MICHELLE LUJAN GRISHAM
GOVERNOR

JAMES C. KENNEY
CABINET SECRETARY

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

September 8, 2022

Emily Wirth
CEHMM Algae Propagation Ponds
505 N. Main Street
Carlsbad, NM 88220

RE: Draft Discharge Permit Renewal, DP-1634, CEHMM Algae Propagation Ponds

Dear Emily Wirth:

The New Mexico Environment Department (NMED) hereby provides notice to you of the proposed approval of Ground Water Discharge Permit Renewal, DP-1634, (copy enclosed), pursuant to Subsection H of 20.6.2.3108 NMAC. NMED will publish notice of the availability of the draft Discharge Permit in the near future for public review and comment and will forward a copy of that notice to you.

Prior to making a final ruling on the proposed Discharge Permit, NMED will allow 30 days from the date the public notice is published in the newspaper for any interested party, including the Discharge Permit applicant, i.e., yourself, to submit written comments and/or a request a public hearing. A hearing request shall set forth the reasons why a hearing is requested. NMED will hold a hearing in response to a timely hearing request if the NMED Secretary determines there is substantial public interest in the proposed Discharge Permit.

Please review the enclosed draft Discharge Permit carefully. Please be aware that this Discharge Permit may contain conditions that require the permittee to implement operational, monitoring or closure actions by a specified deadline.

Please submit written comments or a request for hearing to my attention at the address below, through the online portal accessible at https://nmed.commentinput.com/comment/search or via email to Jaben.richards@state.nm.us , or acs.general@state.nm.us . If NMED does not receive written comments or a request for hearing during the public comment period, the draft Discharge Permit will become final.

Thank you for your cooperation during the review process. Feel free to contact me with any questions at 505-660-8376.

Sincerely,

Jaben Richards Digitally signed by Jaben Richards
Date: 2022.09.08 19:59:49 -06'00'

Jaben Richards
Team Leader

Enc: Draft Discharge Permit Renewal, DP-1634

cc: Jaben Richards, GWQB ACS Acting Manager
ACS Reading File

MICHELLE LUJAN GRISHAM
GOVERNOR

JAMES C. KENNEY
CABINET SECRETARY

Ground Water Quality Bureau

1190 Saint Francis Drive / PO Box 5469
Santa Fe, NM 87502-5469
Phone (505) 827-2900 Fax (505) 827-2965
www.env.nm.gov

Draft: September 8, 2022

GROUND WATER QUALITY BUREAU
DISCHARGE PERMIT – RENEWAL
Issued under 20.6.2 NMAC

Facility Name:	CEHMM Algae Propagation Impoundments
Discharge Permit No:	DP-1634
Permittee Name:	Emily Wirth
Facility Owner/Operator:	Center of Excellence (CEHMM)
Mailing Address:	505 N Main Street Carlsbad, NM 88220
Facility Location:	157 N Lake Road Artesia, NM 88210 Section 16, Township 18S, Range 26E
County:	Eddy
Permitting Action:	Renewal
Source Classification:	Agriculture – Crop/Food Processing
Permit Issuance Date:	DATE
Permit Expiration Date:	DATE
NMED Permit Contact:	Jaben Richards
Telephone Number/Email:	(505)-660-8376 / *Jaben.richards@state.nm.us*
Main Bureau/Section Contact	(505) 827-2900/ *acs.general@state.nm.us*

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Justin Ball
Chief, Ground Water Quality Bureau
New Mexico Environment Department

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PART A GENERAL INFORMATION

A100 Introduction

A. The New Mexico Environment Department (NMED) issues this Discharge Permit Renewal (Discharge Permit), **DP-1634,** to Emily Wirth (Permittee) pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978, §§ 74-6-1 through 74-6-17, and the New Mexico Ground and Surface Water Protection Regulations, 20.6.2 NMAC. NMED's purpose in issuing this Discharge Permit is to control the discharge of water contaminants from the CEHMM Algae Propagation Impoundments (Facility) for the protection of groundwater and those segments of surface water gaining from groundwater inflow, for present and potential future use as domestic and agricultural water supply and other uses, and to protect public health.

B. The Permittee is discharging up to 1,000,000 gallons per year (gpy) of effluent from the CEHMM Algae Propagation Impoundments. This discharge or leachate may move directly or indirectly into groundwater of the State of New Mexico which has an existing concentration of 10,000 milligrams per liter (mg/L) or less of total dissolved solids (TDS) within the meaning of Subsection A of 20.6.2.3101 NMAC, without exceeding standards of 20.6.2.3103 NMAC for any water contaminant.

C. In issuing this Discharge Permit, NMED has determined that the Permittee has met the requirements of Subsection C of 20.6.2.3109 NMAC. Pursuant to Section 20.6.2.3104 NMAC, it is the Permittee's responsibility to comply with the terms and conditions of this Discharge Permit; failure to do so may result in enforcement action by NMED (20.6.2.1220 NMAC).

A101 Terms of Permit Issuance

A. **Permit Duration** - Pursuant to WQA 74-6-5(I) and Subsection H of 20.6.2.3109 NMAC, the term of a Discharge Permit shall be for the fixed term of **five years** from the effective date of the Discharge Permit.

