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NEW MEXICO ENVIRONMENT DEPARTMENT



SUSANA MARTINEZ Governor

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RYAN FLYNN Cabinet Secretary BUTCH TONGATE Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUEST

July 21, 2014

Raymond Jarratt, President Jarratt Dairy 2104 Los Lentos Road SE Los Lunas, NM 87031

RE: Discharge Permit Renewal and Modification, DP-1176, Jarratt D

U.S. Postal Service CERTIFIED MAIL (Domestic Mail Only; No Ins) For delivery information visit OFFICE Postage \$ Certified Fee Return Receipt Fee (Endorsement Required) Restricted Delivery Fee (Endorsement Required) Tot Raymond Jarratt Jarratt Dairy 2104 Los Lentos Road SE Los Lunas, NM PS Form 3800, August 2006

Dear Mr. Jarratt:

On June 21, 2013, the New Mexico Environment Department (NMED) proposed renewal of the Ground Water Discharge Permit for Jarratt Dairy, DP-1176, pursuant to Subsection H of 20.6.2.3108 NMAC. A draft Discharge Permit Renewal and Modification was sent to you at that time. In response, NMED received comments from the facility on July 22, 2013. All of the comments were considered by NMED and some were incorporated into the enclosed Discharge Permit. Comments requesting permit revisions not in accordance with the requirements of 20.6.6 NMAC are not addressed by this Discharge Permit. The permittee may file a petition with the New Mexico Water Quality Control Commission (WQCC) requesting a variance from site specific requirements of 20.6.6 NMAC.

NMED issues the enclosed Discharge Permit Renewal and Modification, DP-1176, to Raymond Jarratt (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.

The Discharge Permit contains requirements that shall be complied with by the permittee and are enforceable by NMED pursuant to Sections 20.6.2.3104 and 20.6.6.8 NMAC, WQA, and NMSA 1978 §74-6-5 and §74-6-10. The discharge shall be managed in accordance with all applicable requirements of the Dairy Rule and this Discharge Permit. Issuance of this Discharge Permit

Raymond Jarratt, DP-1176

July 21, 2014

Page 2 of 2

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.

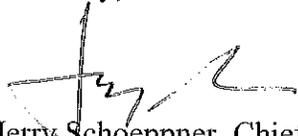
You will be invoiced under separate cover for the remaining permit fee balance of \$575.00.

Pursuant to Subsection I of NMSA 1978 § 74-6-5, the term of this Discharge Permit shall be for the fixed term of five years. The term of this Discharge Permit will end on July 21, 2019.

Pursuant to Subsection A of 20.6.6.10 NMAC, you are required to submit an application for renewal or renewal/modification to NMED one year prior to the end of the Discharge Permit term.

If you have any questions, please contact Sara Arthur at (505) 827-9669 or Gary Westerfield, Agricultural Waste Team Leader, at (505) 827-2713. Thank you for your cooperation during this Discharge Permit review.

Sincerely,



Jerry Schoeppner, Chief
Ground Water Quality Bureau

JS:SA

Encs: Discharge Permit Renewal and Modification, DP-1176

cc: Gary Westerfield, Agricultural Waste Team Leader, NMED-GWQB (permit)
Bill Chavez, NMED District I (permit – electronic copy)
NMED Los Lunas Field Office (permit – electronic copy)
John Romero, Office of the State Engineer (permit – electronic copy)

**GROUND WATER DISCHARGE PERMIT – RENEWAL AND MODIFICATION
EXISTING DAIRY FACILITY with a LAND APPLICATION AREA
Jarratt Dairy, DP-1176**

I. INTRODUCTION AND SUMMARY

The New Mexico Environment Department (NMED) issues this Discharge Permit Renewal and Modification (Discharge Permit), DP-1176, to Raymond Jarratt (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 Jarratt 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 2,500 gallons per day (gpd) of wastewater may be discharged from the production area. Wastewater flows to a concrete sump, is pumped through a solids separator (required to be installed) to a concrete holding tank for storage; or is pumped from a solids separator (required to be installed) to an anaerobic solids digester tank and then flows to a synthetically lined constructed wetlands for storage. Wastewater is land applied by flood irrigation to up to 78 acres of irrigated cropland under cultivation. The modification consists of decreasing the land application area from 335 to 78 acres. 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 2520 Los Lentos Rd SE, approximately two miles south of Los Lunas, in Section 4, T6N, R2E and Section 33, T7N, R2E, Valencia County. Ground water most likely to be affected is at a depth of approximately five feet and had a pre-discharge total dissolved solids concentration of approximately 668 milligrams per liter.

