

**GROUND WATER DISCHARGE PERMIT**  
**JUT Demonstration, Inc., DP-1796**

**I. INTRODUCTION**

The New Mexico Environment Department (NMED) issues this Discharge Permit (Discharge Permit), DP-1796, to Joule Demonstration, Inc. (permittee) pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978 §§74-6-1 through 74-6-17, and the New Mexico Water Quality Control Commission (WQCC) Regulations, 20.6.2 NMAC.

NMED's purpose in issuing this Discharge Permit, and in imposing the requirements and conditions specified herein, is to control the discharge of water contaminants from JUT Demonstration, Inc. (facility) into ground and surface water, so as to protect ground and surface water for present and potential future use as domestic and agricultural water supply and other uses and protect public health. In issuing this Discharge Permit, NMED has determined that the requirements of Subsection C of 20.6.2.3109 NMAC have been or will be met. Pursuant to Section 20.6.2.3104 NMAC, it is the responsibility of the permittee to comply with the terms and conditions of this Discharge Permit; failure may result in an enforcement action(s) by NMED (20.6.2.1220 NMAC).

The activities which produce the discharge, the location of the discharge, and the quantity, quality and flow characteristics of the discharge are briefly described as follows:

Up to 40,000 gallons per day (gpd) of wastewater generated by algae aquaculture is discharged to up to four double synthetically lined impoundments (each 1.5 acres) with leak detection for disposal by evaporation. The discharge contains water contaminants which may be elevated above the standards of Section 20.6.2.3103 NMAC and/or the presence of toxic pollutants as defined in Subsection WW of 20.6.2.7 NMAC.

The facility is located at 1020 S. NM Highway 483, approximately five miles west of Hobbs, in Section 33, Township 18S, Range 36E, Lea County. Ground water most likely to be affected is at a depth of approximately 150 feet and has a total dissolved solids concentration of approximately 410 milligrams per liter.

The application (i.e., discharge plan) consists of the materials submitted by the permittee dated March 12, 2012 and materials contained in the administrative record prior to issuance of this Discharge Permit. The discharge shall be managed in accordance with all conditions and requirements of this Discharge Permit.

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 ground water quality, and that more stringent requirements to protect ground water quality may be required by NMED. The permittee may be required to implement abatement of water pollution and remediate ground water quality.

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Issuance of this Discharge Permit does not relieve the permittee of the responsibility to comply with the WQA, WQCC Regulations, and any other applicable federal, state and/or local laws and regulations, such as zoning requirements and nuisance ordinances.

The following acronyms and abbreviations may be used in this Discharge Permit:

Abbreviation	Explanation	Abbreviation	Explanation
BOD <sub>5</sub>	biochemical oxygen demand (5-day)	NTU	nephelometric turbidity units
CFR	Code of Federal Regulations	Org	organisms
Cl	chloride	TDS	total dissolved solids
EPA	United States Environmental Protection Agency	TKN	total Kjeldahl nitrogen
gpd	gallons per day	total nitrogen	= TKN + NO <sub>3</sub> -N
LADS	land application data sheet(s)	TRC	Total Residual Chlorine
mg/L	milligrams per liter	TSS	total suspended solids
mL	milliliters	UPC	Uniform Plumbing Code
NMAC	New Mexico Administrative Code	WQA	New Mexico Water Quality Act
NMED	New Mexico Environment Department	WQCC	Water Quality Control Commission
NMSA	New Mexico Statutes Annotated	WWTF	Wastewater Treatment Facility
NO <sub>3</sub> -N	nitrate-nitrogen		

## II. FINDINGS

In issuing this Discharge Permit, NMED finds:

1. The permittee is discharging effluent or leachate from the facility so that such effluent or leachate may move directly or indirectly into ground water within the meaning of Section 20.6.2.3104 NMAC.
2. The permittee is discharging effluent or leachate from the facility so that such effluent or leachate may move into ground water of the State of New Mexico which has an existing concentration of 10,000 mg/L or less of TDS within the meaning of Subsection A of 20.6.2.3101 NMAC.
3. The discharge from the facility is not subject to any of the exemptions of Section 20.6.2.3105 NMAC.

## III. AUTHORIZATION TO DISCHARGE

Pursuant to 20.6.2.3104 NMAC, it is the responsibility of the permittee to ensure that discharges authorized by this Discharge Permit are consistent with the terms and conditions herein.

