

GROUND WATER DISCHARGE PERMIT
Liberty Farm Implement and Supply, DP-1696

I. INTRODUCTION

The New Mexico Environment Department (NMED) issues this Discharge Permit (Discharge Permit), DP-1696, to Jack Smith (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 Liberty Farm Implement and Supply (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 met.

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 267,863 gallons per day (gpd) of reclaimed domestic wastewater transferred from the City of Tucumcari Waste Water Treatment Facility (WWTF) in accordance with DP-1700 is land applied by flood and center pivot sprinkler irrigation to up to 263 acres of irrigated cropland under cultivation. The discharge contains water contaminants or toxic pollutants which may be elevated above the standards of Section 20.6.2.3103 NMAC. The proposed discharge is located in Sections 1 and 2, Township 11 North, Range 30 East, and Section 36, Township 12 North, Range 30 East, Quay County, approximately 1/2 mile north of the City of Tucumcari WWTF which is at 1700 North Rock Island, Tucumcari in Section 11 Township 11 North, Range 30 East, Quay County. Ground water most likely to be affected is at a depth of approximately 15 feet and has a total dissolved solids concentration of approximately 212 milligrams per liter.

The permittee's application consists of the materials submitted by Engineers Inc. on behalf of the permittee dated August 25, 2008 and additional information received on May 14, 2009 and June 1, 2009. 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 and/or remediate ground water quality may be required by NMED. These requirements may include: describe as appropriate: lining/relining lagoons; expanding land application areas; changing waste management practices; expanding monitoring requirements; installing an advanced treatment system; and/or implementing abatement of water pollution.

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 abbreviations may be used in this Discharge Permit:

Abbreviation	Explanation	Abbreviation	Explanation
BOD ₅	biochemical oxygen demand (5-day)	NTU	nephelometric turbidity units
CFR	Code of Federal Regulations	Org	organisms
Cl	chloride	TDS	total dissolved solids
LADS	land application data sheet(s)	TKN	total Kjeldahl nitrogen
mg/L	milligrams per liter	total nitrogen	TKN+NO ₃ -N
mL	milliliters	TRC	Total Residual Chlorine
NMAC	New Mexico Administrative Code	TSS	total suspended solids
NMED	New Mexico Environment Department	WQA	New Mexico Water Quality Act
NMSA	New Mexico Statutes Annotated	WQCC	Water Quality Control Commission
NO ₃ -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 milligrams per liter or less of total dissolved solids 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. CONDITIONS

The following conditions shall be complied with by the permittee and are enforceable by NMED. The permittee is authorized to discharge water contaminants subject to the following conditions:

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. [20.6.2.3106.C NMAC, 20.6.2.3107 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]																								
3.	The permittee is authorized to discharge up to 267,863 gallons per day of reclaimed domestic wastewater transferred from the City of Tucumcari Waste Water Treatment Facility in accordance with DP-1700. Reclaimed domestic wastewater is land applied by flood and center pivot sprinkler irrigation to up to 263 acres of irrigated cropland under cultivation. [20.6.2.3104 NMAC, 20.6.2.3106 NMAC]																								
4.	<p>Reclaimed wastewater transferred to Liberty Farm Implement and Supply (DP-1696) from the City of Tucumcari Waste Water Treatment Facility (WWTF) shall not exceed the following limitations:</p> <table border="1"> <thead> <tr> <th>Test</th> <th>30-day geometric mean</th> <th>30-day average</th> <th>maximum</th> </tr> </thead> <tbody> <tr> <td><i>E. coli</i> bacteria:</td> <td>126 Org/100 mL</td> <td>NA</td> <td>235 Org/100 mL</td> </tr> <tr> <td>BOD₅:</td> <td>N/A</td> <td>30 mg/L</td> <td>45 mg/L</td> </tr> <tr> <td>TSS:</td> <td>N/A</td> <td>30 mg/L</td> <td>45 mg/L</td> </tr> <tr> <td>TRC:</td> <td>N/A</td> <td>Monitor Only</td> <td>Monitor Only</td> </tr> <tr> <td>Total Nitrogen:</td> <td>N/A</td> <td>N/A</td> <td>25 mg/L</td> </tr> </tbody> </table> <p>[20.6.2.3109 NMAC]</p>	Test	30-day geometric mean	30-day average	maximum	<i>E. coli</i> bacteria:	126 Org/100 mL	NA	235 Org/100 mL	BOD ₅ :	N/A	30 mg/L	45 mg/L	TSS:	N/A	30 mg/L	45 mg/L	TRC:	N/A	Monitor Only	Monitor Only	Total Nitrogen:	N/A	N/A	25 mg/L
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5.	Prior to discharging from the facility, the permittee shall post signs in English and Spanish at above ground areas receiving reclaimed wastewater. The signs shall be posted at the entrance and/or at other locations where public access may occur and shall state: NOTICE: THIS AREA IS IRRIGATED WITH RECLAIMED WASTEWATER - DO NOT DRINK. AVISO: ESTA ÁREA ESTÁ REGADA CON AGUAS NEGRAS RECOBRADAS - NO TOMAR. Alternate wording and/or graphics may be submitted for NMED approval. [20.6.2.3107 NMAC, 20.6.2.3109 NMAC]																								
6.	The permittee shall not store reclaimed wastewater transferred from the City of Tucumcari WWTF. Reclaimed wastewater shall be transferred to the site by the City of Tucumcari and applied directly to up to 263 acres of irrigated cropland (Field 1, Field 2, Field 3 and Field 4. Wastewater shall be applied to cropland under cultivation in such a manner that the amount of total nitrogen in the combined application of wastewater and chemical fertilizer shall not exceed by more than 25% the amount reasonably expected to be taken up and removed by the harvested crops on an annual basis. Nitrogen content shall not be adjusted to account for volatilization or mineralization processes. Wastewater shall be distributed evenly over the entire area of application. Excessive ponding shall be prevented. No part of the land application area shall be used for livestock grazing. [20.6.2.3109 NMAC]																								
7.	The permittee shall submit, semi-annually, a crop and nutrient management plan which																								

