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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

August 28, 2023

Jennifer Faler, Area Manager
US Bureau of Reclamation
555 Broadway Blvd., NE, Suite 100
Albuquerque, New Mexico 87102

RE: Draft Discharge Permit Renewal and Modification, DP-1472, Brackish Groundwater National Desalination Research Facility

Dear Jennifer Faler:

The New Mexico Environment Department (NMED) hereby provides notice to the US Bureau of Reclamation of the proposed approval of Ground Water Discharge Permit Renewal and Modification, DP-1472, (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, via email to avery.young@env.nm.gov or to pps.general@env.nm.gov, or directly into the NMED Public Comment Portal at <https://nmed.commentinput.com/comment/search>. 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) 699-8564.

SCIENCE | INNOVATION | COLLABORATION | COMPLIANCE

Ground Water Quality Bureau | 1190 Saint Francis Drive, PO Box 5469, Santa Fe, New Mexico 87502-5469
Telephone (505) 827-2900 | www.env.nm.gov/gwqb/

Jennifer Faler

August 28, 2023

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Sincerely,

Avery Young, Domestic Waste Team Lead

Encl: Draft Discharge Permit Renewal and Modification, DP-1472

cc: Malynda Cappelle, Facility Manager, BGNDRF, mcappelle@usbr.gov



**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Ground Water Quality Bureau

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Santa Fe, NM 87502-5469

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Draft: August 28, 2023

**GROUND WATER QUALITY BUREAU
DISCHARGE PERMIT
Issued under 20.6.2 NMAC**

Facility Name:	Brackish Groundwater National Desalination Research Facility
Discharge Permit Number:	DP-1472
Facility Location:	500 La Velle Rd. Alamogordo, NM
County:	Otero
Permittee:	United States Bureau of Reclamation
Mailing Address:	Jennifer Faler, Area Manager 555 Broadway Blvd., NE, Suite 100 Albuquerque, NM 87102
Facility Contact:	Malynda Cappelle, Facility Manager
Telephone Number/Email:	575-443-6553 / mcappelle@usbr.gov
Permitting Action:	Renewal and Modification
Permit Issuance Date:	DATE
Permit Expiration Date:	DATE
NMED Permit Contact:	Avery Young, Domestic Waste Team Lead
Telephone Number/Email:	505-699-8564 / avery.young@env.nm.gov or 505-827-2900 / pps.general@env.nm.gov

JUSTIN D. BALL
Chief, Ground Water Quality Bureau
New Mexico Environment Department

Date

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Discharge Permit Summary
Groundwater Discharge Permit Guidance for Synthetically Lined Lagoons – Liner
Material and Site Preparation, Revision 0.0, May 2007

I. INTRODUCTION

The New Mexico Environment Department (NMED) issues this groundwater discharge permit Renewal and Modification (Discharge Permit or DP-1472) to the United States Bureau of Reclamation (BoR or 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) Ground and Surface Water Protection 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 the Brackish Groundwater National Desalination Research Facility (BGNDRF or Facility) in order to protect 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. It is NMED's determination in issuing this Discharge Permit that the Permittee has met the requirements of Subsection C of 20.6.2.3109 NMAC. The Permittee is responsible for complying with the terms and conditions of this Discharge Permit pursuant to Section 20.6.2.3104 NMAC; failure to do so may result in enforcement action by NMED (20.6.2.1220 NMAC).

Described below are the activities that produce the discharge, the location of the discharge, and the quantity, quality, and flow characteristics.

The Facility discharges brackish groundwater, desalinated groundwater, and desalination concentrate at a volume up to 107,000 gallons per day (gpd) to three double synthetically lined impoundments equipped with leak detection systems for disposal by evaporation.

The Facility discharges brackish groundwater and desalination concentrate at a volume up to 4,887,765 gallons per year (3 acre-feet per year per acre) at an appropriate agronomic irrigation rate to the five-acre agricultural research area for irrigation and research of salt-tolerant plants. The Facility may discharge concentrate wastewater and brackish groundwater with a total dissolved solids (TDS) concentration up to 4,200 mg/L to the agricultural research area without the installation of a synthetic liner and secondary containment/sump system. The Facility may discharge concentrate wastewater and brackish groundwater that exceed a TDS concentration of 4,200 mg/L to the agricultural research area; however, NMED requires the Facility to install a synthetic liner and secondary containment/sump system to collect and drain potential excess liquid/leachate and transfer any excess liquid/leachate to the double synthetically lined impoundments for disposal by evaporation.

The Facility may only discharge wastewater to the City of Alamogordo through the sanitary sewer system with a pH between 6 and 9 and a perfluorinated chemical (PFC) concentration below 10 ng/L.

The Discharge Permit modification consists of a change in the quality of the wastewater discharge due to the presence of PFCs in three of the supply wells for the Facility.

Discharge Permit Location Information:

Physical Address	500 La Velle Road
Nearest Town/City	Alamogordo
Section, Township, Range	Section 36, Township 16S, Range 09E
County	Otero
Depth to Groundwater	67
Pre-Discharge TDS	4,200

Discharge Permit Issuance History:

Original Permit Issuance	April 4, 2005
Permit Renewal	May 14, 2014

The application (i.e., discharge plan) associated with this Discharge Permit consists of the materials submitted by the Permittee dated January 22, 2019, and a revised application dated February 16, 2023, and materials contained in the administrative record prior to issuance of this Discharge Permit.

The Permittee shall manage the discharge in accordance with all conditions and requirements of this Discharge Permit.