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Up to 40,000 gpd of wastewater generated by algae aquaculture is discharged to up to four double synthetically lined impoundments, (each 1.5 acres) with leak detection for disposal by evaporation. [20.6.2.3104 NMAC, Subsection C of 20.6.2.3106 NMAC, Subsection C of 20.6.2.3109 NMAC]

**IV. CONDITIONS**

NMED issues this Discharge Permit for the discharge of water contaminants subject to the following conditions:

**A. OPERATIONAL PLAN**

#	Terms and Conditions
1.	The permittee shall implement the following operational plan to ensure compliance with Title 20, Chapter 6, Parts 1 and 2 NMAC.  [Subsection C of 20.6.2.3109 NMAC]
2.	The permittee shall operate in a manner such that standards and requirements of Sections 20.6.2.3101 and 20.6.2.3103 NMAC are not violated.  [20.6.2.3101 NMAC, 20.6.2.3103 NMAC, Subsection C of 20.6.2.3109 NMAC]

***Operating Conditions***

#	Terms and Conditions
3.	The permittee shall maintain the impoundment liner(s) in such a manner as to avoid conditions which could affect the structural integrity of the impoundment(s) and/or impoundment liner(s). Such conditions include or may be characterized by the following: <ul style="list-style-type: none"><li>• erosion damage;</li><li>• animal burrows or other damage;</li><li>• 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;</li><li>• the presence of large debris or large quantities of debris in the impoundment;</li><li>• evidence of seepage; and</li><li>• evidence of berm subsidence.</li></ul> Vegetation growing around the impoundment shall be routinely controlled by mechanical removal in a manner that is protective of the impoundment liner.

#	Terms and Conditions
	<p>The permittee shall visually inspect the impoundment(s) and surrounding berms on a monthly basis to ensure proper maintenance. In the event that inspection reveals any evidence of damage that threatens the structural integrity of an impoundment berm or liner, or that may result in an unauthorized discharge, the permittee shall enact the contingency plan set forth in this Discharge Permit.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]</p>
4.	<p>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.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]</p>

**B. MONITORING AND REPORTING**

#	Terms and Conditions
5.	<p>The permittee shall conduct the following monitoring, reporting, and other requirements listed below in accordance with the monitoring requirements of this Discharge Permit.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]</p>
6.	<p><b>METHODOLOGY</b> – Unless otherwise approved in writing by NMED, the permittee shall conduct sampling and analysis in accordance with the most recent edition of the following documents:</p> <ul style="list-style-type: none"> <li>a) American Public Health Association, Standard Methods for the Examination of Water and Wastewater (18<sup>th</sup>, 19<sup>th</sup> or current)</li> <li>b) U.S. Environmental Protection Agency, Methods for Chemical Analysis of Water and Waste</li> <li>c) U.S. Geological Survey, Techniques for Water Resources Investigations of the U.S. Geological Survey</li> <li>d) American Society for Testing and Materials, Annual Book of ASTM Standards, Part 31. Water</li> <li>e) U.S. Geological Survey, et al., National Handbook of Recommended Methods for Water Data Acquisition</li> <li>f) Federal Register, latest methods published for monitoring pursuant to Resource Conservation and Recovery Act regulations</li> <li>g) Methods of Soil Analysis: Part 1. Physical and Mineralogical Methods; Part 2. Microbiological and Biochemical Properties; Part 3. Chemical Methods, American Society of Agronomy</li> </ul>

#	Terms and Conditions
	[Subsection B of 20.6.2.3107 NMAC]
7.	<p>The permittee shall submit quarterly monitoring reports to NMED for the most recently completed quarterly period by the 1<sup>st</sup> of February, May, August and November each year.</p> <p>Quarterly monitoring shall be performed during the following periods and submitted as follows:</p> <ul style="list-style-type: none"> <li>• January 1<sup>st</sup> through March 31<sup>st</sup> (first quarter) – <b>due by May 1<sup>st</sup></b></li> <li>• April 1<sup>st</sup> through June 30<sup>th</sup> (second quarter) – <b>due by August 1<sup>st</sup></b></li> <li>• July 1<sup>st</sup> through September 30<sup>th</sup> (third quarter) – <b>due by November 1<sup>st</sup></b></li> <li>• October 1<sup>st</sup> through December 31<sup>st</sup> (fourth quarter) – <b>due by February 1<sup>st</sup></b></li> </ul> <p>[Subsection A of 20.6.2.3107 NMAC]</p>

