

**GROUND WATER DISCHARGE PERMIT - RENEWAL**  
**EXISTING DAIRY FACILITY with an EVAPORATIVE DISPOSAL SYSTEM**  
**Jersey Gold Dairy, DP-885**

**I. INTRODUCTION AND SUMMARY**

The New Mexico Environment Department (NMED) issues this Discharge Permit (Discharge Permit), DP-885, to Ferron Lucero (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 and 20.6.6 NMAC.

NMED's purpose in issuing this Discharge Permit is to control the discharge of water contaminants from Jersey Gold Dairy (dairy facility) for the protection of ground water and those segments of surface water gaining from ground water inflow, for present and potential future use as domestic and agricultural water supply and other uses, and to protect public health.

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:

A maximum daily discharge volume of 2,000 gallons per day (gpd) of wastewater may be discharged from the production area. Wastewater flows to a concrete-lined sump, through a solids separator (required to be installed), to two separate earthen- and manure-lined combination wastewater and stormwater impoundments for disposal by evaporation. The discharge contains water contaminants or toxic pollutants which may be elevated above the standards of Section 20.6.2.3103 NMAC.

The dairy facility is located at 1647 Highway 304, approximately three miles north of Veguita, in projected Section 20, T4N, R2E, in the Casa Colorada Land Grant, Valencia County. Ground water most likely to be affected is at a depth of approximately 25 feet and had a pre-discharge total dissolved solids concentration of approximately 277 milligrams per liter.

The original Discharge Permit was issued on October 20, 1992, subsequently modified on March 31, 1993, and renewed and modified on January 15, 1999 and April 21, 2004. The application consists of the materials submitted by the permittee dated March 30, 2012, and materials contained in the administrative record associated with issuance of this Discharge Permit. The discharge shall be managed in accordance with all applicable requirements of the Dairy Rule (20.6.6 NMAC) and this Discharge Permit.

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

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

Abbreviation	Explanation	Abbreviation	Explanation
Cl	chloride	NO <sub>3</sub> -N	nitrate-nitrogen
gpd	gallons per day	S	Sulfur

Abbreviation	Explanation	Abbreviation	Explanation
LADS	land application data sheet(s)	SO <sub>4</sub>	Sulfate
mg/L	milligrams per liter	TDS	total dissolved solids
NMAC	New Mexico Administrative Code	TKN	total Kjeldahl nitrogen
NMED	New Mexico Environment Department	WQA	New Mexico Water Quality Act
NMP	Nutrient management plan	WQCC	Water Quality Control Commission
NMSA	New Mexico Statutes Annotated		

## II. FINDINGS

In issuing this Discharge Permit, NMED finds:

1. The permittee is discharging from a facility that meets the definition of “dairy facility” and is subject to the Dairy Rule (20.6.6 NMAC). This dairy facility meets the definition of “existing facility”.
2. The permittee is discharging effluent or leachate from the dairy facility that may move directly or indirectly into ground water within the meaning of Section 20.6.2.3104 NMAC.
3. The permittee is discharging effluent or leachate from the dairy facility that 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.
4. The discharge from the dairy facility is not subject to any of the exemptions of Section 20.6.2.3105 NMAC.
5. The Discharge Permit for this facility last issued on April 21, 2004 (before the effective date of the Dairy Rule of December 31, 2011) required the wastewater impoundment system to have the capacity to dispose of the maximum daily discharge volume (expressed in gallons per day), plus stormwater runoff and direct precipitation generated from the facility, by evaporation while preserving two feet of freeboard.
6. The dairy facility was existing as of the effective date of the Dairy Rule (December 31, 2011) and does not measure the volume of wastewater discharged to wastewater impoundment(s) using a flow meter installed on the discharge line(s) from all wastewater sources to the wastewater impoundment(s).