	<p>describes the crops to be grown, harvest method and product, and calculated nitrogen loading for the next reporting period. The plan shall incorporate current results from soil and crop nitrogen analysis to predict nitrogen uptake by each crop and to determine the amount of nitrogen to be applied to each field in the land application area. The plan shall be submitted in the monitoring reports due by November 1st and May 1st. [20.6.2.3107 NMAC]</p>
<p>8.</p>	<p>Prior to discharging reclaimed domestic wastewater to Field 2, Field 3 and Field 4 of the land application area, the permittee shall install the infrastructure necessary to properly transfer, distribute and apply wastewater. Written confirmation of the distribution system installation including the type and location(s) of the system, the method of backflow prevention employed (if applicable), and photographic documentation, shall be submitted to NMED prior to discharging to Field 2, Field 3 and Field 4 of the land application area. [20.6.2.3109 NMAC]</p>
<p>9.</p>	<p>Within 90 days of the effective date of this Discharge Permit (by DATE), the permittee shall install 18 to 24-inch berms around the flood irrigated fields within the land application area to prevent surface water run-on and run-off. The berms shall be inspected on a regular basis and after any major rainfall event and repaired as necessary. Confirmation of berm installation and locations, including photographic documentation, shall be submitted to NMED within 30 days of completion. [20.6.2.3107 NMAC, 20.6.2.3109 NMAC]</p>
<p>10.</p>	<p>The permittee shall meet the following general requirements for above ground use of reclaimed domestic wastewater:</p> <ul style="list-style-type: none"> a) The permittee shall maintain signs in English and Spanish at above ground areas receiving reclaimed wastewater. All signs shall remain visible and legible for the term of this Discharge Permit. b) The reclaimed wastewater systems shall have no direct or indirect cross connections with potable water systems pursuant to the latest revision of the New Mexico Plumbing and Mechanical Code. c) Above ground use of reclaimed wastewater shall not result in excessive standing or pooling of wastewater, and shall be applied at the appropriate consumptive water use rate. Irrigation shall not be conducted at times when the receiving area is saturated or frozen. d) The discharge of reclaimed wastewater shall be confined to the area designated and approved for receiving the wastewater. e) All water supply wells within 200 feet of a wetted irrigation area shall have adequate well head construction and irrigation shall be managed to ensure protection of ground water quality. f) All existing and accessible portions of the reclaimed wastewater system shall be colored purple or clearly labeled as being part of a reclaimed wastewater distribution system. All piping, valves and outlets that are installed during the term of this Discharge Permit shall be color-coded in purple pursuant to the latest revision of the New Mexico Plumbing and Mechanical Code to differentiate piping or fixtures used to convey reclaimed wastewater from piping or fixtures used for potable or other water. All valves, outlets, and sprinkler heads used in reclaimed wastewater systems shall be of a type that can only be operated by authorized personnel.