***Monitoring Actions with Implementation Deadlines***

#	Terms and Conditions
8.	<p>Within 90 days following the effective date of this Discharge Permit (<b>by DATE</b>), the permittee shall install the following flow meters:</p> <ul style="list-style-type: none"> <li>• One totalizing flow meter installed on the wastewater influent line from the processing unit to measure the volume of wastewater discharged to the evaporative disposal system.</li> <li>• One totalizing flow meter installed to measure cooling tower blowdown discharged to the evaporative disposal system.</li> <li>• One totalizing flow meter installed to measure water softener reject water discharged to the evaporative disposal system.</li> </ul> <p>Confirmation of meter installation, type, calibration and locations shall be submitted to NMED.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]</p>
9.	<p>Within 60 days following the effective date of this Discharge Permit (<b>by DATE</b>), the permittee shall submit a written monitoring well location proposal for review and approval by NMED. The proposal shall designate the locations of all monitoring wells required to be installed by this Discharge Permit. The proposal shall include, at a minimum, the following information:</p> <ol style="list-style-type: none"> <li>a) A map showing the proposed location of the monitoring well(s) from the boundary of the source it is intended to monitor.</li> <li>b) A written description of the specific location proposed for the monitoring well(s) including the distance (in feet) and direction of the monitoring well(s) from the edge</li> </ol>

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	<p>of the source it is intended to monitor. Examples include: 35 feet north-northwest of the northern berm of the synthetically lined impoundment; 45 feet due south of the leachfield; 30 feet southeast of the re-use area 150 degrees from north.</p> <p>c) A statement describing the ground water flow direction beneath the facility, and documentation and/or data supporting the determination.</p> <p>All monitoring well locations shall be approved by NMED prior to installation.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
10.	<p>Within 120 days of the effective date of this Discharge Permit (<b>by DATE</b>), the permittee shall install the following new monitoring well.</p> <ul style="list-style-type: none"><li>• One monitoring well (MW-1) located 20 to 50 feet hydrologically downgradient of the first of the two sets of wastewater evaporation impoundments to be constructed.</li></ul> <p>The well shall be completed in accordance with the attachment titled <i>Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions</i>, Revision 1.1, March 2011. Construction and lithologic logs shall be submitted to NMED within 30 days of well completion.</p> <p>Unless otherwise noted in this Discharge Permit, the requirement to install a monitoring well downgradient of a source is <u>not</u> contingent upon construction of or discharge of wastewater to that source, or discharge of wastewater from the facility.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
11.	<p>Within 150 days following the effective date of this Discharge Permit (<b>by DATE</b>), the permittee shall survey all wells approved by NMED for Discharge Permit monitoring purposes including MW-1, the single closest upgradient monitoring well (CU-7) and single closest downgradient monitoring well (CU-10) for Excel Energy to a U.S. Geological Survey (USGS) or other permanent benchmark. Survey data shall include northing, easting and elevation to the nearest hundredth of a foot or shall be in accordance with the “Minimum Standards for Surveying in New Mexico” (12.8.2 NMAC). A survey elevation shall be established at the top-of-casing, with a permanent marking indicating the point of survey. The survey shall bear the seal and signature of a licensed New Mexico professional surveyor (pursuant to the New Mexico Engineering and Surveying Practice Act and the rules promulgated under that authority).</p> <p>Depth-to-most-shallow ground water shall be measured to the nearest hundredth of a foot in all surveyed wells, and the data shall be used to develop a ground water elevation contour map showing the location of all monitoring wells and the direction and gradient of ground water flow at the facility. The data and ground water elevation contour map shall be submitted to NMED within 30 days of survey completion.</p>

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	[Subsection A of 20.6.2.3107 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]
12.	<p>Once prior to the date that the term of this Discharge Permit ends, NMED shall have the option to perform downhole inspections of all monitoring wells 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 sediment agitated from pump removal.</p> <p>Should a facility not have existing dedicated pumps, but decide to install pumps in any of the monitoring wells, NMED shall be notified at least 90 days prior to pump installation so that a downhole well inspection(s) can be scheduled prior to pump placement.</p> <p>[Subsections A and D of 20.6.2.3107 NMAC]</p>