NMED reserves the right to require a Discharge Permit modification in the event NMED determines that the Permittee is or may be violating, or is likely to violate in the future, the requirements of 20.6.2 NMAC or the standards of Section 20.6.2.3103 NMAC. NMED reserves this right pursuant to Section 20.6.2.3109 NMAC. An NMED requirement to modify the Discharge Permit may result from a determination by the department that structural controls and/or management practices approved under this Discharge Permit are insufficiently protective of groundwater quality and human health. NMED reserves the right to require the Permittee to implement abatement of water pollution and remediate groundwater quality.

NMED 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.

This Discharge Permit may use the following acronyms and abbreviations.

Abbreviation	Explanation	Abbreviation	Explanation
BOD ₅	biochemical oxygen demand (5-day)	NMED	New Mexico Environment Department

Abbreviation	Explanation	Abbreviation	Explanation
CAP	Corrective Action Plan	NMSA	New Mexico Statutes Annotated
CFR	Code of Federal Regulations	NO ₃ -N	nitrate-nitrogen
CFU	colony forming unit	NTU	nephelometric turbidity units
Cl	chloride	QA/QC	Quality Assurance/Quality Control
EPA	United States Environmental Protection Agency	TDS	total dissolved solids
Gpd	gallons per day	TKN	total Kjeldahl nitrogen
LAA	land application area	total nitrogen	= TKN + NO ₃ -N
LADS	Land Application Data Sheet(s)	TRC	total residual chlorine
mg/L	milligrams per liter	TSS	total suspended solids
mL	milliliters	WQA	New Mexico Water Quality Act
MPN	most probable number	WQCC	Water Quality Control Commission
NMAC	New Mexico Administrative Code	WWTF	Wastewater Treatment Facility

II. FINDINGS

In issuing this Discharge Permit, NMED finds the following.

1. The Permittee is discharging effluent or leachate from the Facility so that such effluent or leachate may move into groundwater of the State of New Mexico that 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, without exceeding standards of 20.6.2.3103 NMAC for any water contaminant.
2. The Permittee is discharging effluent or leachate from the Facility directly or indirectly into groundwater pursuant to this Discharge Permit and Sections 20.6.2.3000 through 20.6.2.3114 NMAC.
3. The discharge from this Facility has the potential to contain water contaminants or toxic pollutants elevated above the standards of Section 20.6.2.3103 NMAC and is not subject to the exemption at Subsection 20.6.2.3105 NMAC.

III. AUTHORIZATION TO DISCHARGE

The Permittee is responsible for ensuring that discharges authorized by this Discharge Permit are consistent with the terms and conditions herein pursuant to 20.6.2.3104 NMAC.

This Discharge Permit authorizes the Permittee to discharge brackish groundwater, desalinated groundwater, and desalination concentrate up to 107,000 gpd to three double synthetically lined impoundments equipped with leak detection systems for disposal by evaporation.

This Discharge Permit also authorizes the Permittee to discharge at an appropriate agronomic irrigation rate brackish groundwater and desalination concentrate with a maximum TDS concentration of 4,200 mg/L at a volume up to 4,887,765 gallons per year to the five-acre agricultural research area for irrigation and research of salt-tolerant plants. This Discharge Permit requires the Permittee to install a synthetic liner with secondary containment/sump system to capture excess liquid/leachate prior to the Permittee irrigating with brackish groundwater or desalination concentrate with a TDS concentration over 4,200 mg/L.

This Discharge Permit also authorizes the Permittee to only discharge wastewater to the City of Alamogordo through the sanitary sewer system with a pH between 6 and 9 and a PFC concentration below 10 ng/L, which is the agreed upon value between the Facility and the City of Alamogordo in the *Agreement with the City of Alamogordo Concerning Discharge of Concentrate to the Waste Water Treatment Plant* dated March 1, 2004, and updated on January 19, 2023.

[20.6.2.3104 NMAC, Subsection C of 20.6.2.3106 NMAC, Subsection D 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 2 and 4 NMAC. [Subsection C of 20.6.2.3109 NMAC]
2.	The Permittee shall operate in a manner that does not violate standards and requirements of Sections 20.6.2.3101 and 20.6.2.3103 NMAC. [20.6.2.3101 NMAC, 20.6.2.3103 NMAC, Subsection C of 20.6.2.3109 NMAC]

Operational Actions with Implementation Deadlines

#	Terms and Conditions
3.	<p>Within 30 days of completing construction of the full-scale PFC treatment system the Permittee shall submit record drawings to NMED that bear the seal and signature of a licensed New Mexico professional engineer (pursuant to the New Mexico Engineering and Surveying Practice Act and the rules promulgated under that authority) for the constructed full-scale PFC treatment system.</p> <p>[Subsections A and C of 20.6.2.1202 NMAC, Subsection C of 20.6.2.3109 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]</p>
4.	<p>Five business days prior to discharging from the full-scale PFC treatment system, the Permittee shall submit written notification to NMED stating the date the discharge is to commence.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]</p>
5.	<p>Prior to discharging brackish groundwater and/or desalination concentrate to the agricultural research area for a new research project, the Permittee shall submit written notification to NMED stating the date the discharge is to commence and provide the chemical characteristics of the discharge, including the total dissolved concentrations and all standards, except radioactivity, listed in Section 20.6.2.3103 NMAC.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]</p>
6.	<p>A minimum of 90 days prior to construction of the synthetic liner(s) and secondary containment/sump system(s) in the agricultural research area for discharges over 4,200 mg/L of TDS, the Permittee shall submit final construction plans and specifications for the proposed agricultural research area(s). The construction plans and specifications shall bear the seal and signature of a licensed New Mexico professional engineer (pursuant to New Mexico Engineering and Surveying Practice Act and the rules promulgated under that authority) and shall include supporting design calculations.</p> <p>The submitted documentation shall include the following elements.</p> <ol style="list-style-type: none"> a) Details for the construction of the irrigation system, including a secondary containment/sump system and a liner consistent with the attachment titled <i>Ground Water Discharge Permit Conditions for Synthetically Lined Lagoons – Liner Material and Site Preparation</i>, Revision 0.0, May 2007. b) The infrastructure necessary to discharge concentrate wastewater and saline well water to an irrigation system. The Permittee shall size the irrigation area to accommodate the maximum intended daily application volume of brackish groundwater and desalination concentration and to minimize infiltration and runoff.