B. **Permit Fees** – Payment of permit fees is due at the time of Discharge Permit approval. Permit fees shall be paid in a single payment or shall be paid in equal installments on a yearly basis over the term of the Discharge Permit. Single payments shall be remitted to NMED no later than 30 days after the Discharge Permit effective date. Initial installment payments shall be remitted to NMED no later than 30 days after the Discharge Permit effective date; subsequent installment payments shall be remitted to NMED no later than the anniversary of the Discharge Permit effective date. Permit fees are associated with issuance of this Discharge Permit. Nothing in this Discharge Permit relieves the Permittee of the obligation to pay all permit fees assessed by NMED. A Permittee that ceases discharging or does not commence discharging from the facility during the term of the Discharge Permit shall pay all permit fees assessed by NMED. An approved Discharge Permit shall be suspended or terminated if the facility fails to remit an installment payment by its due date. [Subsection F of 20.6.2.3114 NMAC, NMSA 1978, § 74-6-5.K]

C. **Permit Renewal** - To renew this Discharge Permit, the Permittee shall submit, in accordance with 20.6.2.3106 NMAC, an application and any associated fees for renewal, renewal and modification, or renewal for closure at least 120 days before the discharge permit expiration date, unless closure of the facility is approved by NMED before that date.

D. **Transfer of Ownership** - This Discharge Permit is being issued to Emily Wirth as identified in **Section A100** above. In accordance with Section 20.6.2.3111 NMAC, the Permittee, any listed owner(s) of record, and any [other] holder(s) of an expired discharge permit are responsible for complying with the conditions listed herein. If during the duration of this Discharge Permit a change in the list of responsible parties is required, transfer of ownership shall be completed in accordance with Section 20.6.2.3111(A).

A102 Applicable Regulations

A. **Scope** - This Discharge Permit applies solely for the regulation of process wastewater or stormwater generated from facility operations and does not include regulation of domestic wastewater at the facility. Domestic wastewater generated at the facility is treated or disposed of pursuant to 20.7.3 NMAC.

B. The discharge from the facility is not subject to any of the exemptions of Section 20.6.2.3105 NMAC.

C. Groundwater quality as observed in on-site monitoring wells is subject to the criteria of Sections 20.6.2.3101 and 20.6.2.3103 NMAC unless otherwise specified in this Discharge Permit.

D. Complying with the applicable requirements of 20.6.2 NMAC does not relieve a facility's owner, operator or Permittee from complying with the requirements of other applicable local, state and federal regulations or laws.

A103 Facility: Physical Description

A. This facility is located at 157 N. Lake Road, approximately 6 miles south of Artesia, in Section 16, Township 18S, Range 26E, Eddy County, Eddy County.

B. This facility is comprised of the following wastewater system components as identified in the application dated June 1, 2022 and the administrative record which includes the original Discharge Permit issued on June 26, 2007, subsequently modified on September 3, 2010, and then renewed on June 21, 2012 and December 15, 2017 as of the effective date of this Discharge Permit:

1. Wastewater impoundments:

   a. **Algae Pond 1** – a synthetically-lined 1/8 acre impoundment containing nutrient rich water for the cultivation of algae. Algae Pond 1 is located in the northeast corner of the facility.

b. **Algae Pond 2** - a synthetically-lined 1/8 acre impoundment containing nutrient rich water for the cultivation of algae. Algae Pond 2 is located directly south of Algae Pond 1.

c. **Algae Pond 3** - a synthetically-lined 1/4 acre impoundment containing nutrient rich water for the cultivation of algae. Algae Pond 3 is the western most algae pond.

d. **Algae Pond 4** - a synthetically-lined 1/4 acre impoundment containing nutrient rich water for the cultivation of algae. Algae Pond 4 is located east of Algae Pond 3 and south of Algae Pond 2.

e. **Algae Pond 5** - a synthetically-lined 1/4 acre impoundment containing nutrient rich water for the cultivation of algae. Algae Pond 5 is located directly south of Algae Pond 4.

f. **Waste Pond –** a double synthetically-lined 1/4 acre impoundment that receives nutrient rich wastewater from cleaning the algae ponds. Waste Pond is located in the southeast corner of the property.

These system components identified are potential sources of groundwater contamination. **Section B100** lists all wastewater system components authorized to discharge under this Discharge Permit.

A104 Facility: Documented Hydrogeologic Conditions

A. Groundwater most likely to be affected at this facility is at a depth of approximately 54 feet and had a total dissolved solids concentration of 2,950 milligrams per liter.

PART B DISCHARGE REQUIREMENTS

B100 Facility: Authorized Discharge

A. NMED authorizes the Permittee to discharge water contaminants as part of facility operations subject to the following requirements:

1. The Permittee is authorized to discharge up to 1,000,000 gpy of nutrient-enriched water for algae propagation. The wastewater is discharged and contained in five synthetically lined impoundments and a double synthetically lined waste pit. Water is enriched with sodium chloride, plus lesser amounts of other salts, and chemical fertilizers containing nitrogen and phosphorus to be used as an algal growth medium. This nutrient-enriched water is used to fill and maintain the water levels in the algae ponds. The waste pit receives liquefied waste from cleaning the algae ponds for disposal by evaporation.