***Ground Water Monitoring Conditions***

#	Terms and Conditions
13.	<p>The permittee shall perform quarterly ground water sampling in the following monitoring wells and analyze the samples for dissolved TKN, NO<sub>3</sub>-N, TDS and Cl:</p> <ul style="list-style-type: none"> <li>• MW-1, intended to be located hydrologically downgradient of of the first of the two sets of wastewater evaporation impoundments to be constructed.</li> </ul> <p>Ground water sample collection, preservation, transport and analysis shall be performed according to the following procedure:</p> <ol style="list-style-type: none"> <li>a) Measure the depth-to-most-shallow ground water from the top of the well casing to the nearest hundredth of a foot.</li> <li>b) Purge three well volumes of water from the well prior to sample collection.</li> <li>c) Obtain samples from the well for analysis.</li> <li>d) Properly prepare, preserve and transport samples.</li> <li>e) Analyze samples in accordance with the methods authorized in this Discharge Permit.</li> </ol> <p>Depth-to-most-shallow ground water 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 quarterly monitoring.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
14.	<p>The permittee shall develop a ground water elevation contour map on a quarterly basis using the top of casing elevation data from the monitoring well survey and quarterly</p>

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	<p>depth-to-most-shallow ground water measurements obtained from the ground water monitoring well required by this Discharge Permit and the two Excel monitoring wells, (CU-7) and (CU-10).</p> <p>The ground water elevation contour map shall depict the ground water flow direction based on the ground water elevation contours. Ground water 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. Ground water elevation contour maps shall depict the ground water flow direction, using arrows, based on the orientation of the ground water elevation contours, and the location and identification of each monitoring well and contaminant source. The ground water elevation contour map shall be submitted to NMED in the quarterly monitoring reports.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>

***Facility Monitoring Conditions***

#	Terms and Conditions
15.	<p>The permittee shall measure the monthly volume of wastewater discharged to the evaporative impoundment system. The permittee shall obtain readings from three totalizing flow meters one each located on the inlet to the evaporation impoundments, on the cooling tower blowdown pipeline and on the water softener regeneration wastewater discharge on a monthly basis and calculate the monthly and average daily volume discharged to the impoundment system. The monthly meter readings, and calculated monthly and average daily discharge volumes shall be submitted to NMED in the quarterly monitoring reports.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]</p>
16.	<p>All flow meters shall be capable of having their accuracy ascertained under actual working (field) conditions. A field calibration method shall be developed for each flow meter and that method shall be used to check the accuracy of each respective meter. Field calibrations shall be performed upon repair or replacement of a flow measurement device and, at a minimum, within 90 days of the effective date of this Discharge Permit (<b>by DATE</b>), and then every other year thereafter.</p> <p>Flow meters shall be calibrated to within plus or minus 10 percent of actual flow, as measured under field conditions. Field calibrations shall be performed by an individual knowledgeable in flow measurement and in the installation/operation of the particular device in use. A flow meter calibration report shall be prepared for each flow measurement device at the frequency calibration is required. The flow meter calibration</p>

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	<p>report shall include the following information:</p> <ol style="list-style-type: none"> <li>a) The location and meter identification.</li> <li>b) The method of flow meter field calibration employed.</li> <li>c) The measured accuracy of each flow meter prior to adjustment indicating the positive or negative offset as a percentage of actual flow as determined by an in-field calibration check.</li> <li>d) The measured accuracy of each flow meter following adjustment, if necessary, indicating the positive or negative offset as a percentage of actual flow of the meter.</li> <li>e) Any flow meter repairs made during the previous year or during field calibration.</li> </ol> <p>The permittee shall maintain records of flow meter calibration(s) at a location accessible for review by NMED during facility inspections.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]</p>
17.	<p>The permittee shall visually inspect flow meters on a monthly basis for evidence of malfunction. If a visual inspection indicates a flow meter is not functioning as required by this Discharge Permit, the permittee shall repair or replace the meter within 30 days of discovery. For <i>repaired</i> meters, the permittee shall submit a report to NMED with the next monitoring report following the repair that includes a description of the malfunction; a statement verifying the repair; and a flow meter field calibration report completed in accordance with the requirements of this Discharge Permit. For <i>replacement</i> meters, the permittee shall submit a report to NMED with the next monitoring report following the replacement that includes a design schematic for the device and a flow meter field calibration report completed in accordance with the requirements of this Discharge Permit.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]</p>
18.	<p>The permittee shall collect a composite wastewater sample on a semi-annual basis (once every six months) from a representative location within each evaporative impoundment (one composite sample per impoundment). The composite sample(s) shall consist of a minimum of six equal aliquots collected around the entire perimeter of the evaporative impoundment and thoroughly mixed. The composite sample shall be analyzed for TKN, NO<sub>3</sub>-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 monitoring reports due by the 1<sup>st</sup> of February, May, August and November each year.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]</p>
19.	<p>The permittee shall inspect the leak detection sump(s) in each evaporation impoundment on a monthly basis for liquid. If liquid is present in the leak detection sump(s), the permittee shall sample the liquid within 15 days and analyze the sample(s) for NO<sub>3</sub>-N,</p>