#	Terms and Conditions
	<p>c) Flow meters to measure the volume of brackish groundwater and desalination concentration discharged to the agricultural research area(s).</p> <p>d) Specifications for all equipment, materials, and installation procedures to be used in the construction of the synthetic liner(s) and secondary containment/sump system(s).</p> <p>Prior to constructing the synthetically lined irrigation area(s) and its associated components (secondary containment/sump system and irrigation system), the Permittee shall obtain written verification from NMED that the plans and specifications meet the requirements of this Discharge Permit.</p> <p>[Subsections A and C 20.6.2.1202 NMAC, Subsection C of 20.6.2.3106 NMAC, Subsection C of 20.6.2.3107 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]</p>

Operating Conditions

#	Terms and Conditions
7.	<p>The Permittee shall maintain fences around the Facility to restrict access by the general public and animals. The fences shall consist of a minimum of six-foot chain link or field fencing and locking gates. The Permittee shall maintain the fences to serve the stated purpose throughout the term of this Discharge Permit.</p> <p>[Subsections B and C of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.D]</p>
8.	<p>The Permittee shall maintain signs indicating that the wastewater at the Facility is not potable. The Permittee shall post signs at the Facility entrance and other areas where there is potential for public contact with wastewater. The Permittee shall print signs in English and Spanish and shall ensure the signs remain visible and legible for the term of this Discharge Permit.</p> <p>[Subsections B and C of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.D]</p>
9.	<p>The Permittee shall maintain the impoundment liners to avoid conditions that could affect the liner or the structural integrity of the impoundments. Characterization of such conditions may include the following:</p> <ul style="list-style-type: none"> • erosion damage; • animal burrows or other damage; • 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

#	Terms and Conditions
	<p>five feet of the toe of the outside berm of an above-grade impoundment, or within the impoundment itself;</p> <ul style="list-style-type: none"> • the presence of large debris or large quantities of debris in the impoundment; • evidence of seepage; or • evidence of berm subsidence. <p>The Permittee shall routinely control vegetation growing around the impoundments by mechanical removal that is protective of the impoundment liner.</p> <p>The Permittee shall visually inspect the impoundments and surrounding berms on a monthly basis to ensure proper maintenance. In the event that an 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 implement the Contingency Plan set forth in this Discharge Permit.</p> <p>The Permittee shall create and maintain a log of all impoundment inspections which describes the date of the inspection, any findings and repairs and the name of the person responsible for the inspection. The Permittee shall make the log available to NMED upon request.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]</p>
10.	<p>The Permittee shall preserve a minimum of two feet of freeboard, i.e., the distance between the highest calculated liquid level in the impoundments and the liquid level which would result in the release of stored liquid from the impoundments.</p> <p>In the event that the Permittee determines that it cannot preserve two feet of freeboard in the impoundment, the Permittee shall implement 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>
11.	<p>The Permittee shall ensure that wastewater discharged to the synthetically lined impoundments does not exceed the following limitation:</p> <p style="text-align: center;">< 2 pH units and > 12.5 pH units.</p> <p>[20.6.2.3109 NMAC]</p>
12.	<p>The Permittee shall inspect the leak detection systems on a monthly basis for the presence of liquid. If liquid is present in the leak detection sump, the Permittee shall evaluate the origin of the liquid by sampling the liquid within 15 days of determining the</p>

#	Terms and Conditions
	<p>presence of the liquid and by analyzing the sample for the constituents listed in Condition 22.</p> <p>In the event that the Permittee determines that water in leak detection sump is similar to the water in the impoundment and indicative of a leak in the impoundment's liner, the Permittee shall implement the related Contingency Plan requirement set forth in this Discharge Permit.</p> <p>The Permittee shall maintain a log of leak detection system inspections which identifies the date of the inspection, all findings, the laboratory analytical data results including the QA/QC summary, and the name of the person responsible for the inspection.</p> <p>The Permittee shall submit a copy of the leak detection system inspection log to NMED in the semi-annual monitoring reports.</p> <p>[20.6.2.3107 NMAC]</p>
13.	<p>Desalination concentrate and/or brackish groundwater discharged to the agricultural research area for irrigation and research of salt-tolerant plants shall not exceed the following limitation:</p> <p style="text-align: center;">Total Dissolved Solids: 4,200 mg/L</p> <p>If the Permittee chooses to irrigate with desalination concentrate and/or brackish groundwater that exceeds the TDS concentration limit of 4,200 mg/L, the Permittee shall install a synthetic liner(s) and secondary containment/sump system(s) under the irrigated area(s). The Permittee must drain all desalination concentrate and brackish groundwater not evapotransported by the research crop from synthetic liner(s) to a secondary containment/sump system(s) so that excess concentrate wastewater and saline well water does not leach below the soil zone. The Permittee shall transfer any excess liquid/leachate collected in the secondary containment/sump system(s) to the double synthetically lined impoundments for final disposal by evaporation.</p> <p>[Subsection A of 20.6.23109 NMAC]</p>
14.	<p>The Permittee shall maintain the full-scale PFC treatment system in accordance with the PFAS Mitigation Plan submitted to NMED on April 25, 2022, and any subsequent updates to the plan.</p> <p>[20.6.2.3109 NMAC]</p>