The original Discharge Permit was issued on May 20, 1999, and subsequently renewed and modified on November 9, 2006. The application consists of the materials submitted by the permittee dated April 2, 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 ₃ -N	nitrate-nitrogen
gpd	gallons per day	S	Sulfur
LADS	land application data sheet(s)	SO ₄	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 dairy 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. Data collected from on-site monitoring wells document ground water contamination attributed to one or more sources at this dairy facility. Ground water quality standards for NO₃-N have been exceeded according to the criteria of Sections 20.6.2.3101 and 20.6.2.3103 NMAC.
6. The Discharge Permit for this facility last issued on November 9, 2006 (before the effective date of the Dairy Rule of December 31, 2011) required the wastewater impoundment system to have the capacity to store the volume of wastewater discharged

at the maximum daily discharge volume, for a minimum of 60 days while preserving two feet of freeboard.

7. 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). As of the effective date of this Discharge Permit, the dairy facility uses a supply meter(s) to estimate the volume of wastewater generated in the production area. The meter(s) measures the volume of all fresh water contributing to the wastewater discharged from the production area.
8. 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) Wastewater Impoundments
 - i. **Constructed Wetland** - authorized for use by this Discharge Permit.
 - ii. **Digester Tank** - authorized for use by this Discharge Permit.
 - iii. **Concrete Holding Tank** - authorized for use by this Discharge Permit.
 - b) Fields within the Land Application Area
 - i. **Field 2** - authorized for use by this Discharge Permit.
 - ii. **Field 3** - authorized for use by this Discharge Permit.
 - iii. **Field 4** - authorized for use by this Discharge Permit.
 - iv. **Field 5** - authorized for use by this Discharge Permit.
 - v. **Field 6** - not authorized for use by this Discharge Permit; subject to closure and post-closure ground water monitoring requirements.

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 2,500 gpd of wastewater from the production area. Wastewater flows to a concrete sump, is pumped through a solids

separator (required to be installed) to a concrete holding tank for storage; or is pumped from a solids separator (required to be installed) to an anaerobic solids digester tank and then flows to a synthetically lined constructed wetlands for storage. Wastewater is land applied by flood irrigation to up to 78 acres of irrigated cropland under cultivation.

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) **Constructed Wetland** – authorized to receive wastewater for storage prior to land application. This impoundment exists as of the effective date of this Discharge Permit and is synthetically lined with 40 mil polyvinyl chloride. Wastewater flows from the Digester Tank to the Constructed Wetlands prior to land application by flood irrigation.
 - b) **Digester Tank** – authorized to receive wastewater for storage prior to land application. This impoundment exists as of the effective date of this Discharge Permit. Wastewater is pumped from the concrete parlor sump through a solids separator (required to be installed) to the Digester Tank. Wastewater flows from the Digester Tank to the Constructed Wetlands prior to land application by flood irrigation.
 - c) **Concrete Holding Tank** – authorized to receive wastewater for storage prior to land application. This impoundment exists as of the effective date of this Discharge Permit. Wastewater is pumped from the concrete sump through a solids separator (required to be installed) to the Concrete Holding Tank. Wastewater flows from the Concrete Holding Tank to the flood irrigation system.

3. The permittee is authorized to apply wastewater and stormwater to all fields within the land application area in accordance with Subsections B, C and I of 20.6.6.21 NMAC. The land application area consists of the following fields for a total land application area of 78 acres.
 - a) **Field 2** – consists of 20 acres; applied by flood irrigation. This field has not received wastewater and/or stormwater as of the effective date of this Discharge Permit.
 - b) **Field 3** – consists of 22 acres; applied by flood irrigation. This field was authorized by the last Discharge Permit issued prior to the effective date of the Dairy Rule (December 31, 2011) to receive wastewater and/or stormwater and has received wastewater and/or stormwater as of the effective date of this Discharge Permit.
 - c) **Field 4** – consists of 12 acres; applied by flood irrigation. This field was authorized by the last Discharge Permit issued prior to the effective date of the Dairy Rule (December 31, 2011) to receive wastewater and/or stormwater and has received wastewater and/or stormwater as of the effective date of this Discharge Permit.
 - d) **Field 5** – consists of 25 acres; applied by flood irrigation. This field was authorized by the last Discharge Permit issued prior to the effective date of the Dairy Rule (December 31, 2011) to receive wastewater and/or stormwater and has

received wastewater and/or stormwater as of the effective date of this Discharge Permit.