2. The Permittee is authorized to use the following impoundments for the following purposes in accordance with Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC:

   a. **Algae Pond 1** – authorized to receive nutrient rich water for storage and algae production prior to disposal by evaporation. This impoundment ***exists*** as of the effective date of this Discharge Permit.

b. **Algae Pond 2** – authorized to receive nutrient rich water for storage and algae production prior to disposal by evaporation. This impoundment ***exists*** as of the effective date of this Discharge Permit.

c. **Algae Pond 3** – authorized to receive nutrient rich water for storage and algae production prior to disposal by evaporation. This impoundment ***exists*** as of the effective date of this Discharge Permit.

d. **Algae Pond 4** – authorized to receive nutrient rich water for storage and algae production prior to disposal by evaporation. This impoundment ***exists*** as of the effective date of this Discharge Permit.

e. **Algae Pond 5** – authorized to receive nutrient rich water for storage and algae production prior to disposal by evaporation. This impoundment ***exists*** as of the effective date of this Discharge Permit.

f. **Waste Pond** – authorized to receive wastewater for storage prior to disposal by evaporation. This impoundment ***exists*** as of the effective date of this Discharge Permit.

B. This Discharge Permit authorizes only those discharges specified herein. Any unauthorized discharges, such as spills or leaks must be reported to NMED in a corrective action conducted pursuant to Section 20.6.2.1203 NMAC.

B101 <u>Existing System Controls</u>

A. The following existing system controls at this facility shall be required as described below:

1. **Impoundment(s)** - The Permittee shall maintain operations of the existing impoundment(s) as listed in **Section A103** above in accordance with conditions listed in **Table B2** to achieve compliance with this Discharge Permit. The wastewater impoundment system shall be designed to achieve compliance with the storage capacity requirements of Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC.

2. **Flow Meter(s)** - The facility measures the volume of supply water discharged into the impoundments using the following flow meters:

   a. **Supply Meter** - located on well RA00827 to measure the volume of all fresh water contributing to the wastewater discharged to the algae ponds; providing an estimate of the volume of wastewater generated from algae production.

3. **Monitoring Wells** - The facility uses the following monitoring wells to supply data representative of groundwater quality [Subsection A of 20.6.2.3107 NMAC]:

   a. **MW-1** - hydrologically cross-gradient/downgradient of Algae Pond 1. Located directly east of Algae Pond 1.

   b. **MW-2** - hydrologically downgradient of Algae Ponds 1, 2 and 4. Located directly west of Algae Pond 4.

   c. **MW-3** - hydrologically upgradient of the facility. Located southwest of Algae Pond 3.

d. **MW-4** - hydrologically downgradient of Algae Ponds 3 and 5 and the Waste Pond. Located in the southeast corner of the facility.

B102 <u>Conditions for Operation</u>

A. NMED has reviewed the permit application for the proposed facility and has determined that the provisions of the applicable groundwater quality standards will be met in accordance with this Discharge Permit. General conditions for all Discharge Permits issued by the Ground Water Quality Bureau pursuant to NMAC 20.6.2 are summarized on **Table B1**. Unless otherwise specified in Parts A or B of this Discharge Permit, both the general conditions for a facility discharge permit (as listed in this part) and facility-specific conditions as listed are mandated to assure continued compliance.

Table B1
General Discharge Permit Conditions:

Engineering and Surveying

Table B1
General Discharge Permit Conditions:

a) None required.
Operations and Maintenance
b) Operate in a manner such that standards and requirements of Sections 20.6.2.3101 and 20.6.2.3103 NMAC are not violated. c) Maintain all fencing around the facility to control access by the general public and animals. d) Maintain all signage indicating that the wastewater at the facility is not potable. All signage shall be printed in English and Spanish and shall remain visible and legible. e) Repair or replace compromised pipe(s) or fixture(s) within 72 hours of discovery.
Inspection and Monitoring
f) Visually inspect all facility pipes and fixtures on a weekly basis for evidence of leaks or failure. [20.6.2.3107 NMAC]
Recordkeeping and Reporting
g) Maintain written records at the facility of any inspection(s), repairs and maintenance conducted on facility infrastructure as related the wastewater management system. h) Conduct the monitoring, reporting, and other requirements in accordance with the monitoring requirements of this Discharge Permit. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC] i) Unless otherwise specified by this Discharge Permit, or approved in writing by NMED, the Permittee shall use sampling and analytical techniques that conform with the references listed in Subsection B of 20.6.2.3107 NMAC j) Unless otherwise identified in this Discharge Permit, submit monitoring reports to NMED annually according to the following schedule: [Subsection A of 20.6.2.3107 NMAC] • January 1 through December 31 – report by February 1 **(Annual)** k) Retain required records for a minimum period of five years from the date of any sample collection, measurement, report or application in accordance with 20.6.2.3107 NMAC, 74-6-5 WQA.

B. **<u>Impoundment(s)</u> -** The Permittee shall manage all impoundments at the facility in accordance with 20.6.2.3107 and 20.6.2.3109 NMAC and the conditions summarized in **Table B2** below.

Table B2
Impoundment(s)

Engineering, Surveying and Construction and/or Improvements
a) None required.
Operations and Maintenance of All Impoundments
b) The wastewater impoundment(s) shall be designed to contain the maximum daily discharge volume authorized by the Discharge Permit and two feet of freeboard. Design calculations may consider seasonal discharge patterns.