#	Terms and Conditions
15.	<p>The Permittee shall notify NMED and the City of Alamogordo should the Permittee be in breach of the <i>Agreement with the City of Alamogordo Concerning Discharge of Concentrate to the Waste Water Treatment Plant</i> dated March 1, 2004, and updated on January 19, 2023 or any updates to the agreement within 24 hours following the discovery of the breach.</p> <p>[20.6.2.3109 NMAC]</p>

B. MONITORING AND REPORTING

#	Terms and Conditions
16.	<p>The Permittee shall conduct the 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>
17.	<p>METHODOLOGY – 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.</p> <p>[Subsection B of 20.6.2.3107 NMAC]</p>

Due Dates for Monitoring Reports

#	Terms and Conditions
18.	<p>Semi-annual monitoring - The Permittee shall perform monitoring and other Permit required actions during the following periods and shall submit semi-annual reports to NMED by the following due dates:</p> <ul style="list-style-type: none"> • October 1st through March 31st – due by May 1st; and • April 1st through September 30th – due by November 1st . <p>[Subsection A of 20.6.2.3107 NMAC]</p>

Facility Monitoring Conditions

#	Terms and Conditions
19.	<p>The Permittee shall on a monthly basis measure the volume of brackish groundwater and desalination concentrate discharged to the agricultural research area(s) during the period using a totalizing flow meter.</p> <p>The Permittee shall maintain a log that records the date that discharges occur to <i>each</i> field and the monthly totalizing meter readings and units of measurement. The Permittee shall use the log to calculate the total calendar monthly volume of brackish groundwater and/or desalination concentrate discharged to <i>each</i> field. The Permittee shall submit a copy of the log to NMED in the semi-annual monitoring reports.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]</p>
20.	<p>The Permittee shall on a monthly basis measure the volume of wastewater discharged to the evaporative impoundments during the period.</p> <p>To determine the discharge volume, the Permittee shall obtain readings from a totalizing flow meter located on the discharge line on a monthly basis and calculate the monthly and average daily volume discharged to the impoundments. The Permittee shall submit calendar monthly meter readings, calculated monthly discharge volumes and average daily discharge volumes to NMED in the semi-annual monitoring reports.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]</p>
21.	<p>All flow meters shall be capable of having their accuracy verified under working (i.e., real-time in-the-field) conditions. The Permittee shall develop a field verification method for each flow meter and shall utilize that method to check the accuracy of each respective meter. The Permittee shall perform field calibrations, at a minimum, within 90 days of the issuance date of this Discharge Permit (by DATE), and then every other year thereafter. The Permittee shall also perform field calibrations upon repair or replacement of a flow measurement device.</p> <p>The Permittee shall calibrate each flow meter to its manufacturer’s recommended specification which shall be no less accurate than plus or minus 10 percent of actual flow, as measured under field conditions. An individual knowledgeable in flow measurement shall perform field calibration and the installation/operation of the device in use. The Permittee shall prepare a flow meter calibration report for each flow measurement device calibration event. The flow meter calibration report shall include the following information.</p> <p>a) The location and meter identification.</p>

#	Terms and Conditions
	<p>b) The method of flow meter field calibration employed.</p> <p>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.</p> <p>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.</p> <p>e) Any flow meter repairs made during the previous year or during field calibration.</p> <p>f) The name of the individual performing the calibration and the date of the calibration.</p> <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>
22.	<p>The Permittee shall visually inspect flow meters on a monthly basis for evidence of malfunction. The Permittee shall maintain a log of the inspections that includes a date of the inspection, findings and repairs, and the name of the inspector. The Permittee shall make the log available to NMED upon request.</p> <p>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>
23.	<p>The Permittee shall collect a composite wastewater sample on a semi-annual basis from each of the three synthetically lined impoundments. The composite sample shall consist of a minimum of six equal aliquots collected equidistantly around the entire perimeter of the evaporative impoundment and thoroughly mixed. The Permittee shall analyze the composite sample for:</p> <ul style="list-style-type: none"> • TKN; • NO₃-N; • TDS; • Cl; and

#	Terms and Conditions
	<ul style="list-style-type: none"> • Fluoride. <p>The Permittee shall ensure the sample is properly prepared, preserved, transported, and analyzed in accordance with the methods authorized in this Discharge Permit. The Permittee shall submit the laboratory analytical data results, including the QA/QC summary and Chain of Custody, to NMED in the semi-annual monitoring reports.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]</p>
24.	<p>The Permittee shall collect a composite wastewater sample on a semi-annual basis from each of the three synthetically lined impoundments. The composite sample shall consist of a minimum of six equal aliquots collected equidistantly around the entire perimeter of the evaporative impoundment and thoroughly mixed. The Permittee shall analyze the composite sample for the following inorganic contaminants (dissolved fraction, except as noted):</p> <ul style="list-style-type: none"> • aluminum (CAS 7429-90-5) • antimony (CAS 7440-36-0) • arsenic (CAS 7440-38-2) • barium (CAS 7440-39-3) • beryllium (CAS 7440-41-7) • boron (CAS 7440-42-8) • cadmium (CAS 7440-43-9) • chromium (CAS 7440-47-3) • cobalt (CAS 7440-48-4) • copper (CAS 7440-50-8) • cyanide CAS 57-12-5) • fluoride (CAS 16984-48-8) • iron (CAS 7439-89-6) • lead (CAS 7439-92-1) • manganese (CAS 7439-96-5) • molybdenum (CAS 7439-98-7) • total mercury (nonfiltered) (CAS 7439-97-6) • pH (instantaneous) • nickel (CAS 7440-02-0) • selenium (CAS 7782-49-2) • silver (CAS 7440-224) • sulfate (CAS 14808-79-8) • thallium (CAS 7440-28-0) • uranium (CAS 7440-61-1) • zinc (CAS 7440-66-6) <p>The Permittee shall properly collect, prepare, preserve, transport and analyze the samples in accordance with the methods authorized in this Discharge Permit. The Permittee shall analyze the sample using methods with reporting limits that are less than the corresponding numerical groundwater standards identified in 20.6.2.3103 NMAC.</p> <p>The Permittee shall submit a summary of measured concentrations compared with the corresponding groundwater standards, a copy of the laboratory report including the</p>