APPLICATION REQUIREMENTS

4. Within 90 days from the effective date of this Discharge Permit (**by October 19, 2014**) 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) Pursuant to Subsection G of 20.6.6.12 NMAC, provide the methods and calculations used to determine the maximum daily discharge volume.
 - c) Pursuant to Subsection H of 20.6.6.12 NMAC, provide the settled solids thickness and free-liquid capacity for each existing wastewater impoundment determined in accordance with Subsection D of 20.6.6.20 NMAC.
 - d) Pursuant to Subsection O of 20.6.6.12 NMAC, provide the following:
 - 1) A scaled design schematic and supporting documentation for construction of a manure solids separator in accordance with Subsection C of 20.6.6.17 NMAC;
 - 2) Record drawings and final specifications for the existing impoundments and for their liners in accordance with 20.6.6.17 NMAC; **or**
 - 3) If record drawings and final specifications for the existing impoundments and for their liners do not exist, a survey of the existing impoundments and capacity calculations in accordance with Subsection C of 20.6.6.20 NMAC.
 - e) Pursuant to Subsection E of 20.6.6.21 NMAC, submit a narrative statement and photographic documentation of the existing infrastructure necessary to transfer, distribute and apply wastewater to the land application area. Documentation should include confirmation of the type(s) and location of the system(s), and the method(s) of backflow prevention employed.
 - f) Pursuant to Subsection P of 20.6.6.12 NMAC, provide a nutrient management plan (NMP) developed in accordance with Subsection I of 20.6.6.21 NMAC.

ENGINEERING AND SURVEYING REQUIREMENTS

5. 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.
6. 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><u>Manure Solids Separation Plans and Specifications – Existing Wastewater System:</u></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>	October 19, 2014	20.6.6.17.C(5) NMAC
B.	<p><u>Flow Metering Plans:</u></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"> the volume of wastewater discharged from the Constructed Wetland to each field in the land application area the volume of wastewater discharged from the Concrete Holding Tank to each field in the land application area 	October 19, 2014	20.6.6.17.C(7) NMAC

OPERATIONAL REQUIREMENTS

- The permittee shall comply with the requirements of Sections 20.6.6.20 and 20.6.6.21 NMAC, and shall submit to NMED all information or documentation required by the applicable portions of Sections 20.6.6.20 and 20.6.6.21 NMAC.
- 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

- If record drawings and final specifications for the existing impoundments and for their liners do not exist, within 90 days from the effective date of this Discharge Permit (by **October 19, 2014**), the permittee shall submit an up-to-date survey and capacity

calculations for the existing impoundments in accordance with Subsection C of 20.6.6.20 NMAC.

10. Within 90 days from the effective date of this Discharge Permit (**by October 19, 2014**), 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.
11. Within 90 days from the effective date of this Discharge Permit (**by October 19, 2014**), the permittee shall submit a scaled design schematic and supporting documentation for construction of a manure solids separator in accordance with Subsection F 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, and Subsections G and H of 20.6.6.21 NMAC.
 - a) **LAA Meter 1**– to be located on the discharge line of the Constructed Wetland to measure the volume of wastewater discharged from the Constructed Wetland to each field in the land application area.
 - b) **LAA Meter 2**– to be located on the discharge line of the Concrete Tank to measure the volume of wastewater discharged from the Concrete Tank to each field in the land application area.

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

13. Within 90 days from the effective date of this Discharge Permit (**by October 19, 2014**) the permittee shall submit documentation in accordance with Subsection M of 20.6.6.20 NMAC to demonstrate that the existing flow meter(s) meets the requirements of Subsection M of 20.6.6.20 NMAC.

The permittee is authorized to use the following existing flow meters pursuant to the alternative requirements of Subsection N of 20.6.6.20 NMAC to measure the volume of all fresh water contributing to the wastewater discharged to the wastewater impoundments.