Table B2
Impoundment(s)

The Permittee shall operate and maintain the wastewater impoundment system for the purpose of storing and managing wastewater at the facility. In order to maintain the required capacity, solids shall be removed from the impoundment [system] as needed in a manner that is protective of the liner. Solids shall be stored and transported off-site in accordance with the conditions of this Discharge Permit.

c) Maintain impoundments to prevent conditions which could affect the structural integrity of the impoundments and associated liners. Such conditions include or may be characterized by the following:

- Erosion damage
- Animal burrows or other damage
- The presence of large debris or large quantities of debris in the impoundment
- Evidence of seepage
- Evidence of berm subsidence
- The presence of vegetation, including aquatic plants, weeds, woody shrubs or trees growing within five feet of the top inside edge of a sub-grade impoundment, within five feet of the toe of the outside berm of an above-grade impoundment, or within the impoundment itself. Vegetation growing around the impoundment shall be routinely controlled by mechanical removal in a manner that is protective of the impoundment liner.

d) The Permittee shall preserve a minimum of two feet of freeboard between the liquid level in the impoundment(s) and the elevation of the top of the impoundment liner. In the event that the Permittee determines that two feet of freeboard cannot be preserved in the impoundment, the Permittee shall enact the contingency plan set forth in this Discharge Permit. Repair or replace the faulty pipe(s) or fixture(s) within 72 hours of discovery of an unauthorized discharge.

Inspection and Monitoring All Impoundments

e) Visually inspect impoundments and surrounding berms on a monthly basis to ensure proper condition and control vegetation growing around the impoundments in a manner that is protective of the liners.

f) While in active operation, visually inspect pipes and fixtures on a weekly basis for evidence of leaks or failure. In areas where pipes and fixtures cannot be visually inspected because they are buried, visually inspect the area directly surrounding the features for evidence of leaks or failure (e.g., saturated surface soil, surfacing wastewater, etc.).

g) While in active operation, the Permittee shall collect a composite wastewater sample on a semi-annual basis (once every six months) from each impoundment. The composite sample(s) shall consist of a minimum of six equal sub-samples collected around the entire perimeter of the evaporative impoundment and thoroughly mixed. The composite sample(s) shall be analyzed for TKN, NO_3-N, TDS and Cl. Samples shall be properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. Analytical results shall be submitted to NMED in the **annual monitoring reports**.

Recordkeeping and Reporting All Impoundments

Table B2
Impoundment(s)

h) Report any unauthorized discharges to NMED pursuant to 20.6.2.1203 NMAC.
i) Unless otherwise specified in this Discharge Permit, submit all monitoring information in accordance with the general reporting schedule listed in Table B1 of this Discharge Permit.
j) Notify NMED within 24 hours of discovery of any observed impoundment condition(s) that may impact the structural integrity of a berm or liner or that may result in an unauthorized discharge. [20.6.2.3107 NMAC]
k) Maintain written records at the facility of all facility inspections including repairs and replacements.

C. **Solids Management -** The Permittee shall mange all solids at the facility in accordance with 20.6.2.3101 NMAC and the conditions summarized in **Table B3** below.

Table B3
Solids Management

Engineering and Surveying
a) None required.
Operations and Maintenance
b) The Permittee shall store and remove solids separated from the wastewater in a manner and frequency necessary to prevent the contamination of groundwater. Solids removed from the impoundments shall be contained, transported, and disposed of in accordance with all local, state, and federal regulations. Solids shall be contained in a waste disposal bin prior to being hauled offsite for final disposal.
Inspection and Monitoring
c) None required.
Recordkeeping and Reporting
d) None required.

D. **Flow Meters** – Pursuant to 20.6.2.3107 (A) and 20.6.2.3109 (C), the Permittee shall employ a flow metering system that uses flow measurement devices (flow meters) to measure the volume of all fresh water contributing to the wastewater discharged to the impoundments. All flow meters employed at the facility shall be managed in accordance with the conditions listed in **Table B4** below.

Table B4
Flow Meters

Engineering and Surveying
a) None required.

Table B4
Flow Meters

Operations and Maintenance
b) All flow meters shall be calibrated in accordance with the manufacturer's requirements prior to installation or reinstallation following repair.
Inspection and Monitoring
c) Using flow meter(s) installed on the fresh water supply line(s), measure the volume of all sources contributing to the wastewater discharged to the impoundment(s) authorized to contain wastewater. Readings from flow meter(s) on water supply lines are used to estimate wastewater volumes discharged to impoundment system without adjustments or deductions to the meter readings. The monthly meter readings, estimated monthly and average daily discharge volumes, and notes (i.e a clear designation of the well, the date of the meter reading, a decimal point in the number, and the units of the number) shall be submitted to NMED in the Annual Monitoring Report. f) While in active operation, visually inspect flow meters on a weekly basis for evidence of malfunction. If a visual inspection indicates a flow meter is not functioning to measure flow, the Permittee shall initiate repair or replacement of the meter within 30 days of discovery.
Recordkeeping and Reporting
g) Maintain copies of the manufacturer's certificate of calibration and the manufacturer's recommended maintenance schedule at the facility. h) While in active operation, record of meter readings at intervals not to exceed monthly. The average daily discharge volume for each recording interval shall be calculated by dividing the difference between the meter readings by the number of days between meter readings. i) Record meter readings (without adjustments or deductions) and submit in the **Annual Monitoring Report due by DATE**. Include the date, time and units of each measurement, and calculations for the average daily volumes of wastewater discharged from the processing area, reported in gallons per day. j) For meters requiring repair, submit a report to NMED with the subsequent monitoring report following the repair that includes a description of the malfunction, a statement verifying the repair, and a copy of the manufacturer's or repairer's certificate of calibration. k) For meters requiring replacement, submit a report to NMED with the subsequent monitoring report following the replacement that includes plans for the device, a copy of the manufacturer's certificate of calibration, and a copy of the manufacturer's recommended maintenance schedule. l) The Permittee shall maintain a log of repairs. The log shall be available, at all times, for NMED inspection.