#	Terms and Conditions
	<p>laboratory analytical data results, the QA/QC summary and the Chain of Custody, to NMED in the semi-annual monitoring reports.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]</p>
25.	<p>The Permittee shall collect a composite wastewater sample on a semi-annual basis from each of the three synthetically lined impoundments. The composite sample shall consist of a minimum of six equal aliquots collected equidistantly around the entire perimeter of the evaporative impoundment and thoroughly mixed. The Permittee shall analyze the non-filtered composite sample for the following organic contaminants:</p> <ul style="list-style-type: none"> • Perfluorooctane sulfonic acid (PFOS) (CAS 1763-23-1) • Perfluorooctanoic acid (PFOA) (CAS 335-67-1) • Perfluorohexanesulfonic acid (PFHxS) (CAS 355-46-4) • styrene (CAS 100-42-5) • 1,2,4-trichlorobenzene (CAS 120-82-1) <p>The Permittee shall properly collect, prepare, preserve, transport, and analyze the samples in accordance with the methods authorized in this Discharge Permit. The Permittee shall analyze samples using methods with reporting limits that are less than the corresponding numerical groundwater standards identified in 20.6.2.3103 NMAC.</p> <p>For the PFC analytes, the Permittee shall properly collect, prepare, preserve, transport, and analyze the sample in accordance with ASTM D7979-17, or an equivalent method that uses liquid chromatography and tandem mass spectrometry (LC/MS/MS). The reporting limit shall be low enough to identify whether the combined concentration of the perfluorinated chemicals is less than the Tap Water Screening Level identified in the <i>NMED Risk Assessment Guidance for Site Assessments and Investigations</i>, Table A-1 available on the NMED Hazardous Waste Bureau’s website under Guidance Documents. The Permittee shall take appropriate measures to avoid cross contamination while collecting and transporting the sample. The selected laboratory should be able to provide guidance that ensures sample integrity.</p> <p>The Permittee shall submit a summary of measured concentrations compared with the corresponding groundwater standards, and a copy of the laboratory report including the laboratory analytical data results, the QA/QC summary and the Chain of Custody to NMED in the semi-annual monitoring reports.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]</p>

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26.	<p>The Permittee shall submit a summary of the laboratory analytical results from the full-scale PFC treatment system to NMED in the semi-annual monitoring reports.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]</p>

C. CONTINGENCY PLAN

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27.	<p>In the event that groundwater exceeds a groundwater protection standard identified in Section 20.6.2.3103 NMAC as a result of this discharge, the Permittee shall submit to NMED a Corrective Action Plan (CAP) that proposes, at a minimum, contaminant source control measures and an implementation schedule. The Permittee shall implement the CAP following approval by NMED.</p> <p>The NMED may require the Permittee to abate water pollution consistent with the requirements and provisions of Section 20.6.2.4101, Section 20.6.2.4103, Subsections C and E of 20.6.2.4106, Section 20.6.2.4107, Section 20.6.2.4108 and Section 20.6.2.4112 NMAC.</p> <p>[20.6.2.3103 NMAC, Subsection A of 20.6.2.3107 NMAC, Subsection E of 20.6.2.3109 NMAC]</p>
28.	<p>In the event that the Facility exceeds the authorized discharge volume set in this Discharge Permit, the Permittee shall initiate the following Contingency Plan.</p> <p><u>Contingency Plan</u></p> <ol style="list-style-type: none"> a) Notify NMED within seven days of the discovery of the discharge volume exceedance that the Facility exceeded the authorized discharge volume. b) The Permittee shall conduct a physical inspection of the discharge system, i.e., inflow and infiltration issues, collection system failures, etc., and the discharge meter(s)/volume measuring device/method to detect abnormalities and report the findings to NMED within 30 days of the discovery of the discharge volume exceedance. The Permittee shall correct any abnormalities detected with NMED's concurrence. c) If the Permittee does not detect any abnormalities and with NMED's concurrence, the Permittee shall submit a discharge permit modification for the increase in discharge quantity to NMED within 90 days of the discovery of the discharge volume exceedance. The discharge permit modification must include demonstration that the