7. This Discharge Permit contains requirements associated with the following potential contaminant sources as identified in the application and the administrative record as of the effective date of this Discharge Permit:
- a) Combination Wastewater/Stormwater Impoundments
    - i. **North Lagoon** - authorized for use by this Discharge Permit.
    - ii. **South Lagoon** - authorized for use by this Discharge Permit.
  - b) Stormwater Impoundments
    - i. **North Runoff Area** - authorized for use by this Discharge Permit.

### III. APPLICABLE RULES

Sections 20.6.2.3000 through 20.6.2.3114 NMAC and Part 20.6.6 NMAC (Dairy Rule) apply to discharges specific to dairy facilities and their operations.

### IV. DISCHARGE PERMIT REQUIREMENTS

The permittee is authorized to discharge water contaminants pursuant to this Discharge Permit which contains requirements authorized or specified by the Dairy Rule. The permittee shall comply with the Dairy Rule and this Discharge Permit, which are enforceable by NMED. The permittee is authorized to discharge water contaminants subject to the following requirements:

#### AUTHORIZATION TO DISCHARGE

1. The permittee is authorized to discharge up to 2,000 gpd of wastewater from the production area. Wastewater flows to a concrete-lined sump, through a solids separator (required to be installed), to two separate earthen- and manure-lined combination wastewater and stormwater impoundments for disposal by evaporation.
2. The permittee is authorized to use the following impoundments for the following purposes in accordance with Subsection B of 20.6.6.20 NMAC.
  - a) **North Lagoon** – authorized to receive wastewater and stormwater for disposal by evaporation. This impoundment exists as of the effective date of this Discharge Permit and is earthen- and manure-lined. This impoundment receives wastewater from the parlor sump and stormwater from the southern corrals. Wastewater/stormwater may be pumped from the North Lagoon to the South Lagoon or vice versa.
  - b) **South Lagoon** – authorized to receive wastewater and stormwater for disposal by evaporation. This impoundment exists as of the effective date of this Discharge Permit and is earthen- and manure-lined. This impoundment receives wastewater from the parlor sump. Wastewater/stormwater may be pumped from the North Lagoon to the South Lagoon or vice versa.

- c) **North Runoff Area** – authorized to collect stormwater for transfer to the North or South Lagoon for disposal by evaporation. This impoundment exists as of the effective date of this Discharge Permit and is unlined.

### APPLICATION REQUIREMENTS

- 3. Within 90 days from the effective date of this Discharge Permit (**by October 29, 2013**) the permittee shall submit the following information to satisfy the requirements of Sections 20.6.6.10 through 20.6.6.12 NMAC.
  - a) Provide an up-to-date scaled map of the entire facility in accordance with Subsection U of 20.6.6.20 NMAC.
  - b) For each proposed, existing or closed wastewater, stormwater or combination wastewater/stormwater impoundment, provide the storage capacity in accordance with Paragraph (2) of Subsection H of 20.6.6.12 NMAC.
  - c) Pursuant to Paragraph (5) of Subsection H of 20.6.6.12 NMAC, provide the settled solids thickness and free-liquid capacity for each existing wastewater or combination wastewater/stormwater impoundment in accordance with Subsection D of 20.6.6.20 NMAC.
  - d) In accordance with Paragraph (7) of Subsection H of 20.6.6.12 NMAC, provide a description of methods(s) used to protect each of the following areas from stormwater runoff:
    - 1) Manure storage area(s)
    - 2) Silage storage area(s)
    - 3) Compost storage area(s)
  - e) Pursuant to Subsection J of 20.6.6.12 NMAC, provide the direction of most shallow ground water flow at the facility.
  - f) Pursuant to Subsection K of 20.6.6.12 NMAC, identify proposed locations for new monitoring wells to meet the requirements of Subsections A and B of 20.6.6.23 NMAC.
  - g) Pursuant to Subsection L of 20.6.6.12 NMAC, provide the following:
    - 1) The most recent soil survey map and associated soil type descriptions.
    - 2) Lithologic logs from all on-site monitoring wells.
  - h) Pursuant to Subsection N of 20.6.6.12 NMAC, submit the most recent 100-year flood zone map which includes the dairy facility location.
  - i) Pursuant to Subsection O of 20.6.6.12 NMAC, provide the following:
    - 1) Record drawings and final specifications for the North and South Lagoons and for their liners in accordance with 20.6.6.17 NMAC; **or**
    - 2) If record drawings and final specifications for the North and South Lagoons and for their liners do not exist, a survey of the North and South Lagoons and capacity calculations in accordance with Subsection C of 20.6.6.20 NMAC.