- a) **Parlor Meter** – located west of the milking parlor on the incoming water supply line; measures the total supply water used by the parlor and for cattle drinking water.
 - a) **Cow Water Meter** – located west of the parlor to measure water pumped to corral water troughs; measures the water supplied to cattle for drinking water and is to be subtracted from the total supply water volume (Parlor Meter).
14. The permittee is authorized, pursuant to Subsection S of 20.6.6.20 NMAC, to land apply manure solids and composted material to the land application area. Manure solids and composted material shall be applied in accordance with the Nutrient Management Plan (NMP) required by Subsection I of 20.6.6.21 NMAC.

15. Within 90 days from the effective date of this Discharge Permit (**by October 19, 2014**), 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.
16. The permittee is authorized to blend wastewater with fresh irrigation water for land application using any of the methods provided in Subsection D of 20.6.6.21 NMAC. Fresh water may be added to a wastewater impoundment prior to land application in accordance with Subsection D of 20.6.6.21 NMAC.
17. Within 90 days from the effective date of this Discharge Permit (**by October 19, 2014**), the permittee shall submit a narrative statement and photographic documentation of the existing infrastructure necessary to transfer, distribute and apply wastewater to the land application area in accordance with Subsection E of 20.6.6.21 NMAC. Documentation should include confirmation of the type(s) and location of the system(s), and the method(s) of backflow prevention employed.
18. Within 90 days from the effective date of this Discharge Permit (**by October 19, 2014**), the permittee shall submit a NMP developed in accordance with Subsection I of 20.6.6.21 NMAC.
19. The permittee shall remove crops from the following fields within the land application area using the following methods in accordance with Subsection I and J of 20.6.6.21 NMAC. Crops may be grazed prior to and between mechanical harvests, however, nitrogen removal credit shall not be taken for grazing activities unless a grazing plan is developed and submitted in accordance with Subsections I and J of 20.6.6.21 NMAC.
 - a) **Field 2** – crops shall be harvested mechanically.
 - b) **Field 3** – crops shall be harvested mechanically.
 - c) **Field 4** – crops shall be harvested mechanically.
 - d) **Field 5** – crops shall be harvested mechanically.

The permittee shall submit an application for Discharge Permit Modification to NMED for any proposed changes to the method(s) of crop removal for any field within the land application area as required by Subsection K of 20.6.6.21 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.	<u>Manure Solids Separator Installation – Existing System:</u> i) Complete construction of a manure solids separator associated with the existing wastewater storage system. ii) Submit confirmation of solids separator construction.	December 18, 2014 January 17, 2015	20.6.6.20.F NMAC

Item No.	Action Required and Submittal Due to NMED	Due Date	Citation
B.	<p><u>Flow Meter Installation:</u></p> <p>i) Complete installation of flow meter(s).</p> <p>ii) Submit confirmation of installation.</p>	<p>December 18, 2014</p> <p>January 17, 2015</p>	20.6.6.20.J NMAC
C.	<p><u>Scaled Map of Dairy Facility – Updates:</u></p> <p>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.</p>	Within 90 days of any addition or change.	20.6.6.20.V NMAC
D.	<p><u>Nutrient Management Plan:</u></p> <p>Develop and submit annual updates to the NMP.</p>	Annually: May 1	20.6.6.21.I NMAC
E.	<p><u>Backflow Prevention:</u></p> <p>i) Complete installation of backflow prevention methods or devices.</p> <p>ii) Submit confirmation of installation.</p>	<p>October 19, 2014</p> <p>January 17, 2015</p>	20.6.6.21.M NMAC
F.	<p><u>Backflow Prevention by Reduced Pressure Principle Backflow Prevention Assembly – Inspection and Maintenance:</u></p> <p>Submit copies of inspection and maintenance records and test results for each RP device, should the device be used to satisfy the requirements of Subsection M of 20.6.6.21 NMAC.</p>	Annually: May 1	20.6.6.21.N NMAC

GROUND WATER MONITORING REQUIREMENTS

21. 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.
22. Monitoring wells shall be constructed and completed in accordance with Subsection D of 20.6.6.23 NMAC.
23. Monitoring wells shall be permanently identified in accordance with Subsection C of 20.6.6.23 NMAC.
24. Within 90 days of the effective date of this Discharge Permit (by **October 19, 2014**), 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.