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	<p>volume increase is sufficient for the design capacity or plans and specifications to upgrade the system to accommodate the discharge volume increase.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
29.	<p>In the event that the laboratory analytical data results of the liquid present in the leak detection sump indicates that the chemical content of the liquid is consistent with the contents of the evaporative impoundment, the Permittee shall submit a CAP to NMED which evaluates the primary liner leakage rate and proposes options for stopping or reducing leakage. The Permittee shall submit the CAP to NMED for approval within 60 days of the receipt of the analytical results demonstrating consistency with the liquid in the sump and the evaporative impoundment.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
30.	<p>In the event that an inspection reveals significant damage has occurred or is likely to affect the structural integrity of an impoundment or liner or their ability to contain contaminants, the Permittee shall propose the repair or replacement by submitting a CAP to NMED for approval. The Permittee shall submit the CAP to NMED within 30 days after discovery of the damage or following notification from NMED that significant damage is evident. The Permittee shall ensure the CAP includes a schedule for completion of corrective actions. The Permittee shall initiate implementation of the CAP following approval by NMED.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]</p>
31.	<p>In the event that an impoundment cannot preserve a minimum of two feet of freeboard, the Permittee shall take actions to restore the required freeboard as authorized by this Discharge Permit and all applicable local, state, and federal regulations.</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 restore two feet of freeboard by submitting a short-term CAP to NMED for approval. Examples of short-term corrective actions include the pumping and hauling of excess wastewater from the impoundment or reducing the volume of wastewater discharged to the impoundment. The Permittee shall ensure the CAP includes a schedule for completion of corrective actions. The Permittee shall submit the CAP within 15 days following the date the Permittee or the NMED discover the exceedance. The Permittee shall implement the CAP following NMED approval.</p> <p>In the event that the short-term corrective actions fail to restore two feet of freeboard, the Permittee shall submit to NMED a proposal for permanent corrective actions in a</p>

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	<p>long-term CAP. The Permittee shall submit the long-term CAP within 90 days following failure of the short-term CAP. Examples of corrective actions include the installation of an additional storage impoundment or a significant and permanent reduction in the volume of wastewater discharged to the impoundment. The Permittee shall ensure the long-term CAP includes a schedule for completion of corrective actions. The Permittee shall implement the CAP following NMED approval.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
32.	<p>In the event that a release occurs that is not authorized under this Discharge Permit (commonly known as a “spill”), 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. A release is defined as such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property.</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"> 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. b) The name and address of the Facility. c) The date, time, location, and duration of the unauthorized discharge. d) The source and cause of unauthorized discharge. e) A description of the unauthorized discharge, including its estimated chemical composition. f) The estimated volume of the unauthorized discharge. g) Any actions taken to mitigate immediate damage from the unauthorized discharge. <p>Within <u>one week</u> following discovery of the unauthorized discharge, the Permittee shall submit written notification to NMED providing 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 CAP to NMED describing any corrective actions previously taken and corrective actions to be taken relative to the unauthorized discharge. The CAP shall include the following information.</p> <ol style="list-style-type: none"> a) A description of proposed actions to mitigate damage from the unauthorized discharge. b) A description of proposed actions to prevent future unauthorized discharges of this nature.

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	<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, NMED may require the Permittee to abate water pollution pursuant to Sections 20.6.2.4000 through 20.6.2.4115 NMAC.</p> <p>The Permittee shall not construe anything in this condition as relieving them of the obligation to comply with all requirements of Section 20.6.2.1203 NMAC.</p> <p>[20.6.2.1203 NMAC]</p>
33.	<p>In the event that NMED or the Permittee identifies any failures of the discharge plan, i.e., the application, or this Discharge Permit not specifically noted herein, NMED may require the Permittee to submit a CAP 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

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34.	<p>The Permittee shall perform the following closure measures in the event the Facility, or a component thereof, is proposed to be permanently closed.</p> <p>Within <u>60 days</u> of ceasing to discharge to the impoundments, the Permittee shall plug the impoundment influent lines so that a discharge can no longer occur.</p> <p>Within <u>60 days</u> of ceasing to discharge to the impoundments, the Permittee shall evaporate or drain all wastewater from the impoundment and any other wastewater system component and disposed of it in accordance with all local, state, and federal regulations.</p> <p>Within <u>90 days</u> of ceasing to discharge to the impoundments, the Permittee shall submit a sludge removal and disposal plan to NMED for approval. The Permittee shall implement the plan within 30 days following approval by NMED. The sludge removal and disposal plan shall include the following information.</p>

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	<p>a) The estimated volume and dry weight of sludge planned for removal and disposal, including measurements and calculations.</p> <p>b) Analytical results for samples of the sludge taken from the impoundment for TKN, NO₃-N, percent total solids, and any other parameters tested (reported in mg/kg, dry weight basis).</p> <p>c) The method of sludge <i>removal</i> from the impoundments.</p> <p>d) The method of <i>disposal</i> for all the sludge (and its contents) removed from the impoundment(s). The method shall comply with all local, state, and federal regulations. <i>Note: A proposal that includes the surface disposal of sludge may be subject to Groundwater Discharge Permitting requirements pursuant to 20.6.2.3104 NMAC that are separate from the requirements of this Discharge Permit.</i></p> <p>e) A schedule for completion of sludge removal and disposal not to exceed two years from the date discharge to the impoundments ceased.</p> <p>Within <u>one year</u> following completion of the sludge removal and disposal, the Permittee shall complete the following closure measures.</p> <p>a) Remove all lines leading to and from the impoundments, or permanently plug and abandon the lines in place.</p> <p>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.</p> <p>c) Characterize, remove, and dispose of all solids from the impoundments in accordance with local, state, and federal regulations, and maintain a record of solids transported for off-site disposal, including the volume of solids transported and the disposal location.</p> <p>d) Remove and dispose of the impoundment liners at a solid waste facility. If there is evidence of contaminated soil below the liners, assess the impact, report that assessment to NMED, and mitigate the impacts following NMED approval.</p> <p>e) Fill the impoundments with suitable fill.</p> <p>f) Re-grade the impoundment site and the locations of ancillary equipment, e.g., influent piping, to blend with surface topography, promote positive drainage and prevent ponding.</p> <p>When the Permittee has met all closure and post-closure requirements and verified appropriate actions with date stamped photographic evidence or an associated NMED inspection, the Permittee may submit to NMED a written request, including photographic evidence, for termination of the Discharge Permit.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection D of 20.6.2.4103 NMAC, 40 CFR Part 503]</p>