	[20.6.2.3109 NMAC]
11.	<p>The permittee shall meet the following setbacks, access restrictions and equipment requirements for spray irrigation using reclaimed domestic wastewater:</p> <ul style="list-style-type: none"> a) A minimum 100-foot set-back shall be maintained between any dwellings or occupied establishments and the edge of any area receiving reclaimed wastewater. b) Irrigation shall be postponed at times when windy conditions may result in drift of reclaimed wastewater outside the designated area of application. c) Access to the irrigated area shall be restricted by perimeter fencing using 4-strand barbed wire and locking gate or other NMED approved access controls. d) The public shall be excluded from entering the area during times when the reclaimed wastewater is being applied. e) The spray irrigation system shall utilize only low trajectory spray nozzles. <p>[20.6.2.3109 NMAC]</p>
12.	<p>The permittee shall meet the following setbacks and access restrictions for flood and drip irrigation using reclaimed domestic wastewater:</p> <ul style="list-style-type: none"> a) Whenever reclaimed wastewater is used in areas with public access it shall be applied at times and in a manner that minimizes public contact. b) Access to the irrigated area shall be restricted by perimeter fencing using 4-strand barbed wire and locking gate or other NMED approved access controls. <p>[20.6.2.3109 NMAC]</p>
13.	<p>Prior to discharging to Field 2, Field 3 and Field 4 in the land application distribution system, the permittee shall install a backflow prevention method to protect all wells connected to the land application distribution system from contamination by reclaimed wastewater. Backflow prevention shall be achieved by installation of a physical air gap between the discharge pipe and the liquid surface at least twice the diameter of the discharge pipe, a reduced pressure principal valve assembly or other method approved by NMED. With the exception of a physical air gap, backflow prevention devices shall be tested by a certified backflow assembly tester at the time of installation, repair or relocation and at least on an annual basis thereafter and shall be maintained functional at all times. Inspection and maintenance records for the backflow prevention device shall be kept on-site and available for NMED review upon request. [20.6.2.3109 NMAC]</p>

MONITORING, REPORTING, AND OTHER REQUIREMENTS

#	Terms and Conditions
14.	The permittee shall conduct the following monitoring, reporting, and other requirements listed below. [20.6.2.3107 NMAC]
15.	<p>METHODOLOGY - 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"> a) American Public Health Association, Standard Methods for the Examination of Water and Wastewater (18th, 19th or current); b) U.S. Environmental Protection Agency, Methods for Chemical Analysis of Water and Waste; c) U.S. Geological Survey, Techniques for Water Resources Investigations of the U.S.

	<p>Geological Survey;</p> <p>d) American Society for Testing and Materials, Annual Book of ASTM Standards, Part 31. Water;</p> <p>e) U.S. Geological Survey, et al., National Handbook of Recommended Methods for Water Data Acquisition; or</p> <p>f) Methods of Soil Analysis: Part 1. Physical and Mineralogical Methods and Part 2. Chemical and Microbiological Properties, American Society of Agronomy.</p> <p>[20.6.2.3107.B NMAC]</p>
<p>16.</p>	<p>The permittee shall submit quarterly monitoring reports to NMED for the most recently completed quarterly period by the 1st of February, May, August and November each year.</p> <p>Quarterly monitoring shall be performed during the following periods:</p> <ul style="list-style-type: none"> • January 1st through March 31st (first quarter) – due by May 1st; • April 1st through June 30th (second quarter) – due by August 1st; • July 1st through September 30th (third quarter) – due by November 1st; and • October 1st through December 31st (fourth quarter) – due by February 1st. <p>Monitoring requirements detailed in this Discharge Permit are summarized on the sheet titled <i>Summary of Required Actions, Monitoring and Reporting</i>. [20.6.2.3107 NMAC]</p>
<p>17.</p>	<p>Prior to discharging to Field 2, Field 3 and Field 4 in the land application area, the permittee or another entity shall install the following totalizing flow meter:</p> <p>a) One totalizing flow meter installed on the transfer line from the City of Tucumcari WWTF to the land application area to measure the volume of reclaimed domestic wastewater discharged.</p> <p>Confirmation of meter installation, type, calibration and location shall be submitted to NMED prior to discharging to Field 2, Field 3 and Field 4 in the land application area.</p> <p>[20.6.2.3109 NMAC]</p>
<p>18.</p>	<p>The permittee shall measure and record all discharges of reclaimed domestic wastewater transferred from the City of Tucumcari WWTF to each location (Field 1, Field 2, Field 3, or Field 4) in the land application area using a totalizing flow meter. The permittee shall maintain a log showing the location of each discharge, totalizing meter readings immediately prior to and after each discharge, and the calculated total volume of each discharge. A summary of the log entries and the calculated monthly discharge volumes for each location in the land application area shall be submitted to NMED in the quarterly monitoring reports. The volumes discharged to each location each month, calculated based upon the log, shall be used to calculate nitrogen loading on the LADS. The flow meter shall be calibrated to within +/- 10% of actual flow and kept operational at all times.</p> <p>[20.6.2.3107.A(1) NMAC, 20.6.2.3109.C(3) NMAC]</p>
<p>19.</p>	<p>Within 90 days of the effective date of this Discharge Permit (by DATE), the permittee shall install three new monitoring wells. The permittee shall install:</p> <ul style="list-style-type: none"> • One monitoring well (MW-1) located at a minimum of 100 feet hydrologically upgradient of the entire land application area, • One monitoring well (MW-2) located 20 to 50 feet hydrologically downgradient of Field 2 (68-acre, flood irrigated field in the NE part of the land application area),

