standards
- spills or illegal releases of wastewater
- migration of soil nitrogen
- loading nitrogen above limit

Propose additional contingency plans, if appropriate:

_____

_____

_____

_____

Closure Plan *[Section 20.6.2.3107(A)11 NMAC]*

B-18. **Facility Closure and Post-Closure Monitoring.** Discharge Permits contain standard requirements to address the closure of part or all of your discharge system, as follows:

- cap or plug lines to prevent the flow of wastewater to treatment or disposal system
- empty and remove or backfill tanks
- empty lagoons, perforate or remove liners, re-grade to surface topography
- appropriately dispose of solids
- regrade and cover stockpiles at mine facilities
- continue ground water monitoring for at least two years, longer as appropriate
- enact contingency plans if ground water standards are violated
- financial assurance may be required.

Propose additional closure plans in the space below or as an attachment, if appropriate:

_____

_____

_____

_____

_____

_____

Please Note: You must also complete Part C of the application.

Supplemental Instructions for Part B – General Form

B-1. Source(s) of the Discharge.

Be specific in describing all sources. Consider the following examples:

- Municipalities – identify particular industries or specialized facilities contributing wastewater.
- RV Parks – identify showers, dump stations, laundromat, etc.
- Subdivisions – identify homes, apartments, commercial developments, water softener backwash, etc.
- Landfarms or disposal facilities – specify type of materials accepted, e.g., residential septage, car wash grit trap waste, contaminated soils/water, treated municipal sludge, etc.
- Dairies – identify milking parlors, type of washdown used, sources of stormwater runoff, etc.
- Schools – identify cafeteria, gym, showers, etc.
- Truck stops – identify restaurant, showers, car wash, etc.
- Facilities receiving reclaimed wastewater – identify the treatment facility providing the reclaimed wastewater.
- Food processing and industrial facilities – describe the processes which produce the waste stream and chemicals used.
- Mines – identify processes including beneficiation, tailing, waste rock, leach facilities, pipelines, ponds, catchments, booster stations, in-situ leach facilities.

You do not need to include solid wastes, hazardous wastes or discharges being managed under other permits; however, these should be listed under Item C-7 in Part C of the application.

B-2. Discharge Quantity.

Your Discharge Permit will allow for the treatment, processing and/or discharge of up to a specified volume, generally, a maximum number of gallons per day. The flow at your facility on any given day must not exceed this "maximum discharge volume." It is determined based on the expected contributions from the sources you identified in Item B-1.

NMED will carefully review the basis of the maximum discharge volume you propose. Show all your calculations and assumptions.

Animal feeding operations must provide calculations based on the number of animals and water conservation practices in place.

Landfarms, disposal facilities, processing facilities typically identify the expected number of loads to be delivered.

For septic systems and wastewater treatment plants, the maximum discharge volume is also referred to as the "design flow." It includes a peaking or safety factor to guard against back-ups and overflows.

Municipal wastewater treatment facilities should identify the population served, growth assumptions, and expected per capita usage considering any contributing industries.

On-site domestic wastewater treatment facilities should rely on published design flows such as those provided in the NMED Liquid Waste Regulations (20.7.3 NMAC), the Uniform Plumbing Code or the USEPA On-site Wastewater Treatment Systems Manual.

For existing facilities, the maximum discharge volume may be based on a record of measured flows if no changes are anticipated. At least two years of flow data must be submitted, and the highest monthly discharge volume must be multiplied by a peaking factor of 1.5.

NMED will verify that your proposed or existing facility can handle maximum discharge volume you propose.

B-11. Past Monitoring Results.

A complete list of ground water standards can be found in Section 20.6.2.3103 NMAC. The standards for contaminants most frequently monitored under Discharge Permits are as follows:

Nitrate-nitrogen (NO_3-N) ..... 10 mg/L
Chloride ..... 250 mg/L
Total dissolved solids (TDS).... 1000 mg/L
Sulfate (SO_4) ..... 600 mg/L
pH ..... between 6 and 9

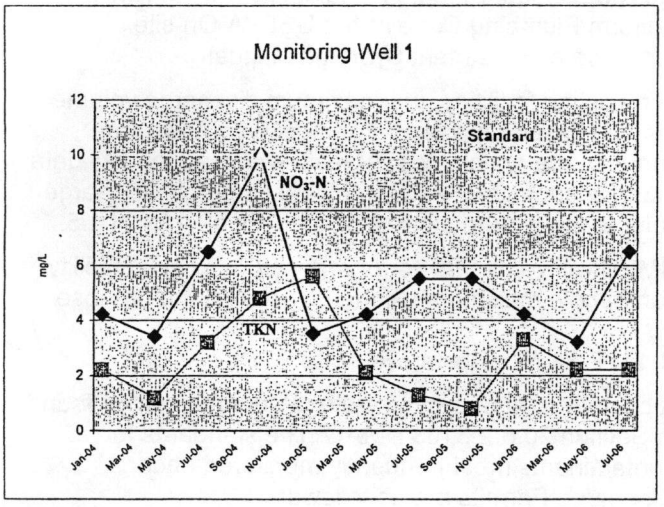
There is no ground water standard for total Kjeldahl nitrogen (TKN). Because TKN converts readily to nitrate as it moves through the vadose zone, however, concentrations approaching or exceeding 10 mg/L are of concern.

Additional parameters typically apply at mining or industrial facilities.

Some ground waters in the state have TDS or chloride concentrations that naturally exceed these standards. In that case, the standard is the naturally occurring level. You must provide documentation of such elevated natural conditions, such as analytical results from a non-impacted well.