E. **Monitoring Well(s)** - Pursuant to 20.6.2.3107 (A) and 20.6.2.3109 (C), the Permittee is required to install monitoring wells at appropriate depths and locations to monitor groundwater quality. The approved groundwater monitoring well system at the facility is detailed in **Table B5** below.

Table B5
Groundwater Monitoring Wells

Engineering and Surveying
a) None required.
Operations and Maintenance
b) None required.
Inspection and Monitoring
c) While the facility is not operational, perform annual groundwater sampling for all facility monitoring wells as identified in Section B101 A.3 and analyze the samples for dissolved TKN, NO_3-N, TDS and Cl. Groundwater sample collection, preservation, transport and analysis shall be performed according to the following procedure: • Measure the depth-to-most-shallow groundwater from the top of the well casing to the nearest hundredth of a foot. • Purge three well volumes of water from the well prior to sample collection. • Obtain samples from the well for analysis. • Properly prepare, preserve and transport samples. • Analyze samples in accordance with the methods authorized in this Discharge Permit. Depth-to-most-shallow groundwater measurements, analytical results, including the laboratory QA/QC summary report, and a facility layout map showing the location and number of each well shall be submitted to NMED in the **Annual Monitoring Report.**
d) While the facility is in active operation, perform quarterly groundwater sampling for all facility monitoring wells as identified in Section B101 A.3 and analyze the samples for dissolved TKN, NO_3-N, TDS and Cl. Groundwater sample collection, preservation, transport and analysis shall be performed according to the following procedure: • Measure the depth-to-most-shallow groundwater from the top of the well casing to the nearest hundredth of a foot. • Purge three well volumes of water from the well prior to sample collection. • Obtain samples from the well for analysis. • Properly prepare, preserve and transport samples. • Analyze samples in accordance with the methods authorized in this Discharge Permit. e) Depth-to-most-shallow groundwater measurements, analytical results, including the laboratory QA/QC summary report, and a facility layout map showing the location and number of each well shall be submitted to NMED in the **Annual Monitoring Report**
f) The Permittee shall develop a groundwater elevation contour map on a quarterly (if facility is in active operation) or annual (if facility is not operational) basis using the top of casing elevation data from the monitoring well survey and quarterly (if facility is in active operation) or annual (if facility is not operational) depth-to-most-shallow groundwater measurements obtained from the groundwater monitoring wells required by this Discharge Permit. The groundwater elevation contour map shall depict the groundwater flow direction based on the groundwater elevation contours. Groundwater elevations between monitoring well locations shall be estimated using common interpolation methods. A contour interval appropriate to the data shall be used, but in no case shall the interval be greater than two feet. Groundwater elevation

Table B5
Groundwater Monitoring Wells

contour maps shall depict the groundwater flow direction, using arrows, based on the orientation of the groundwater elevation contours, and the location and identification of each monitoring well and contaminant source. The groundwater elevation contour map shall be submitted to NMED in the **Annual Monitoring Report.**
g) Prior to the expiration date of this Discharge Permit, NMED shall have the option to perform one downhole inspection of each monitoring well identified in this Discharge Permit. NMED shall establish the inspection date and provide at least 60 days' notice to the Permittee by certified mail. The Permittee shall have any existing dedicated pumps removed at least 48 hours prior to NMED inspection to allow adequate settling time of any sediment agitated as a result of pump removal.
Recordkeeping and Reporting
h) An **Annual Monitoring Report** shall be filed with NMED in accordance with the general reporting schedule listed in **Table B1**. Each **Annual Monitoring Report** shall contain, at a minimum, the following information: • Facility map with location and number of each well in relation to the contamination source it is intended to monitor • Depth-to-shallowest groundwater measurements • Field parameter measurements and parameter stabilization log • Analytical results (including the laboratory quality assurance and quality control summary report) • Groundwater elevation contour maps utilizing elevation contours of 2 ft or less

B103 <u>Facility: Conditions for Closure</u>

A. For permanent closure, the following closure actions shall be completed upon permanent cessation of wastewater discharge:

1. Within 60 days of ceasing discharging to the impoundment(s), the line leading to the impoundment(s) shall be plugged so that a discharge can no longer occur.
2. Within 60 days of ceasing discharging to the impoundment(s), wastewater shall be evaporated or drained from the impoundment and any other wastewater system components and disposed of in accordance with all local, state, and federal regulations. OR discharged from the impoundment and any other wastewater system components to the land application area, as authorized by this Discharge Permit. The discharge of accumulated solids (sludge) from the impoundment to the land application is prohibited.
3. Within 90 days of ceasing discharging to the impoundment(s), the Permittee shall submit a sludge removal and disposal plan to NMED for approval. The Permittee shall initiate implementation of the plan within 30 days following approval by NMED. The sludge removal and disposal plan shall include the following information.
    a) The estimated volume and dry weight of sludge to be removed and disposed,

including measurements and calculations.

b) Analytical results for samples of the sludge taken from the impoundment for TKN, NO_3-N, percent total solids, and any other parameters tested (reported in mg/kg, dry weight basis).

c) The method(s) of sludge removal from the impoundment(s).

d) The method(s) of disposal for all of the sludge (and its contents) removed from the impoundment(s). The method(s) shall comply with all local, state and federal regulations, including 40 CFR Part 503. *Note: A proposal that includes the surface disposal of sludge may be subject to Ground Water Discharge Permitting requirements pursuant to 20.6.2.3104 NMAC that are separate from the requirements of this Discharge Permit.*

e) A schedule for completion of sludge removal and disposal not to exceed two years from the date discharge to the impoundment(s) ceased.