	<ul style="list-style-type: none"> • One monitoring well (MW-3) located 20 to 50 feet hydrologically downgradient of Field 3 (90-acre, $\frac{3}{4}$ center pivot irrigated field in the western part of the land application area). <p>All monitoring well locations shall be approved by NMED prior to installation. The wells shall be completed in accordance with the attachment titled <i>Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions</i>, Revision 1.0, July 2008. Construction and lithologic logs shall be submitted to NMED within 30 days of well completion. [20.6.2.3107 NMAC]</p>
20.	<p>Following well development and after installation of the new monitoring wells required by this Discharge Permit, the permittee shall sample ground water in the new wells and analyze the samples for NO₃-N, TKN, Cl, and TDS. The permittee shall sample:</p> <ul style="list-style-type: none"> • MW-1, intended to be located hydrologically upgradient of the facility (at least 100 feet northeast of the land application area); • MW-2, intended to be located hydrologically downgradient of Field 2 (68-acre, flood irrigated field in the NE part of the land application area); and • MW-3, intended to be located hydrologically downgradient of Field 3 (90-acre, $\frac{3}{4}$ center pivot irrigated field in the western part of the land application area). <p>Ground water sample collection, preservation, transport and analysis shall be performed according to the following procedure:</p> <ol style="list-style-type: none"> a) measure the depth-to-ground water from the top of well casing to the nearest hundredth of a foot; b) purge three well volumes of water from the well prior to sample collection; c) obtain samples from the well for analysis; d) properly prepare, preserve and transport samples; and e) analyze samples in accordance with the methods authorized in this Discharge Permit. <p>Depth-to-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 within 45 days of the installation of the monitoring wells. [20.6.2.3107 NMAC]</p>
21.	<p>Within 120 days of the effective date of this Discharge Permit (by DATE), the permittee shall survey all wells approved by NMED for Discharge Permit monitoring purposes 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 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 be completed and certified by a licensed New Mexico professional surveyor. Depth-to-water shall be measured to the nearest hundredth of a foot in all surveyed wells, and the data shall be used to develop a map showing the location of all monitoring wells and the direction and gradient of ground water flow at the facility. The data and map of ground water flow direction at the facility shall be submitted to NMED within 30 days of survey completion. [20.6.2.3107 NMAC]</p>
22.	<p>The permittee shall perform quarterly ground water sampling in four monitoring wells and</p>

	<p>analyze the samples for NO₃-N, TKN, Cl, and TDS. The permittee shall sample:</p> <ul style="list-style-type: none"> • MW-1, intended to be located hydrologically upgradient of the facility (at least 100 feet northeast of the land application area); • MW-2, intended to be located hydrologically downgradient of Field 2 (68-acre, flood irrigated field in the NE part of the land application area); • MW-3, intended to be located hydrologically downgradient of Field 3 (90-acre, ³/₄ center pivot irrigated field in the western part of the land application area); and • MW-4, intended to be located hydrologically downgradient of Field 1 (90-acre, ³/₄ center pivot irrigated field in the SE part of the land application area) <p>Ground water sample collection, preservation, transport and analysis shall be performed according to the following procedure:</p> <ol style="list-style-type: none"> a) measure the depth-to-ground water from the top of well casing to the nearest hundredth of a foot; b) purge three well volumes of water from the well prior to sample collection; c) obtain samples from the well for analysis; d) properly prepare, preserve and transport samples; and e) analyze samples in accordance with the methods authorized in this Discharge Permit. <p>Depth-to-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 reports. [20.6.2.3107 NMAC]</p>
23.	<p>The permittee shall develop a ground water elevation contour map on a quarterly basis using the monitoring well survey data and quarterly depth-to-water measurements required by this Discharge Permit. The ground water elevation contour map shall depict the ground water flow direction based on the ground water elevation contours. The data and ground water elevation contour maps shall be submitted to NMED in the quarterly monitoring reports. [20.6.2.3107 NMAC]</p>
24.	<p>Once prior to the expiration date of this Discharge Permit, NMED shall have the option to require the permittee to temporarily remove the dedicated pump from each monitoring well to provide access for a complete well inspection by NMED personnel. NMED shall establish the inspection date and provide at least 60 days notice to the permittee by certified mail. Dedicated pumps shall be removed at least 48 hours prior to NMED inspection to allow adequate settling time for sediment agitated from pump removal. [20.6.2.3107 NMAC]</p>
25.	<p>Prior to discharging to Field 2, Field 3 and Field 4 of the land application area that previously received whey from the Tucumcari Mountain Cheese Factory, DP-1258, the permittee shall perform deep soil nitrogen sampling. The permittee shall collect composite soil samples at depths of 2, 4, 6, 8 and 10 feet from three separate soil cores. Composite samples for each depth shall be assembled from the three cores and analyzed for NO₃-N and TKN. Soil NO₃-N shall be analyzed by a 2 molar KCl extract, as described in Methods of Soil Analysis: Part 2, Chemical and Microbiological Properties, Agronomy Monograph no.9 (2nd edition), pp 643-698, American Society of Agronomy. The analytical results and a map showing sampling locations within the fields shall be submitted to NMED in the quarterly monitoring report due November 1, 2009. [20.6.2.3107 NMAC]</p>