**ENGINEERING AND SURVEYING REQUIREMENTS**

4. The permittee shall comply with the requirements of Section 20.6.6.17 NMAC and shall submit to NMED all information or documentation required by the applicable portions of Section 20.6.6.17 NMAC.
5. The permittee shall complete the following items and submit documentation to NMED as summarized in the following table:

Item No.	Action Required and Submittal Due to NMED	Due Date	Citation
A.	<p><b><u>Manure Solids Separation Plans and Specifications – Existing Wastewater System:</u></b></p> <p>Submit a scaled design schematic and supporting documentation for the construction of a new manure solids separation system for use with the existing wastewater system to achieve compliance with Subsection F of 20.6.6.20 NMAC.</p>	<p align="center"><b>October 29, 2013</b></p>	<p align="center">20.6.6.17.C(5) NMAC</p>
B.	<p><b><u>Flow Metering Plans:</u></b></p> <p>To achieve compliance with Subsection J of 20.6.6.20 NMAC, submit a description of the location and installation/construction information for a flow meter(s) to measure the following:</p> <ul style="list-style-type: none"> <li>• the volume of wastewater discharged from all wastewater sources to the impoundment(s)*</li> </ul> <p>*Alternatively, to achieve compliance with Subsection J of 20.6.6.20 NMAC, submit a description of the location and installation/construction information for a flow meter(s) installed on the fresh water supply line(s) to measure the volume of all sources contributing to the wastewater discharged to the impoundment(s).</p>	<p align="center"><b>October 29, 2013</b></p>	<p align="center">20.6.6.17.C(7) NMAC</p>

**OPERATIONAL REQUIREMENTS**

6. The permittee shall comply with the requirements of Sections 20.6.6.20 and 20.6.6.22 NMAC, and shall submit to NMED all information or documentation required by the applicable portions of Sections 20.6.6.20 and 20.6.6.22 NMAC.
7. The permittee shall provide written notice to NMED regarding any changes to the presence of lactating cows and/or the status of wastewater discharges at the facility in accordance with Subsection A of 20.6.6.20 NMAC (summarized in the table below).

Activity	Notification of Estimated Date	Verification of Actual Date
Removal of Lactating Cows	Not required	Within 30 days of removal
Reintroduction of Lactating Cows	Not required	Within 30 days of reintroduction
Cessation of wastewater discharge	Not required	Within 30 days of cessation of discharge
Recommencement of Discharge	Minimum 30 days prior to recommencement	Within 30 days of recommencement

8. If record drawings and final specifications for the North and South Lagoons and for their liners do not exist, within 90 days from the effective date of this Discharge Permit (**by October 29, 2013**), the permittee shall submit an up-to-date survey and capacity calculations for the North and South Lagoons in accordance with Subsection C of 20.6.6.20 NMAC.
9. Within 90 days from the effective date of this Discharge Permit (**by October 29, 2013**), the permittee shall submit the settled solids thickness and free-liquid capacity for each existing impoundment determined in accordance with Subsection D of 20.6.6.20 NMAC.
10. The permittee shall employ manure solids separation in accordance with Subsection F of 20.6.6.20 NMAC. Within 90 days from the effective date of this Discharge Permit (**by October 29, 2013**), the permittee shall submit plans and specifications in accordance with Paragraph (5) of Subsection C of 20.6.6.17 NMAC.
11. The permittee is authorized and required to transfer stormwater collected in the unlined stormwater impoundment(s) to the wastewater impoundment(s) in accordance with Subsection I of 20.6.6.20 NMAC.
12. The permittee shall install and use the following flow meter(s) in accordance with Subsections J, K, L and N of 20.6.6.20 NMAC.
  - a) **Parlor Wastewater Meter** – to be located on the parlor discharge line prior to the parlor sump to measure the volume of wastewater discharged from the production area to the North and South Lagoons.