E. GENERAL TERMS AND CONDITIONS

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35.	<p>RECORD KEEPING - The Permittee shall maintain a written record of the following:</p> <ul style="list-style-type: none">• Information and data used to complete the application for this Discharge Permit;• Information, data, and documents demonstrating completion of closure activities;• Any releases (commonly known as “spills”) not authorized under this Discharge Permit and reports submitted pursuant to 20.6.2.1203 NMAC;• The operation, maintenance, and repair of all facilities/equipment used to treat, store or dispose of wastewater;• 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;• Copies of logs, inspection reports, and monitoring reports completed and/or submitted to NMED pursuant to this Discharge Permit;• The volume of wastewater or other wastes discharged pursuant to this Discharge Permit;• Groundwater quality and wastewater quality data collected pursuant to this Discharge Permit;• Copies of construction records (well log) for all sampled groundwater monitoring wells pursuant to this Discharge Permit;• The maintenance, repair, replacement or calibration of any monitoring equipment or flow measurement devices required by this Discharge Permit; and• Data and information related to field measurements, sampling, and analysis conducted pursuant to this Discharge Permit, including:<ul style="list-style-type: none">○ the dates, location and times of sampling or field measurements;○ the name and job title of the individuals who performed each sample collection or field measurement;○ the sample analysis date of each sample;○ the name and address of the laboratory, and the name of the signatory authority for the laboratory analysis;○ the analytical technique or method used to analyze each sample or collect each field measurement;○ the results of each analysis or field measurement, including raw data;○ the results of any split, spiked, duplicate or repeat sample; and○ a copy of the laboratory analysis chain-of-custody as well as a description of the quality assurance and quality control procedures used.

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	<p>The Permittee shall maintain the written record at a location accessible to NMED during a Facility inspection for a minimum of five years. The Permittee shall make the record available to NMED upon request.</p> <p>[Subsections A and D of 20.6.2.3107 NMAC]</p>
36.	<p>SUBMITTALS – The Permittee shall submit both a paper copy and an electronic copy of all notification and reporting documents required by this Discharge Permit, e.g., monitoring reports. The Permittee shall submit paper and electronic documents to the NMED Permit Contact identified on the Permit cover page.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
37.	<p>INSPECTION and ENTRY – The Permittee shall allow NMED to inspect the Facility and its operations that 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 any maintained records required by this Discharge Permit, the regulations of the federal government, or the WQCC are located.</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>No person shall construe anything in this Discharge Permit 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> <p>[Subsection D of 20.6.2.3107 NMAC, NMSA 1978, §§ 74-6-9.B and 74-6-9.E]</p>
38.	<p>DUTY to PROVIDE INFORMATION - The Permittee shall, upon NMED’s request, allow for 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>
39.	<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 NMED’s approval</p>

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	<p>(which may require modification of this Discharge Permit) 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>
40.	<p>PLANS and SPECIFICATIONS – In the event the Permittee proposes 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 of the proposed system or process unit to NMED for approval prior to the commencement of construction.</p> <p>In the event the Permittee implements changes to the wastewater system authorized by this Discharge Permit that 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) to NMED prior to implementation.</p> <p>[Subsections A and C of 20.6.2.1202 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]</p>
41.	<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 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>
42.	<p>CRIMINAL PENALTIES – No person shall:</p> <ul style="list-style-type: none"> • Make any false material statement, representation, certification or omission of material fact in an application, record, report, plan or other document filed, submitted or maintained under the WQA; • Falsify, tamper with or render inaccurate any monitoring device, method or record maintained under the WQA; or

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	<ul style="list-style-type: none"> • Fail to monitor, sample or report as required by a permit issued pursuant to a state or federal law or regulation. <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>
43.	<p>COMPLIANCE with OTHER LAWS - Nothing in this Discharge Permit shall be construed in any way as relieving the Permittee of the obligation to comply with any other applicable federal, state, and/or local laws, regulations, zoning requirements, nuisance ordinances, permits or orders.</p> <p>[NMSA 1978, § 74-6-5.L]</p>
44.	<p>RIGHT to APPEAL - 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 raised and the relief sought. Unless the Permittee files a timely petition for review, the decision of NMED shall be final and not subject to judicial review.</p> <p>[20.6.2.3112 NMAC, NMSA 1978, § 74-6-5.O]</p>
45.	<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> <ul style="list-style-type: none"> • Notify the proposed transferee in writing of the existence of this Discharge Permit; • Include a copy of this Discharge Permit with the notice; and • Deliver or send by certified mail to NMED a copy of the notification and proof that the proposed transferee has received such notification.

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	<p>The Permittee shall continue to be responsible for any discharge from the Facility, until both ownership and possession of the Facility have been transferred to the transferee.</p> <p>[20.6.2.3111 NMAC]</p>
46.	<p>PERMIT FEES – The Permittee shall be aware that the payment of permit fees is due at the time of Discharge Permit approval. The Permittee may pay the permit fees in a single payment or they may pay the fee in equal installments on a yearly basis over the term of the Discharge Permit. The Permittee shall remit single payments to NMED no later than 30 days after the Discharge Permit issuance date. The Permittee shall remit initial installment payments to NMED no later than 30 days after the Discharge Permit issuance date; with subsequent installment payments remitted to NMED no later than the anniversary of the Discharge Permit issuance date.</p> <p>Permit fees are associated with <u>issuance</u> of this Discharge Permit. No person shall construe anything in this Discharge Permit 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. NMED shall suspend or terminate an approved Discharge Permit if the Permittee 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>



New Mexico Environment Department Ground Water Quality Bureau Discharge Permit Summary