<p>26.</p>	<p>Following the initial soil sampling required by this Discharge Permit, the permittee shall, on an annual basis, collect and analyze soil samples from each field and/or management unit within the permitted land application area that has received or is actively receiving reclaimed wastewater during the term of this Discharge Permit. Once a field has received reclaimed wastewater it shall be sampled annually regardless of whether the field is cropped, remains fallow, or has recently received reclaimed wastewater.</p> <p>Composite soil samples shall be collected between December 1st and May 31st according to the following procedure:</p> <ul style="list-style-type: none"> • Each surface and sub-surface soil sample shall consist of a single composite of 15 soil cores collected randomly throughout each field. If a field is divided into differing management units (i.e., two separate crops on a single pivot), soil samples shall be collected from each management unit. Should a field or management unit consist of considerably different soil textures (i.e., sandy and silty clay); soil samples shall be collected from each soil texture within each field or management unit. • Surface soil samples (1st-foot) shall be collected from a depth of 0 to 12 inches. • Each 2nd-foot sub-surface soil sample shall be collected from a depth of 12 to 24 inches. • Each 3rd-foot sub-surface soil sample shall be collected from a depth of 24 to 36 inches. <p>Surface (1st-foot) samples shall be analyzed for:</p> <ul style="list-style-type: none"> • pH, EC, NO₃-N, Cl, SO₄, OM, K, P, Na, Ca, Mg, and determination of the SAR. <p>Sub-surface (2nd and 3rd-foot) samples shall be analyzed for:</p> <ul style="list-style-type: none"> • EC, NO₃-N, SO₄, and Cl <p>Soil samples shall be analyzed according to the following methods:</p> <ul style="list-style-type: none"> • Soil pH, EC, Na, Ca, Mg, and SO₄ shall be analyzed using a saturated paste extract, as described in Methods of Soil Analysis: Part 2, Chemical and Microbiological Properties, Agronomy Monograph no.9 (2nd edition), pp 167-179, American Society of Agronomy. • Soil P shall be analyzed using the Olsen sodium bicarbonate method, as described in Methods of Soil Analysis: Part 2, Chemical and Microbiological Properties, Agronomy Monograph no.9 (2nd edition), pp 421-422, American Society of Agronomy. • Soil NO₃-N shall be analyzed by a 2 molar KCl extract, as described in Methods of Soil Analysis: Part 2, Chemical and Microbiological Properties, Agronomy Monograph no.9 (2nd edition), pp 643-698, American Society of Agronomy. <p>The analytical results and a map showing the fields and/or management units as well as the sampling locations within each field/management unit shall be submitted to NMED in the quarterly monitoring report due by November 1st. [20.6.2.3107 NMAC]</p>
<p>27.</p>	<p>The permittee shall complete land application data sheets (LADS) quarterly that document</p>

	the amount of nitrogen applied to the land application area. The LADS (copy enclosed) shall reflect the nitrogen concentration from the most recent wastewater analysis obtained from the City of Tucumcari and the measured discharge volumes for each month. The permittee shall also report crops grown, yields removed and nitrogen uptake values specific to the crops grown on the LADS. The LADS or a statement that no land application occurred shall be submitted to NMED in the quarterly monitoring reports. [20.6.2.3107 NMAC]
28.	The permittee shall keep a log of all additional fertilizer applied to each field in the land application area. The log shall contain the date of fertilizer application, the type and nutrient concentration of the fertilizer, and the amount of fertilizer applied to each field. A summary of the log entries shall be submitted to NMED in the quarterly monitoring reports. [20.6.2.3107 NMAC]
29.	Yield documentation and plant and harvest dates of each crop grown shall be submitted to NMED in the quarterly monitoring reports due on November 1 st and May 1 st . Yield documentation shall consist of scale-weight tickets or harvest summaries based on scale-weights. [20.6.2.3107 NMAC, 20.6.2.3109 NMAC]
30.	The permittee shall determine the total nitrogen concentration of each harvested crop grown to verify plant nitrogen removal levels. A composite sample consisting of 15 sub-samples of plant material shall be taken from each field during the final harvest of each crop grown per year. Samples shall be analyzed for percent total nitrogen and percent dry matter. Analytical reports shall be submitted to NMED in the quarterly monitoring reports due on November 1 st and May 1 st . [20.6.2.3107 NMAC, 20.6.2.3109 NMAC]