- OR -

**Parlor Supply Well Meter** – to be located in the incoming fresh water line to the parlor to measure the volume of all fresh water contributing to the wastewater discharged to the North and South Lagoons; providing an estimate of the volume of wastewater generated from the production area.

Confirmation of flow meter installation shall be completed in accordance with Subsection J of 20.6.6.20 NMAC.

13. The permittee shall remove all manure solids and composted material from the dairy in accordance with Subsection S of 20.6.6.20 NMAC.
14. Within 90 days from the effective date of this Discharge Permit (**by October 29, 2013**), the permittee shall submit an up-to-date scaled map of the entire facility in accordance with Subsection U of 20.6.6.20 NMAC.
15. The permittee shall complete the following items and submit documentation to NMED as summarized in the following table:

Item No.	Action Required and Submittal Due to NMED	Due Date	Citation
A.	<b><u>Manure Solids Separator Installation – Existing System:</u></b> i) Complete construction of a manure solids separator associated with the existing wastewater disposal system. ii) Submit confirmation of solids separator construction.	<b>December 28, 2013</b> <b>January 27, 2014</b>	20.6.6.20.F NMAC
B.	<b><u>Flow Meter Installation:</u></b> i) Complete installation of flow meter(s). ii) Submit confirmation of installation.	<b>December 28, 2013</b> <b>January 27, 2014</b>	20.6.6.20.J NMAC
C.	<b><u>Scaled Map of Dairy Facility – Updates:</u></b> Following completion of any additions or changes to the dairy facility which affect the items listed in Subsection U of 20.6.6.20 NMAC, the permittee shall update and resubmit the facility map.	<b>Within 90 days of any addition or change.</b>	20.6.6.20.V NMAC

**GROUND WATER MONITORING REQUIREMENTS**

16. The permittee shall comply with the requirements of Section 20.6.6.23 NMAC and shall submit to NMED all information or documentation required by the applicable portions of Section 20.6.6.23 NMAC.
17. Monitoring wells shall be constructed and completed in accordance with Subsection D of 20.6.6.23 NMAC.
18. Monitoring wells shall be permanently identified in accordance with Subsection C of 20.6.6.23 NMAC.

19. Within 90 days from the effective date of this Discharge Permit (**by October 29, 2013**), the permittee shall identify locations for the new monitoring wells (listed in the table below) in accordance with Subsections A and B of 20.6.6.23 NMAC.
20. The permittee shall complete the following items and submit documentation to NMED as summarized in the following table:

Item No.	Action Required and Submittal Due to NMED	Due Date	Citation
A.	<p><b><u>Ground Water Monitoring – Existing Combination Wastewater/Stormwater Impoundments:</u></b></p> <p>Install the following monitoring wells within 75 feet hydrologically downgradient of the top inside edge of each existing combination impoundment:</p> <ul style="list-style-type: none"> <li>i) MW-2, hydrologically downgradient of North Lagoon</li> <li>ii) MW-3, hydrologically downgradient of South Lagoon</li> </ul>	November 28, 2013	20.6.6.23.A(2) NMAC
B.	<p><b><u>Ground Water Monitoring – Existing Stormwater Impoundments:</u></b></p> <p>Install the following monitoring wells within 75 feet hydrologically downgradient of the top inside edge of each existing stormwater impoundment:</p> <ul style="list-style-type: none"> <li>i) MW-4, hydrologically downgradient of North Runoff Area</li> </ul>	November 28, 2013	20.6.6.23.A(3) NMAC
C.	<p><b><u>Ground Water Monitoring – Upgradient:</u></b></p> <p>Install a monitoring well, MW-1, hydrologically upgradient of all contamination sources at the dairy facility.</p>	November 28, 2013	20.6.6.23.A(5) NMAC
D.	<p><b><u>Ground Water Sampling and Reporting – Routine:</u></b></p> <p>Collect and analyze ground water samples quarterly from all monitoring wells identified in this Discharge Permit. Sampling shall be performed and results submitted in accordance with Subsection F of 20.6.6.23 NMAC.</p>	Quarterly	20.6.6.23.G NMAC
E.	<p><b><u>Ground Water Sampling – New Monitoring Wells:</u></b></p> <p>Collect ground water samples in accordance with Subsection F of 20.6.6.23 NMAC from the following newly installed monitoring wells required to be installed in the following locations:</p> <ul style="list-style-type: none"> <li>i) MW-1, hydrologically upgradient of all contamination sources at the dairy facility.</li> <li>ii) MW-2, hydrologically downgradient of North Lagoon</li> <li>iii) MW-3, hydrologically downgradient of South Lagoon</li> <li>iv) MW-4, hydrologically downgradient of North Runoff Area</li> </ul>	December 28, 2013	20.6.6.23.H NMAC
F.	<p><b><u>Monitoring Well Survey and Ground Water Flow Determination:</u></b></p> <p>Survey monitoring wells required to be installed <i>within 120 days of the effective date of the Discharge Permit</i> to a USGS</p>	December 28, 2013	20.6.6.23.I NMAC

Item No.	Action Required and Submittal Due to NMED	Due Date	Citation
	benchmark.		
G.	<b><u>Monitoring Well Completion Report:</u></b> Submit a monitoring well completion report for monitoring wells required to be installed <i>within 120 days of the effective date of the Discharge Permit</i> . The report shall include information from all monitoring wells.	<b>January 27, 2014</b>	20.6.6.23.J NMAC
H.	<b><u>Ground Water Elevation Contour Maps:</u></b> Develop and submit ground water elevation contour maps on a quarterly basis using data collected from all monitoring wells used for ground water monitoring at the dairy facility.	<b>Quarterly</b>	20.6.6.23.L NMAC

**MONITORING REQUIREMENTS**

21. The permittee shall comply with the requirements of Sections 20.6.6.24 and 20.6.6.26 NMAC, and shall submit to NMED all information or documentation required by the applicable portions of Sections 20.6.6.24 and 20.6.6.26 NMAC.

22. The permittee shall submit monitoring reports to NMED on a quarterly schedule that contain monitoring data and information collected pursuant to the Dairy Rule and submitted in accordance with Subsection A of 20.6.6.24 NMAC.

Quarterly monitoring reports shall be submitted according to the following schedule:

- January 1 through March 31 (first quarter) – report due by **May 1**
- April 1 through June 30 (second quarter) – report due by **August 1**
- July 1 through September 30 (third quarter) – report due by **November 1**
- October 1 through December 31 (fourth quarter) – report due by **February 1**

23. The permittee shall perform the following monitoring and submit to NMED the required documentation in monitoring reports as summarized in the following table:

Item No.	Action Required and Submittal Due to NMED	Due Date	Citation
A.	<b><u>Wastewater Volume Measurement and Reporting:</u></b> Using a flow meter(s) installed on the discharge line(s), measure the volume of all wastewater discharged to the impoundment(s) authorized to contain wastewater. Submit the information.  <b>Or</b>  <b><u>Wastewater Volume Estimation and Reporting:</u></b> Using a flow meter(s) installed on the fresh water supply line(s), measure the volume of all sources contributing to the wastewater discharged to the impoundment(s) authorized to	<b>Quarterly</b>	20.6.6.24.C NMAC