4. Within one year following completion of the sludge removal and disposal, the Permittee shall complete the following closure measures.

   a) Remove all lines leading to and from the impoundment(s), or permanently plug and abandon them in place.

   b) Remove or demolish any other wastewater system components and re-grade area with suitable fill to blend with surface topography, promote positive drainage and prevent ponding.

   c) Perforate or remove the impoundment liner(s).

   d) Fill the impoundment(s) with suitable fill.

   e) Re-grade the impoundment site to blend with surface topography, promote positive drainage and prevent ponding.

5. The Permittee shall continue groundwater monitoring until the requirements of this condition have been met and groundwater monitoring confirms for a minimum of eight (8) consecutive quarterly groundwater sampling events that the standards of Section 20.6.2.3103 NMAC are not exceeded and toxic pollutants are not present in groundwater.

   If monitoring results show that a groundwater quality standard in Section 20.6.2.3103 NMAC is exceeded, the total nitrogen concentration in groundwater exceeds 10 mg/L, or a toxic pollutant as defined in Section of 20.6.2.7 NMAC is present in groundwater, the Permittee shall implement the contingency plan required by this Discharge Permit.

6. Following notification from NMED that post-closure monitoring may cease, the Permittee shall plug and abandon the monitoring well(s) in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011.

7. When all closure and post-closure requirements have been met, the Permittee may request to terminate the Discharge Permit [20.6.2.3109 NMAC, 20.6.2.3107. NMAC].

B104 <u>Facility: Contingency Plan</u>

A. In the event NMED or the Permittee identifies any failures of the Discharge Permit or system not specifically noted herein, NMED may require the Permittee to develop for NMED approval a contingency or corrective action plan and schedule to cope with the failure(s) [20.6.2.3107.A(10) NMAC].

B. Facility conditions that will invariably require Permittee action under one or more contingency plans include:

1. **Exceedance of groundwater quality standards** – In the event that groundwater monitoring indicates that a groundwater quality standard identified in Section 20.6.2.3103 NMAC is exceeded; the total nitrogen concentration in groundwater is greater than 10 mg/L; or a toxic pollutant (defined in Subsection WW of 20.6.2.7 NMAC) is present in a groundwater sample and in any subsequent groundwater sample collected from a monitoring well required by this Discharge Permit, the Permittee shall enact the following contingency plan:

   Within 60 days of the subsequent sample analysis date, the Permittee shall propose measures to ensure that the exceedance of the standard or the presence of a toxic pollutant will be mitigated by submitting a corrective action plan to NMED for approval. The corrective action plan shall include a description of the proposed actions to control the source and an associated completion schedule. The plan shall be enacted as approved by NMED.

   Once invoked (whether during the term of this Discharge Permit; or after the term of this Discharge Permit and prior to the completion of the Discharge Permit closure plan requirements), this condition shall apply until the Permittee has fulfilled the requirements of this condition and groundwater monitoring confirms for a minimum of two years of consecutive groundwater sampling events that the standards of Section 20.6.2.3103 NMAC are not exceeded and toxic pollutants are not present in groundwater.

2. **Ineffective groundwater monitoring well(s)** – In the event that information available to NMED indicates that a well(s) is not constructed in a manner consistent with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions, Revision 1.1, March 2011*; contains insufficient water to effectively monitor groundwater quality; or is improperly located the Permittee shall install a replacement well(s) and shall survey the replacement monitoring well(s) within 120 days following notification from NMED.

   Replacement well location(s) shall be approved by NMED prior to installation and completed in accordance with the attachment titled Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions, Revision 1.1, March 2011. The Permittee shall submit construction and lithologic logs, survey data and a groundwater elevation contour map to NMED within 60 days following well completion.

   Upon completion of the replacement monitoring well(s), the monitoring well(s) requiring replacement shall be properly plugged and abandoned. Well plugging, abandonment and documentation of the abandonment procedures shall be completed in accordance with the attachment titled Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions, Revision 1.1, March 2011, and all applicable local, state, and

federal regulations. The well abandonment documentation shall be submitted to NMED within 60 days of completion of well plugging activities.

3. **Exceedance(s) of permitted maximum daily discharge volume** - The maximum daily discharge volume authorized by this Discharge Permit is exceeded by more than ten percent for any four average daily discharge volumes within any 12-week period the Permittee shall submit a corrective action plan to reduce the discharge volume for NMED approval.

4. **Insufficient impoundment capacity** – In the event a survey, capacity calculations, or settled solids thickness measurements indicate an existing impoundment is not capable of meeting the capacity the Permittee shall submit a corrective action plan for NMED approval.