Facility Information

Facility Name	Brackish Groundwater National Research Desalination Facility
Discharge Permit Number	DP-1472
Legally Responsible Party	Jennifer Faler, Area Manager U.S. Bureau of Reclamation 555 Broadway Blvd. NE, Suite 100 Albuquerque, NM 87102 (505) 462-3541

Treatment, Disposal and Site Information

Primary Waste Type	Industrial – Concentrate Wastewater
Facility Type	Desalination Research

Discharge Locations

Type	Designation	Description & Comments
Impoundment	Three Total Evaporation Impoundments	Three double synthetically-lined impoundments with leak detection systems hold desalination concentrate generated from research at the facility and brackish groundwater. The impoundments have built-in overflow lines that discharge to the City of Alamogordo WWTP sewer collection system if two feet of freeboard cannot be maintained.
Re-use Area 1	Agricultural Research Area	Concentrate wastewater and saline well water with a maximum TDS concentration of 4,200 mg/L may be applied to the unlined agricultural research area for irrigation and research of salt-tolerant plants.
Re-use Area 2	Agricultural Research Area	Concentrate wastewater and saline well water that exceed a TDS concentration 4,200 mg/L may be applied to agricultural areas must have a synthetic liner(s) with secondary containment/sump system(s) for irrigation and research of salt tolerant plants.

Flow Metering Locations

Type	Designation	Description & Comments
Totalizing Flow Meter	Totalizing Flow Meter	Located on the discharge line that connects the facility to the three double synthetically-lined impoundments.
Flow Meter	Flow Meter	Located on the discharge line that connects the facility to the irrigation system for unlined and lined agricultural research areas.

Depth-to-Ground Water 67 feet



New Mexico Environment Department Ground Water Quality Bureau Discharge Permit Summary

Total Dissolved Solids (TDS) 4,200 mg/L

Permit Information

Original Permit Issued April 4, 2005
Permit Renewal May 14, 2014

Current Action

Application Received
Revised Application Received
Public Notice Published
Permit Issued (Issuance Date)
Permitted Discharge Volume

Renewal and Modification

January 22, 2019
February 16, 2023
[not yet published]
[issuance date]
107,000 gallons per day to the evaporative impoundments
4,887,765 gallons per year to the agricultural research areas

NMED Contact Information

Mailing Address

Ground Water Quality Bureau
P.O. Box 5469
Santa Fe, New Mexico 87502-5469

GWQB Telephone Number

(505) 827-2900

NMED Lead Staff

Avery Young

Lead Staff Telephone Number

(505) 699-8564

Lead Staff Email

avery.young@env.nm.gov or pps.general@env.nm.gov

Groundwater Discharge Permit Guidance for Synthetically Lined Lagoons – Liner Material and Site Preparation

This guidance document represents minimum liner material and site preparation requirements for wastewater treatment, storage and evaporation lagoons. These requirements do not apply to lagoons storing hazardous wastes or high strength waste. The Ground Water Quality Bureau may impose additional requirements (e.g., double-lined lagoons with leak detection) for facilities discharging hazardous or high strength waste to lagoons through the development of specific Discharge Permit conditions for such facilities.

Liner Material Requirements:

1. The liner shall be chemically compatible with any material that will contact the liner.
2. The liner material shall be resistant to deterioration by sunlight if any portion of the liner will be exposed.
3. Synthetic liner material shall be of sufficient thickness to have adequate tensile strength and tear and puncture resistance. Under no circumstances shall a synthetic liner material less than 40 mils in thickness be accepted. Any liner material shall be certified by a licensed New Mexico professional engineer and approved by the New Mexico Environment Department (NMED) prior to its installation.

Lagoon Design and Site Preparation Requirements:

1. The system shall be certified by a licensed New Mexico professional engineer and approved by NMED prior to installation.
2. Inside slopes shall be a maximum of 3 (horizontal): 1 (vertical), and a minimum of 4 (horizontal); 1 (vertical).
3. Lagoon volume shall be designed to allow for a minimum of 24 inches of freeboard.
4. The liner shall be installed with sufficient liner material to accommodate shrinkage due to temperature changes. Folds in the liner are not acceptable.
5. To a depth of at least six inches below the liner, the sub-grade shall be free of sharp rocks, vegetation and stubble. In addition, liners shall be placed on a sub-grade of sand or fine soil. The surface in contact with the liner shall be smooth to allow for good contact between liner and sub-grade. The surface shall be dry during liner installation.
6. Sub-grade shall be compacted to a minimum of 90% of standard proctor density.
7. The minimum dike width shall be eight feet to allow vehicle traffic for maintenance.
8. The base of the pond shall be as uniform as possible and shall not vary more than three inches from the average finished elevation.
9. Synthetic liners shall be anchored in an anchor trench in the top of the berm. The trench shall be a minimum of 12 inches wide, 12 inches deep and shall be set back at least 24 inches from the inside edge of the berm.
10. If the lagoon is installed over areas of decomposing organic materials or shallow groundwater, a liner vent system shall be installed.
11. Any opening in the liner through which a pipe or other fixture protrudes shall be properly sealed. Liner penetrations shall be detailed in the construction plans and record drawings.
12. A synthetic liner shall not be installed in temperatures below freezing.
13. The liner shall be installed or supervised by an individual that has the necessary training and experience as required by the liner manufacturer.
14. All manufacturer's installation and field seaming guidelines shall be followed.
15. All synthetic liner seams shall be field tested by the installer and verification of the adequacy of the seams shall be submitted to NMED along with the record drawings.
16. Concrete slabs installed on top of the synthetic liner for operational purposes shall be completed in accordance with manufacturer and installer recommendations to ensure liner integrity.