CONTINGENCY PLAN

#	Terms and Conditions
31.	In the event that monitoring indicates ground water standards are violated during the term of this Discharge Permit, upon closure of the facility or during post-closure monitoring, the permittee shall collect a confirmatory sample from the monitoring well within 15 days to confirm the initial sampling results. Within 15 days of confirmation of ground water contamination, the permittee shall submit to NMED a corrective action plan that proposes measures to mitigate damage from the discharge including, at a minimum, source control measures and an implementation schedule. The permittee may be required to abate water pollution pursuant to Sections 20.6.2.4000 through 20.6.2.4115 NMAC, if the corrective action plan will not result in compliance with the standards and requirements set forth in Section 20.6.2.4103 NMAC within 180 days of confirmation of ground water contamination. [20.6.2.1203 NMAC, 20.6.2.4105.A(8) NMAC]
32.	In the event that analytical results of a reclaimed domestic wastewater sample collected by the City of Tucumcari are confirmed to exceed any of the maximum limitations for BODs, TSS/turbidity, or <i>E. coli</i> bacteria set by this Discharge Permit, or if any of the 30-day average limitations is exceeded, the transfer of reclaimed domestic wastewater from the Tucumcari WWTF to Liberty Farm Implement and Supply shall cease and the permittee shall enact the following contingency plan: a) The permittee shall immediately cease discharging reclaimed domestic wastewater to Field 1, Field 2, Field 3 and Field 4 in the land application area.

	<p>When the analytical results from samples of reclaimed domestic wastewater, sampled as required by Discharge Permit DP-1700, no longer exceed any of the maximum limitations, the transfer of reclaimed domestic wastewater to Liberty Farm Implement and Supply may resume and the permittee may resume discharging reclaimed wastewater to Field 1, Field 2, Field 3 and Field 4 in the land application area. [20.6.2.3107.A(10) NMAC]</p>
33.	<p>In the event of a spill or release that is not authorized under this Discharge Permit, the permittee shall initiate the notifications and corrective actions as required in Section 20.6.2.1203 NMAC. The permittee shall take immediate corrective action to contain and remove or mitigate the damage caused by the discharge. Within 24 hours after discovery of the discharge, the permittee shall verbally notify NMED and provide the information required by Paragraph (1) of Subsection A of 20.6.2.1203 NMAC. Within 7 days of discovering the discharge, the permittee shall submit a written report to NMED verifying the oral notification and providing any additional information or changes. The permittee shall submit a corrective action report within 15 days after discovery of the discharge. [20.6.2.1203 NMAC]</p>
34.	<p>In the event NMED or the permittee identifies any other failures of the Discharge Permit or system not specifically noted herein, NMED may require the permittee to develop for NMED approval contingency plans and schedules to cope with the failures. [20.6.2.3107.A(10) NMAC]</p>
35.	<p>In the event that information available to NMED indicates that a well(s) is not appropriately constructed to effectively monitor ground water quality, contains insufficient water to allow the collection of representative ground water samples, or is not completed in a manner that is protective of ground water quality, the permittee shall install a replacement well(s) within 90 days of notification from NMED. 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 1.0, July 2008. Construction and lithologic logs shall be submitted to NMED within 30 days of well completion.</p> <p>Upon completion of the replacement monitoring well(s), the monitoring well(s) requiring replacement shall be properly plugged and abandoned. The well(s) shall be plugged and abandoned in accordance with the abandonment details in the attachment titled <i>Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions</i>, Revision 1.0, July 2008, and any applicable local, state, and federal regulations. Documentation describing the plugging and abandonment procedures, including photographic documentation, shall be submitted to NMED within 30 days of completed well abandonment. [20.6.2.3107 NMAC]</p>
36.	<p>In the event that ground water flow information obtained pursuant to this Discharge Permit indicates that a monitoring well(s) was not installed hydrologically downgradient of the intended discharge location(s), the permittee shall install a replacement well(s) within 90 days of notification from NMED. The 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 1.0, July 2008. Construction and lithologic logs shall be submitted to NMED within 30 days of well completion. [20.6.2.3107 NMAC]</p>