An example table and graph follow:

Date	Monitoring Well 1	
	NO3-N	TKN
Jan-04	4.2	2.2
Apr-04	3.4	1.2
Jul-04	6.5	3.2
Oct-04	10	4.8
Jan-05	3.5	5.6
Apr-05	4.2	2.1
Jul-05	5.5	1.3
Oct-05	5.5	0.8
Jan-06	4.2	3.3
Apr-06	3.2	2.2
Jul-06	6.5	2.2



B-12. Discharge Volumes.

You must provide a method for measuring the discharge volume (Section 20.6.2.3109.H.1 NMAC). At facilities with treatment or storage lagoons, it is necessary to measure both the volume entering the treatment system as well as the volume ultimately discharged.

If you land apply wastewater to more that one discharge location, you must be able to track the volume to each location.

If your facility is small and relies on gravity to carry wastewater to the treatment and disposal system, it may be acceptable to estimate the wastewater flow. This can be done by metering water usage and deducting the volume of water used for fresh-water irrigation, swimming pools, evaporative cooling, livestock watering or other uses that do not result in wastewater flowing to the treatment system.

GROUND WATER DISCHARGE PERMIT APPLICATION
PART C: SITE INFORMATION
All Facilities

C-1. **Area Map.** Attach a current area map showing roads and clearly mark the location of your facility.

C-2. **Directions to Site.** Provide driving directions to the site from the nearest town or, if located in a town, from an easily identifiable location.

_____

_____

_____

_____

C-3. **Topographic Map.** Attach a copy of the appropriate US Geological Survey topographic map. You may provide just the relevant portion. USGS maps are available at many outdoor equipment stores or bookstores, from the USGS at www.usgs.gov or 1-888-ASKUSGS, and from commercial websites.

On the map clearly indicate the location of your facility. Also identify the approximate locations of all wells within 1,000 feet of your discharge locations. The Office of the State Engineer has a searchable database of supply wells on its website at www.ose.state.nm.us.

☐ USGS map attached with facility location and neighboring wells marked.

C-4. **Flood Potential.** Attach a copy of the latest Federal Emergency Management Agency (FEMA) flood map with your facility's location clearly marked, to the best of your ability. Information about how to obtain this map, formally known as a Flood Insurance Rate Map (FIRM) is available at www.fema.gov, insurance agencies or county government offices. A site specific analysis may be substituted.

☐ FEMA map or site-specific analysis attached.

☐ Previously submitted and still up-to-date. Submittal date(s): _____

C-5. **Soils.** Attach either:

a) A copy of the appropriate Natural Resource Conservation Service (NRCS) soil survey map, with your site clearly identified to the best of your ability. Include the descriptive information for soils associated with the discharge locations. To obtain the map, contact your local NRCS office – there is one in every county.

b) A site-specific assessment showing the soils classifications. This is preferred over the more generalized NRCS surveys.

☐ NRCS soil survey or site-specific assessment attached.

☐ Previously submitted. Submittal date(s): _____

C-6. **Geology.** Provide information on the geology beneath the site by attaching relevant portions of geologic reports, well logs for on-site or nearby wells, or site specific assessments. A variety of geology publications and resources are available from the New Mexico Bureau of Geology and Mineral Resources at http://geoinfo.nmt.edu or 505-835-5420 (Socorro). Well logs are available from the New Mexico State Engineer's Office at http://www.ose.state.nm.us/.

☐ Geologic report attached. ☐ Well log(s) attached.

☐ Geologic information previously submitted. Submittal date(s): _____

C-7. **Ground Water Hydrology.** Ground water hydrology refers to the occurrence, distribution, movement and chemistry of ground water. The ground water hydrology at your site will determine in large part whether your discharge will adversely affect ground water quality. You may need to present detailed information in order to "demonstrate that the Discharge Permit will not result in concentrations in excess of the standards of Section 20.6.2.3103 NMAC or the presence of any toxic pollutant." (20.2.3106.C.7 NMAC)

At a minimum, provide information below on the direction of ground water flow. Ground water may not flow in the same direction as water on the surface of the ground. A monitoring well survey is one of the best methods to determine the direction of ground water flow at a particular site. Such surveys are routinely required for many Discharge Permit locations.

If a survey is not available, check with well drillers, the city water department, staff at the Office of the State Engineer, environmental consultants or other knowledgeable persons in your area. In addition, relevant reports have been published for some areas. See the OSE website at www.ose.state.nm.us or the NMBGMR website at http://geoinfo.nmt.edu.

Direction of ground water flow: _____

If ground water flow shifts seasonally, describe here: _____

Reference:

☐ On-site well survey attached. ☐ Previously submitted. Submittal date(s): _____

☐ Nearby well survey attached. ☐ Previously submitted. Submittal date(s): _____

☐ Other. Specify: _____

☐ Relevant portion attached.

☐ Previously submitted. Submittal date(s): _____

Attach any additional information available about ground water hydrology at the site.

C-8. **Other Permitted Discharge Locations.** If applicable, list other locations of wastewater or stormwater discharges on your site that are not described in this application and indicate what permits apply to them. Examples include discharges from small septic systems covered by Liquid Waste Permits, discharges to surface waters under a NPDES permit, a discharge covered by a separate Discharge Permit, etc. Be sure these other discharge locations are identified on the site map required in Item B-3.

Discharge Type	Permit Identification

C-9. **Other Information.** Describe below or attach any additional information to demonstrate that your proposed discharge plan will be protective of ground water quality, public health and property.

NMED / GROUND WATER BUREAU
HAROLD RUNNELS BLDG.
1190 ST. FRANCIS DRIVE
PO BOX 5469
SANTA FE, NEW MEXICO 87502-5469

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

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NAME
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DATE 12/21/12

Anthony R. Griggs, Group Leader
LANL Water Quality & RCRA Group
PO Box 1663, Mail Stop ~~K-490~~ MS-A150
Los Alamos, NM 87545