Item No.	Action Required and Submittal Due to NMED	Due Date	Citation
	contain wastewater. Submit the meter readings (without adjustments or deductions in accordance with Subsection N of 20.6.6.20 NMAC)		
B.	<b><u>Stormwater Sampling and Reporting:</u></b> Collect and analyze stormwater samples on a quarterly basis from each stormwater impoundment, and submit results.	<b>Quarterly</b>	20.6.6.24.D NMAC
C.	<b><u>Flow Meter Field Calibration:</u></b> Perform flow meter field calibrations annually and submit a flow meter field calibration report.	<b>Annually:</b> May 1	20.6.6.24.E NMAC
D.	<b><u>Wastewater to be Evaporated – Sampling and Reporting:</u></b> Analyze wastewater samples on a semi-annual basis collected from each impoundment used for disposal of wastewater by evaporation, and submit results.	<b>Semi-annually:</b> May 1 November 1	20.6.6.26 NMAC

#### CONTINGENCY REQUIREMENTS

24. The permittee shall comply with the requirements of Sections 20.6.6.27 and 20.6.6.29 NMAC, and shall submit to NMED all information or documentation required by the applicable portions of Sections 20.6.6.27 and 20.6.6.29 NMAC.

#### CLOSURE REQUIREMENTS

25. The permittee shall comply with the requirements of Section 20.6.6.30 NMAC and shall submit to NMED all information or documentation required by the applicable portions of Section 20.6.6.30 NMAC.
26. Only upon written notification by certified mail from NMED, shall the permittee abandon the following well(s) previously used for monitoring in accordance with Subsection C of 20.6.6.30 NMAC. The permittee is not required to perform routine ground water sampling from the following well(s); however, NMED may collect ground water samples from the well(s) pursuant to Subsection D of 20.6.2.3107 NMAC.
- a) **MW-East** – located approximately 125 feet southwest of the South Lagoon.
  - b) **MW-West** – located approximately 330 feet west-southwest of the South Lagoon.

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

#### GENERAL REQUIREMENTS

27. 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.

28. The permittee shall retain required records for a minimum period of 10 years from the date of sample collection, measurement, report or application in accordance with Section 20.6.6.33 NMAC.
29. Transfer of a Discharge Permit for a dairy facility shall be completed in accordance with Section 20.6.6.34 NMAC.
30. To renew this Discharge Permit, the permittee shall submit an application for renewal, renewal and modification, or renewal for closure at least one year prior to the expiration date of the Discharge Permit in accordance with Section 20.6.6.10 NMAC.
31. In accordance with Subsection A of 20.6.6.9 NMAC, the permittee shall remit a permit fee payment equal to one-tenth of the applicable permit fee from Table 1 of Section 20.6.2.3114 NMAC on the first occurrence of August 1 after the effective date of the Discharge Permit, and annually thereafter until expiration or termination of the Discharge Permit.

#### V. ADDITIONAL CONDITIONS

In addition to the requirements of 20.6.6 NMAC, the permittee shall comply with the following conditions as authorized by Subsection H of 20.6.6.10 NMAC pursuant to Section 74-6-5 WQA. A hearing may be requested on additional conditions in accordance with Section 20.6.6.15 NMAC.

1. This Discharge Permit does not contain additional conditions.

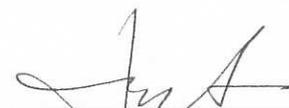
#### VI. PERMIT ISSUANCE

Pursuant to WQA 74-6-5(I), the term of this Discharge Permit shall be for the fixed term of five years from the effective date of the Discharge Permit.

Issued by: New Mexico Environment Department

Effective Date: **July 31, 2013**

Expiration Date: **July 31, 2018**

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