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	TKN, Cl, TDS, and pH. The inspection records, findings and analytical results shall be submitted to NMED in the quarterly monitoring reports. [20.6.2.3107 NMAC]

**C. CONTINGENCY PLAN**

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20.	<p>In the event that ground water monitoring indicates that a ground water quality standard identified in Section 20.6.2.3103 NMAC is exceeded; the total nitrogen concentration in ground water is greater than 10 mg/L; or a toxic pollutant (defined in Subsection WW of 20.6.2.7 NMAC) is present in a ground water sample and in any subsequent ground water sample collected from a monitoring well required by this Discharge Permit, the permittee shall enact the following contingency plan:</p> <p>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.</p> <p>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 ground water monitoring confirms for a minimum of two years of consecutive ground water sampling events that the standards of Section 20.6.2.3103 NMAC are not exceeded and toxic pollutants are not present in ground water.</p> <p>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 confirmed ground water contamination.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection E of 20.6.2.3109 NMAC]</p>
21.	<p>In the event that information available to NMED indicates that a well(s) is not constructed in a manner consistent with the attachment titled <i>Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions</i>, Revision 1.1, March 2011; contains insufficient water to effectively monitor ground water quality; or is not completed in a manner that is protective of ground water quality, the permittee shall install a replacement well(s) within 120 days following notification from NMED.</p> <p>The permittee shall survey the replacement monitoring well(s) within 150 days following</p>

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	<p>notification from NMED.</p> <p>Replacement well location(s) shall be approved by NMED prior to installation and completed in accordance with the attachment titled <i>Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions</i>, Revision 1.1, March 2011. The permittee shall submit construction and lithologic logs , survey data and a ground water elevation contour map to NMED within 60 days following well completion.</p> <p>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 <i>Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions</i>, 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.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
22.	<p>In the event that ground water flow information obtained pursuant to this Discharge Permit indicates that a monitoring well(s) is not located hydrologically downgradient of the discharge location(s) it is intended to monitor, the permittee shall install a replacement well(s) within 120 days following notification from NMED. The permittee shall survey the replacement monitoring well(s) within 150 days following notification from NMED.</p> <p>Replacement well location(s) shall be approved by NMED prior to installation and completed in accordance with the attachment titled <i>Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions</i>, Revision 1.1, March 2011. The permittee shall submit construction and lithologic logs, survey data and a ground water elevation contour map within 30 days following well completion.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
23.	<p>In the event that analytical results of the liquid present in the leak detection sump(s) indicate that the liquid is consistent with the contents of the evaporative lagoon(s), the permittee shall submit a corrective action plan to NMED which evaluates the primary liner leakage rate and proposes options for stopping or reducing the leakage. The plan shall be submitted for NMED approval within 60 days of the receipt of the analytical results.</p> <p>[20.6.2.3107 NMAC, 20.6.2.3109 NMAC]</p>
24.	<p>In the event that inspection findings reveal significant damage likely to affect the structural integrity of the lined impoundment(s) or its ability to contain contaminants, the</p>

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	<p>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.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]</p>
25.	<p>In the event that a minimum of two feet of freeboard cannot be preserved in the impoundment(s), the permittee shall take actions authorized by this Discharge Permit and all applicable local, state, and federal regulations to restore the required freeboard.</p> <p>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.</p> <p>In the event that the short-term corrective actions failed to restore two feet of freeboard, the permittee shall propose permanent corrective actions in a long-term corrective action plan submitted to NMED within 90 days following failure of the short-term corrective action plan. Examples include: the installation of an additional storage impoundment, or a significant/permanent reduction in the volume of wastewater discharged to the impoundment. The plan shall include a schedule for completion of corrective actions and implementation of the plan shall be initiated following approval by NMED.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
26.	<p>In the event that a release (commonly known as a “spill”) occurs that is not authorized under this Discharge Permit, the permittee shall take measures to mitigate damage from the unauthorized discharge and initiate the notifications and corrective actions required in Section 20.6.2.1203 NMAC and summarized below.</p> <p>Within <u>24 hours</u> following discovery of the unauthorized discharge, the permittee shall verbally notify NMED and provide the following information:</p> <ol style="list-style-type: none"> <li>a) The name, address, and telephone number of the person or persons in charge of the facility, as well as of the owner and/or operator of the facility.</li> <li>b) The name and address of the facility.</li> <li>c) The date, time, location, and duration of the unauthorized discharge.</li> </ol>