   The plan may include, but is not limited to, proposals for constructing an additional impoundment, reducing the discharge volume, removing accumulated solids, changing wastewater management practices, or installing an advanced treatment system. The corrective action plan shall include a schedule for implementation through completion of corrective actions. The corrective action plan schedule shall propose completion not to exceed one year from the submittal date of the initial corrective action plan. The Permittee shall initiate implementation of the plan following approval by NMED. Should the corrective action plan include removal of accumulated solids, solids shall be removed from the impoundment in a manner that is protective of the impoundment liner. The plan shall include the method of removal, and locations and methods for storage and disposal (or land application, if authorized) of the solids.

5. **Inability to maintain required freeboard** - A minimum of two feet of freeboard cannot be preserved in one or more wastewater impoundment(s).

   In the event that two feet of freeboard cannot be restored within a period of 72 hours following discovery, the Permittee shall propose actions to be immediately implemented to restore two feet of freeboard by submitting a short-term corrective action plan to NMED for approval. Examples of short-term corrective actions include: removing excess wastewater from the impoundment through pumping and hauling; or reducing the volume of wastewater discharged to the impoundment. The plan shall include a schedule for completion of corrective actions and shall be submitted within 15 days following the date when the two feet of freeboard limit was initially discovered. The Permittee shall initiate implementation of the plan following approval by NMED.

6. **Impoundment(s) structural integrity compromised** - Any damage to the berms or the liner of an impoundment or any condition that exists that may compromise the structural integrity of the impoundment.

   The Permittee shall propose the repair or replacement of the impoundment liner(s) by submitting a corrective action plan to NMED for approval. The plan shall be submitted to NMED within 30 days after discovery by the Permittee or following notification from NMED that significant liner damage is evident. The corrective action plan shall include a schedule for completion of corrective actions and the Permittee shall initiate implementation of the plan following approval by NMED.

7. **Spills, leaks, unauthorized discharge** – Any spill or release that is not authorized under this Discharge Permit. the Permittee shall comply with the requirements of Sections 20.6.2.1203 NMAC, and shall submit to NMED all information or documentation required by the applicable portions of Sections 20.6.2.1203 NMAC.

C. The Permittee may be required to abate water pollution pursuant to Sections 20.6.2.4000 through 20.6.2.4115 NMAC, should the corrective action plan not result in compliance with the standards and requirements set forth in Section 20.6.2.4103 NMAC within 180 days of confirmation of groundwater contamination.

PART C GENERAL TERMS AND CONDITIONS

C100 Legal

A. Nothing in this Discharge Permit in any way, relieves the Permittee of the obligation to comply with all applicable federal, state, and local laws, regulations, permits or orders [20.6.2 NMAC].

B. Pursuant to Section 20.6.2.3109 NMAC, NMED reserves the right to require a Discharge Permit Modification in the event NMED determines that the requirements of 20.6.2 NMAC are being or may be violated or the standards of Section 20.6.2.3103 NMAC are being or may be violated. This may include a determination that structural controls and/or management practices approved under this Discharge Permit are not protective of groundwater quality, and NMED may require more stringent actions to protect groundwater quality. NMED may require the Permittee to implement abatement of water pollution and remediate groundwater quality.

C. Any violation of the requirements and conditions of this Discharge Permit, including any failure to allow NMED staff to enter and inspect records or facilities, or any refusal or failure to provide NMED with records or information, may subject the Permittee to a civil enforcement action. Pursuant to WQA 74-6-10(A) and (B), such action may include a compliance order requiring compliance immediately or in a specified time, assessing a civil penalty, modifying or terminating the Discharge Permit, or any combination of the foregoing; or an action in district court seeking injunctive relief, civil penalties, or both. Pursuant to WQA 74-6-10(C) and 74-6-10.1, civil penalties of up to $15,000 per day of noncompliance may be assessed for each violation of the WQA 74-6-5, the 20.6.2 NMAC, or this Discharge Permit, and civil penalties of up to $10,000 per day of noncompliance may be assessed for each violation of any other provision of the WQA, or any regulation, standard, or order adopted pursuant to such other provision. In any action to enforce this Discharge Permit, the Permittee waives any objection to the admissibility as evidence of any data generated pursuant to this Discharge Permit. [74-6-10 WQA, 74-6-10.1 WQA]

D. Pursuant to WQA 74-6-10.2(A-F), NMED may assess criminal penalties for any person who knowingly violates or knowingly causes or allows another person to:

1. Make any false material statement, representation, certification or omission of material fact in an application, record, report, plan or other document filed, submitted or required to be maintained under the WQA;
2. Falsify, tamper with or render inaccurate any monitoring device, method or record required to be maintained under the WQA; or
3. Fail to monitor, sample or report as required by a permit issued pursuant to a state or federal law or regulation, is subject to felony charges and shall be sentenced in accordance with the provisions of Section 31-18-15 NMSA 1978.

E. The Permittee shall notify the proposed transferee in writing of the existence of this Discharge Permit and include a copy of this Discharge Permit with the notice in accordance with 20.6.2.3111 NMAC, prior to the transfer of any ownership, control, or possession of this permitted facility or any portion thereof. The transferee(s) shall notify NMED, in writing, of the date of transfer of ownership and provide contact information for the new owner(s) pursuant to Subsection B of 20.6.2.3111 NMAC. Submit to NMED notification of the transfer within 30 days of the ownership transfer date. [20.6.2.3111 NMAC]

F. Pursuant to WQA 74-6-5(o), the Permittee has a right to appeal the conditions and requirements as outlined in this Discharge Permit through filing a petition for review before the WQCC. Such petition shall be in writing to the WQCC within thirty (30) days of the receipt of this Discharge Permit. Unless a timely petition for review is made, the decision of NMED shall be final and not subject to judicial review.