37.	<p>In the event that LADS show that the amount of nitrogen in wastewater and additional fertilizer applied annually exceeds by more than 25% the amount reasonably expected to be taken up and removed by the harvested crop(s), the permittee shall submit a corrective action plan for the reduction of nitrogen loading to the land application area. The plan shall be submitted to NMED for approval within 90 days of the end of the monitoring period in which the exceedance occurred. The corrective action plan shall be implemented within 30 days of NMED approval. [20.6.2.3107.A(10) NMAC]</p>
38.	<p>If NMED determines that the initial deep soil sampling results required by this Discharge Permit or the analytical results from annual surface and sub-surface soil sampling, indicate that nitrogen may be migrating vertically, the permittee shall, within 30 days of notification, submit for NMED approval a corrective action plan to reduce nitrogen concentrations in the soil. The plan shall include source control measures, such as a reduction in the amount of reclaimed wastewater applied to the land, expansion of the land application area, and/or changes in crop rotation.</p> <p>The permittee shall also implement the following deep soil sampling. From each field, the permittee shall collect composite soil samples at depths of 2, 4, 6, 8 and 10 feet from three separate soil cores. Composite samples for each depth shall be assembled from the three cores and analyzed for NO₃-N and TKN. Soil NO₃-N shall be analyzed by a 2 molar KCl extract, as described in Methods of Soil Analysis: Part 2, Chemical and Microbiological Properties, Agronomy Monograph no.9 (2nd edition), pp 643-698, American Society of Agronomy. The analytical results and a map showing the sampling locations within each field shall be submitted to NMED within 30 days of the sampling date. If initial deep soil sampling results indicate the presence of excessive nitrogen at depths below 36 inches, NMED may require deep soil sampling on an annual basis to verify success of the corrective actions. [20.6.2.3107.A(10) NMAC, 20.6.2.3109 NMAC]</p>

CLOSURE PLAN

#	Terms and Conditions
39.	<p>Upon closure of the facility, the permittee shall perform the following closure measures:</p> <ul style="list-style-type: none"> a) Complete the installation of all monitoring wells as required by this Discharge Permit. b) Remove or plug all lines leading to the land application area so that a discharge can no longer occur. c) Continue ground water monitoring as required by this Discharge Permit for two years after closure to confirm the absence of ground water contamination. If monitoring results show that the ground water standards in Section 20.6.2.3103 NMAC are being violated, the permittee shall implement the contingency plan required by this Discharge Permit. d) 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 1.0, July 2008. <p>When all post-closure requirements have been met, the permittee may request to terminate the Discharge Permit. [20.6.2.3107.A(11) NMAC]</p>

GENERAL TERMS AND CONDITIONS

#	Terms and Conditions
40.	<p>RECORD KEEPING - The permittee shall maintain at its facility a written record of all data and information related to field measurements, sampling, and analysis conducted pursuant to this Discharge Permit. The following information shall be recorded and shall be made available to NMED upon request:</p> <ul style="list-style-type: none"> a) The dates, exact place and times of sampling or field measurements; b) The name and job title of the individuals who performed each sample collection or field measurement; c) The date of the analysis of each sample; d) The name and address of the laboratory and the name and job title of the person that performed the analysis of each sample; e) The analytical technique or method used to analyze each sample or take each field measurement; f) The results of each analysis or field measurement, including raw data; g) The results of any split sampling, spikes or repeat sampling; and h) A description of the quality assurance and quality control procedures used. <p>[20.6.2.3107.A NMAC]</p>
41.	<p>RECORD KEEPING - The permittee shall maintain a written record of any spills, seeps, and/or leaks of effluent, and of leachate and/or process fluids not authorized by this Discharge Permit. [20.6.2.3107.A NMAC]</p>
42.	<p>RECORD KEEPING - The permittee shall maintain a written record of the operation, maintenance, and repair of all facilities/equipment used to treat, store or dispose of wastewater; to measure flow rates, to monitor water quality, or to collect other data required by this Discharge Permit. This record shall include repair, replacement or calibration of any monitoring equipment and repair or replacement of any equipment used in the permittee's waste or wastewater treatment and disposal system. [20.6.2.3107.A NMAC]</p>
43.	<p>RECORD KEEPING - The permittee shall maintain a written record of the amount of wastewater, effluent, leachate or other wastes discharged pursuant to this Discharge Permit. [20.6.2.3107.A NMAC]</p>
44.	<p>RECORD KEEPING - The permittee shall retain records of all monitoring information, including all calibration and maintenance records, copies of all reports required by this Discharge Permit, and records of all data used to complete the application for this Discharge Permit for a period of at least five years from the date of the sample collection, measurement, report or application. This period may be extended by request of the Secretary at any time. [20.6.2.3107.A NMAC]</p>
45.	<p>INSPECTION and ENTRY - The permittee shall allow the Secretary or an authorized representative, upon the presentation of credentials, to:</p> <ul style="list-style-type: none"> a) Enter at regular business hours or at other reasonable times upon the permittee's premises or other location where records must be kept under the conditions of this Discharge Permit, or under any federal or WQCC regulation. b) Inspect and copy, during regular business hours or at other reasonable times, any