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	<p>d) The source and cause of unauthorized discharge.</p> <p>e) A description of the unauthorized discharge, including its estimated chemical composition.</p> <p>f) The estimated volume of the unauthorized discharge.</p> <p>g) Any actions taken to mitigate immediate damage from the unauthorized discharge.</p> <p>Within <u>one week</u> following discovery of the unauthorized discharge, the permittee shall submit written notification to NMED with the information listed above and any pertinent updates.</p> <p>Within <u>15 days</u> following discovery of the unauthorized discharge, the permittee shall submit a corrective action report/plan to NMED describing any corrective actions taken and/or to be taken relative to the unauthorized discharge that includes the following:</p> <p>a) A description of proposed actions to mitigate damage from the unauthorized discharge.</p> <p>b) A description of proposed actions to prevent future unauthorized discharges of this nature.</p> <p>c) A schedule for completion of proposed actions.</p> <p>In the event that the unauthorized discharge causes or may with reasonable probability cause water pollution in excess of the standards and requirements of Section 20.6.2.4103 NMAC, and the water pollution will not be abated within 180 days after notice is required to be given pursuant to Paragraph (1) of Subsection A of 20.6.2.1203 NMAC, the permittee may be required to abate water pollution pursuant to Sections 20.6.2.4000 through 20.6.2.4115 NMAC.</p> <p>Nothing in this condition shall be construed as relieving the permittee of the obligation to comply with all requirements of Section 20.6.2.1203 NMAC.</p> <p>[20.6.2.1203 NMAC]</p>
27.	<p>In the event that NMED or the permittee identifies any failures of the discharge plan or this Discharge Permit not specifically noted herein, NMED may require the permittee to submit a corrective action plan and a schedule for completion of corrective actions to address the failure(s). Additionally, NMED may require a Discharge Permit modification to achieve compliance with 20.6.2 NMAC.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection E of 20.6.2.3109 NMAC]</p>

**D. CLOSURE PLAN**

*Permanent Facility Closure Conditions*

#	Terms and Conditions
28.	<p>In the event a facility, or a component of a facility, is proposed to be permanently closed, upon ceasing discharging, the permittee shall perform the following closure measures:</p> <p>Within <u>60 days</u> of ceasing discharging to the impoundment(s), the line leading to the impoundment shall be plugged so that a discharge can no longer occur.</p> <p>Within <u>60 days</u> of ceasing discharging to the impoundment(s), wastewater shall be drained or evaporated from the impoundment and any other wastewater system components and it shall be disposed of in accordance with all local, state, and federal regulations.</p> <p>Within <u>90 days</u> 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:</p> <ol style="list-style-type: none"> <li>a) The estimated volume and dry weight of sludge to be removed and disposed, including measurements and calculations.</li> <li>b) Analytical results for samples of the sludge taken from the impoundment for TKN, NO<sub>3</sub>-N, percent total solids, and any other parameters tested (reported in mg/kg, dry weight basis).</li> <li>c) The method(s) of sludge <i>removal</i> from the impoundment(s).</li> <li>d) The method(s) of <i>disposal</i> 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. <i>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.</i></li> <li>e) A schedule for completion of sludge removal and disposal not to exceed two years from the date discharge to the impoundment(s) ceased.</li> </ol> <p>Within <u>one year</u> following completion of the sludge removal and disposal, the permittee shall complete the following closure measures:</p> <ol style="list-style-type: none"> <li>a) Remove all lines leading to and from the impoundment(s), or permanently plug and abandon them in place.</li> <li>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.</li> <li>c) Perforate or remove the impoundment liner(s).</li> <li>d) Fill the impoundment(s) with suitable fill.</li> <li>e) Re-grade the impoundment site to blend with surface topography, promote positive</li> </ol>