C101 <u>General Inspection and Entry Requirements</u>

A. Nothing in this Discharge Permit limits in any way, the inspection and entry authority of NMED under the WQA, 20.6.2 NMAC, or any other applicable law or regulation. [20.6.2.3107 NMAC, 74-6-9(B) & (E) WQA]

B. The Permittee shall allow the Secretary or an authorized representative, upon the presentation of credentials, to [20.6.2.3107.D NMAC, 74-6-9(B) & (E) WQA]:

1. Enter at regular business hours or at other reasonable times upon the Permittee's premises or other location where records must be kept under the conditions of this Discharge Permit, 20.6.2 NMAC, or any other applicable law or regulation.
2. Inspect and copy, during regular business hours or at other reasonable times, any records required to be kept under the conditions of this Discharge Permit, 20.6.2 NMAC, or any other applicable law or regulation.
3. Inspect, at regular business hours or at other reasonable times, any facility, equipment (including monitoring and control equipment or treatment works), practices or operations regulated or required under this Discharge Permit, 20.6.2 NMAC, or any other applicable law or regulation.
4. Sample or monitor, at reasonable times for the purpose of assuring compliance with this Discharge Permit or as otherwise authorized by the WQA, any effluent, water contaminant, or receiving water at any location before or after discharge.

C102 General Record Keeping and Reporting Requirements

A. The Permittee shall maintain a written record of the following:

1. Amount of wastewater, effluent, leachate or other wastes discharged pursuant to this Discharge Permit. [20.6.2.3107.A NMAC]
2. Operation, maintenance, and repair of all facilities/equipment used to treat, store or dispose of wastewater; to measure flow rates, to monitor water quality, or to collect other data required by this Discharge Permit. Per Section A of 20.6.2.3107 NMAC, this record shall include:
   a. Repair, replacement or calibration of any monitoring equipment
   b. Repair or replacement of any equipment used in the Permittee's waste or wastewater treatment and disposal system.
3. Any spills, seeps, and/or leaks of effluent, and of leachate and/or process fluids not authorized by this Discharge Permit. [20.6.2.3107.A NMAC]

B. The Permittee shall maintain at its facility a written record of all data and information related to field measurements, sampling, and analysis conducted pursuant to this Discharge Permit. The following information shall be recorded and shall be made available to NMED upon request:

1. The dates, exact place and times of sampling or field measurements;
2. The name and job title of the individuals who performed each sample collection or field measurement;
3. The date of the analysis of each sample;
4. The name and address of the laboratory and the name and job title of the person that performed the analysis of each sample;
5. The analytical technique or method used to analyze each sample or take each field measurement;
6. The results of each analysis or field measurement, including raw data;
7. The results of any split sampling, spikes or repeat sampling; and
8. A description of the quality assurance (QA) and quality control (QC) procedures used.

C. The Permittee shall furnish to NMED, within a reasonable time, any documents or other information which it may request to determine whether cause exists for modifying, terminating and/or renewing this Discharge Permit or to determine compliance with this Discharge Permit. The Permittee shall also furnish to NMED, upon request, copies of documents required to be kept by this Discharge Permit. [20.6.2.3107.D NMAC, 74-6-9(B) & (E) WQA]

C103 Modifications and/or Amendments

A. The Permittee shall notify NMED of any changes to the Permittee's wastewater treatment and disposal system, including any changes in the wastewater flow rate or the volume of wastewater storage, or of any other changes to operations or processes that would result in any significant change in the discharge of water contaminants. The Permittee shall obtain NMED's approval, as a modification to this Discharge Permit pursuant to Subsections E, F, or G of 20.6.2.3109 NMAC, prior to any increase in the quantity discharged, or any increase in the concentration of water contaminants discharged, above those levels approved in this Discharge Permit [20.6.2.3107.C NMAC].

B. The Permittee shall file plans and specifications with NMED for the construction of a wastewater system and for proposed changes that will change substantially the quantity or quality of the discharge from the system. The Permittee shall file plans and specifications prior to the commencement of construction. Changes to the wastewater system having a minor effect on the character of the discharge shall be reported as of January 1 and June 30 of each year to NMED. [20.6.2.1202 NMAC]

Part D MISCELLANEOUS

D100 Acronyms

CL.....chloride
CQA .....construction quality assurance
CQC.....construction quality control
DP .....discharge permit
FEMA .....Federal Emergency Management Administration
FIRM .....flood insurance rate map
gpd .....gallon per day
LADS .....land application data sheet(s)
mg/L .....milligram per liter
mL.....milliliters
NMAC .....New Mexico Administrative Code
NMED .....New Mexico Environment Department
NMP .....Nutrient Management Plan
NMSA .....New Mexico Statutes Annotated
NO_3-N .....nitrate as nitrogen
SDDS .....surface disposal data sheet(s)
TDS .....total dissolved solids
TKN .....total Kjeldahl nitrogen
WQA .....New Mexico Water Quality Act
WQCC .....Water Quality Control Commission