	<p>records required to be kept under the conditions of this Discharge Permit, or under any federal or WQCC regulation.</p> <p>c) Inspect, at regular business hours or at other reasonable times, any facility, equipment (including monitoring and control equipment or treatment works), practices or operations regulated or required under this Discharge Permit, or under any federal or WQCC regulation.</p> <p>d) Sample or monitor, at reasonable times for the purpose of assuring compliance with this Discharge Permit or as otherwise authorized by the WQA, any effluent, water contaminant, or receiving water at any location before or after discharge.</p> <p>[20.6.2.3107.D NMAC, 74-6-9(B) & (E) WQA]</p>
46.	<p>INSPECTION and ENTRY - 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 applicable law or regulation. [20.6.2.3107 NMAC, 74-6-9(B) & (E) WQA]</p>
47.	<p>DUTY to PROVIDE INFORMATION - The permittee shall furnish to NMED, within a reasonable time, any documents or other information which it may request to determine whether cause exists for modifying, terminating and/or renewing this Discharge Permit or to determine compliance with this Discharge Permit. The permittee shall also furnish to NMED, upon request, copies of documents required to be kept by this Discharge Permit. [20.6.2.3107.D NMAC, 74-6-9(B) & (E) WQA]</p>
48.	<p>SPILLS, LEAKS, and OTHER UNAUTHORIZED DISCHARGES - This Discharge Permit authorizes only those discharges specified herein. Any unauthorized discharges violate Section 20.6.2.3104 NMAC and must be reported to NMED and remediated as required by Section 20.6.2.1203 NMAC. [20.6.2.1203 NMAC]</p>
49.	<p>MODIFICATIONS and/or AMENDMENTS - The permittee shall notify NMED of any changes to the permittee's wastewater treatment and disposal system, including any changes in the wastewater flow rate or the volume of wastewater storage, or of any other changes to operations or processes that would result in any significant change in the discharge of water contaminants. The permittee shall obtain NMED's approval, as a modification to this Discharge Permit pursuant to Subsections E, F, or G of 20.6.2.3109 NMAC, prior to any increase in the quantity discharged, or any increase in the concentration of water contaminants discharged, above those levels approved in this Discharge Permit. [20.6.2.3107.C NMAC]</p>
50.	<p>PLANS and SPECIFICATIONS - The permittee shall file plans and specifications with NMED for the construction of a wastewater system and for proposed changes that will change substantially the quantity or quality of the discharge from the system. The permittee shall file plans and specifications prior to the commencement of construction. Changes to the wastewater system having a minor effect on the character of the discharge shall be reported as of January 1 and June 30 of each year to NMED. [20.6.2.1202 NMAC]</p>
51.	<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</p>

	<p>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. [74-6-10 WQA, 74-6-10.1 WQA]</p>
52.	<p>CRIMINAL PENALTIES – Any person who knowingly violates or knowingly causes or allows another person to:</p> <ol style="list-style-type: none"> 1) make any false material statement, representation, certification or omission of material fact in an application, record, report, plan or other document filed, submitted or required to be maintained under the WQA; 2) falsify, tamper with or render inaccurate any monitoring device, method or record required to be maintained under the WQA; or 3) fail to monitor, sample or report as required by a permit issued pursuant to a state or federal law or regulation, is subject to felony charges and shall be sentenced in accordance with the provisions of Section 31-18-15 NMSA 1978. <p>[74-6-10.2(A-F) WQA]</p>
53.	<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 all applicable federal, state, and local laws, regulations, permits or orders. [20.6.2 NMAC]</p>
54.	<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 (30) days of the receipt of this Discharge Permit. Unless a timely petition for review is made, the decision of NMED shall be final and not subject to judicial review. [74-6-5(O) WQA]</p>
55.	<p>TRANSFER of DISCHARGE PERMIT - Prior to the transfer of any ownership, control, or possession of this permitted facility or any portion thereof, the permittee shall notify the proposed transferee in writing of the existence of this Discharge Permit and include a copy of this Discharge Permit with the notice. The permittee shall 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. [20.6.2.3111 NMAC]</p>
56.	<p>TERM - Pursuant to WQA 74-6-5(I) and Subsection H of 20.6.2.3109 NMAC, the term of this Discharge Permit is five years from its effective date. To renew this Discharge Permit, the permittee must submit an application for renewal at least 180 days before the termination date. [20.6.2.3109.H NMAC, 74-6-5(I) WQA]</p>
57.	<p>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. An approved Discharge Permit shall be suspended or terminated if the facility fails to remit an installment payment by its due date.</p>

[20.6.2.3114.F NMAC, 74-6-5(K) WQA]

EFFECTIVE DATE: effective date

EXPIRATION DATE: expiration date

WILLIAM C. OLSON
Chief, Ground Water Quality Bureau
New Mexico Environment Department

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