#	Terms and Conditions
	<p>drainage and prevent ponding.</p> <p>The permittee shall continue ground water monitoring until the requirements of this condition have been met and ground water monitoring confirms for a minimum of two years of consecutive ground water sampling events that the standards of Section 20.6.2.3103 NMAC are not exceeded and toxic pollutants are not present in ground water.</p> <p>If monitoring results show that a ground water quality standard in Section 20.6.2.3103 NMAC is exceeded; the total nitrogen concentration in ground water is greater than 10 mg/L; or a toxic pollutant (defined in Subsection WW of 20.6.2.7 NMAC) is present in ground water, the permittee shall implement the contingency plan required by this Discharge Permit.</p> <p>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 <i>Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions</i>, Revision 1.1, March 2011.</p> <p>When all closure and post-closure requirements have been met, the permittee may submit a written request for termination of the Discharge Permit to NMED.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>

**E. GENERAL TERMS AND CONDITIONS**

#	Terms and Conditions
29.	<p><b>RECORD KEEPING</b> - The permittee shall maintain a written record of the following information:</p> <ol style="list-style-type: none"> <li>a) Information and data used to complete the application for this Discharge Permit.</li> <li>b) Records of any releases (commonly known as “spills”) not authorized under this Discharge Permit and reports submitted pursuant to 20.6.2.1203 NMAC.</li> <li>c) Records of the operation, maintenance, and repair of all facilities/equipment used to treat, store or dispose of wastewater.</li> <li>d) Facility record drawings (plans and specifications) showing the actual construction of the facility and bear the seal and signature of a licensed New Mexico professional engineer.</li> <li>e) Copies of monitoring reports completed and/or submitted to NMED pursuant to this Discharge Permit.</li> <li>f) The volume of wastewater or other wastes discharged pursuant to this Discharge Permit.</li> <li>g) Ground water quality and wastewater quality data collected pursuant to this</li> </ol>

#	Terms and Conditions
	<p>Discharge Permit.</p> <ul style="list-style-type: none"> <li>h) Copies of construction records (well log) for all ground water monitoring wells required to be sampled pursuant to this Discharge Permit.</li> <li>i) Records of the maintenance, repair, replacement or calibration of any monitoring equipment or flow measurement devices required by this Discharge Permit.</li> <li>j) 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:               <ul style="list-style-type: none"> <li>i) The dates, location and times of sampling or field measurements;</li> <li>ii) The name and job title of the individuals who performed each sample collection or field measurement;</li> <li>iii) The sample analysis date of each sample;</li> <li>iv) The name and address of the laboratory, and the name of the signatory authority for the laboratory analysis;</li> <li>v) The analytical technique or method used to analyze each sample or collect each field measurement;</li> <li>vi) The results of each analysis or field measurement, including raw data;</li> <li>vii) The results of any split, spiked, duplicate or repeat sample; and</li> <li>viii) A copy of the laboratory analysis chain-of-custody as well as a description of the quality assurance and quality control procedures used.</li> </ul> </li> </ul> <p>The written record shall be maintained by the permittee at a location accessible during a facility inspection by NMED for a period of at least five years from the date of application, report, collection or measurement and shall be made available to the department upon request.</p> <p>[Subsections A and D of 20.6.2.3107 NMAC]</p>
30.	<p><b>INSPECTION and ENTRY</b> – The permittee shall allow inspection by NMED of the facility and its operations which are subject to this Discharge Permit and the WQCC regulations. NMED may upon presentation of proper credentials, enter at reasonable times upon or through any premises in which a water contaminant source is located or in which are located any records required to be maintained by regulations of the federal government or the WQCC.</p> <p>The permittee shall allow NMED to have access to and reproduce for their use any copy of the records, and to perform assessments, sampling or monitoring during an inspection for the purpose of evaluating compliance with this Discharge Permit and the WQCC regulations.</p> <p>Nothing in this Discharge Permit shall be construed as limiting in any way the inspection and entry authority of NMED under the WQA, the WQCC Regulations, or any other local, state or federal regulations.</p>

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[Effective Date]

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#	Terms and Conditions
	[Subsection D of 20.6.2.3107 NMAC, NMSA 1978, §§ 74-6-9.B and 74-6-9.E]
31.	<p>DUTY to PROVIDE INFORMATION - The permittee shall, upon NMED's request, allow NMED's inspection/duplication of records required by this Discharge Permit and/or furnish to NMED copies of such records.</p> <p>[Subsection D of 20.6.2.3107 NMAC]</p>
32.	<p>MODIFICATIONS and/or AMENDMENTS – In the event the permittee proposes a change to the facility or the facility's discharge that would result in a change in the volume discharged; the location of the discharge; or in the amount or character of water contaminants received, treated or discharged by the facility, the permittee shall notify NMED prior to implementing such changes. The permittee shall obtain approval (which may require modification of this Discharge Permit) by NMED prior to implementing such changes.</p> <p>[Subsection C of 20.6.2.3107 NMAC, Subsections E and G of 20.6.2.3109 NMAC]</p>
33.	<p>PLANS and SPECIFICATIONS – In the event the permittee is proposing to construct a wastewater system or change a process unit of an existing system such that the quantity or quality of the discharge will change substantially from that authorized by this Discharge Permit, the permittee shall submit construction plans and specifications to NMED for the proposed system or process unit prior to the commencement of construction.</p> <p>In the event the permittee implements changes to the wastewater system authorized by this Discharge Permit which result in only a minor effect on the character of the discharge, the permittee shall report such changes (including the submission of record drawings, where applicable) as of January 1 and June 30 of each year to NMED.</p> <p>[Subsections A and C of 20.6.2.1202 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]</p>
34.	<p>CIVIL PENALTIES - 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 WQCC Regulations, 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</p>

#	Terms and Conditions
	<p>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.</p> <p>[20.6.2.1220 NMAC, NMSA 1978, §§ 74-6-10 and 74-6-10.1]</p>
35.	<p><b>CRIMINAL PENALTIES – No person shall:</b></p> <ol style="list-style-type: none"> <li>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;</li> <li>2) falsify, tamper with or render inaccurate any monitoring device, method or record required to be maintained under the WQA; or</li> <li>3) fail to monitor, sample or report as required by a permit issued pursuant to a state or federal law or regulation.</li> </ol> <p>Any person who knowingly violates or knowingly causes or allows another person to violate the requirements of this condition is guilty of a fourth degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who is convicted of a second or subsequent violation of the requirements of this condition is guilty of a third degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who knowingly violates the requirements of this condition or knowingly causes another person to violate the requirements of this condition and thereby causes a substantial adverse environmental impact is guilty of a third degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who knowingly violates the requirements of this condition and knows at the time of the violation that he is creating a substantial danger of death or serious bodily injury to any other person is guilty of a second degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15.</p> <p>[20.6.2.1220 NMAC, NMSA 1978, §§ 74-6-10.2.A through 74-6-10.2.F]</p>
36.	<p><b>COMPLIANCE with OTHER LAWS -</b> Nothing in this Discharge Permit shall be construed in any way as relieving the permittee of the obligation to comply with all applicable federal, state, and local laws, regulations, permits or orders.</p> <p>[NMSA 1978, § 74-6-5.L]</p>
37.	<p><b>RIGHT to APPEAL -</b> The permittee may file a petition for review before the WQCC on this Discharge Permit. Such petition shall be in writing to the WQCC within thirty days of the receipt of postal notice of this Discharge Permit and shall include a statement of the issues to be raised and the relief sought. Unless a timely petition for review is made, the decision of NMED shall be final and not subject to judicial review.</p>

#	Terms and Conditions
	[20.6.2.3112 NMAC, NMSA 1978, § 74-6-5.O]
38.	<p>TRANSFER of DISCHARGE PERMIT - Prior to the transfer of any ownership, control, or possession of this facility or any portion thereof, the permittee shall:</p> <ol style="list-style-type: none"><li>1) notify the proposed transferee in writing of the existence of this Discharge Permit;</li><li>2) include a copy of this Discharge Permit with the notice; and</li><li>3) deliver or send by certified mail to NMED a copy of the notification and proof that such notification has been received by the proposed transferee.</li></ol> <p>Until both ownership and possession of the facility have been transferred to the transferee, the permittee shall continue to be responsible for any discharge from the facility.</p> <p>[20.6.2.3111 NMAC]</p>
39.	<p>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.</p> <p>Permit fees are associated with <u>issuance</u> of this Discharge Permit. Nothing in this Discharge Permit shall be construed as relieving 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.</p> <p>[Subsection F of 20.6.2.3114 NMAC, NMSA 1978, § 74-6-5.K]</p>

**V. PERMIT TERM & SIGNATURE**

EFFECTIVE DATE: [effective date]

TERM ENDS: [expiration date]

[Subsection H of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.I]

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JERRY SCHOEPPNER  
Chief, Ground Water Quality Bureau  
New Mexico Environment Department