25. 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><u>Ground Water Monitoring – Existing Wastewater Impoundments:</u></p> <p>Install the following monitoring wells within 75 feet hydrologically downgradient of the top inside edge of each <u>existing</u> wastewater impoundment:</p> <p>i) MW-5, hydrologically downgradient of Constructed Wetlands, Digester Tank and Concrete Holding Tank.</p>	<p>November 18, 2014</p>	<p>20.6.6.23.A(1) NMAC and 20.6.6.23.A(7) NMAC</p>
B.	<p><u>Ground Water Monitoring – Land Application Area:</u></p> <p>Install the following monitoring wells within 50 feet hydrologically downgradient of the downgradient boundary of <u>existing</u> fields within the land application area:</p> <p>i) MW-3A, hydrologically downgradient of Field 3; replaces MW-3.</p> <p>ii) MW-6, hydrologically downgradient of Field 4 and Field 5.</p> <p>iii) MW-7, hydrologically downgradient of Field 6 and Field 2.</p>	<p>November 18, 2014</p>	<p>20.6.6.23.A(4) (a) NMAC</p>
C.	<p><u>Ground Water Monitoring – Upgradient:</u></p> <p>Install a monitoring well, MW-4, hydrologically upgradient of all contamination sources at the dairy facility.</p>	<p>November 18, 2014</p>	<p>20.6.6.23.A(5) NMAC</p>
D.	<p><u>Ground Water Sampling and Reporting – Routine:</u></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>	<p>Quarterly</p>	<p>20.6.6.23.G NMAC</p>
E.	<p><u>Ground Water Sampling – New Monitoring Wells:</u></p> <p>Collect ground water samples from monitoring wells required to be installed <i>within 120 days of the effective date of the Discharge Permit</i>. Sampling shall be performed in accordance with Subsection F of 20.6.6.23 NMAC using the monitoring wells required to be installed in the following locations:</p> <p>i) MW-4, hydrologically upgradient of all contamination sources at the dairy facility</p> <p>ii) MW-5, hydrologically downgradient of Constructed Wetlands, Digester Tank and Concrete Holding Tank.</p> <p>iii) MW-3A, hydrologically downgradient of Field 3; replaces MW-3.</p> <p>iv) MW-6, hydrologically downgradient of Field 4 and Field 5.</p> <p>v) MW-7, hydrologically downgradient of Field 6 and Field 2.</p>	<p>December 18, 2014</p>	<p>20.6.6.23.H NMAC</p>

Item No.	Action Required and Submittal Due to NMED	Due Date	Citation
F.	<p><u>Monitoring Well Survey and Ground Water Flow Determination:</u></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 benchmark.</p> <p>Survey monitoring wells required to be installed <i>within the term of the Discharge Permit</i> to a USGS benchmark.</p>	<p>December 18, 2014</p> <p>Upon well completion, to be included in the well completion report.</p>	20.6.6.23.I NMAC
G.	<p><u>Monitoring Well Completion Report:</u></p> <p>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.</p>	January 17, 2015	20.6.6.23.J NMAC
H.	<p><u>Monitoring Well Completion Report – Monitoring Wells for New Fields:</u></p> <p>Submit a monitoring well completion report for monitoring wells required to be installed <i>within the term of the Discharge Permit</i> (i.e., installed prior to land application on a newly activated field). The report shall include information from all monitoring wells.</p>	Within 60 days of well completion.	20.6.6.23.J NMAC
I.	<p><u>Ground Water Elevation Contour Maps:</u></p> <p>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.</p>	Quarterly	20.6.6.23.L NMAC

MONITORING REQUIREMENTS

26. The permittee shall comply with the requirements of Sections 20.6.6.24 and 20.6.6.25 NMAC, and shall submit to NMED all information or documentation required by the applicable portions of Sections 20.6.6.24 and 20.6.6.25 NMAC.
27. 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**

28. 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.	<p><u>Wastewater Volume Estimation and Reporting:</u></p> <p>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 contain wastewater. Submit the meter readings (without adjustments or deductions in accordance with Subsection N of 20.6.6.20 NMAC).</p>	Quarterly	20.6.6.24.C NMAC
B.	<p><u>Flow Meter Field Calibration:</u></p> <p>Perform flow meter field calibrations annually and submit a flow meter field calibration report.</p>	Annually: May 1	20.6.6.24.E NMAC
C.	<p><u>Volume of Wastewater Land Applied – Measurement and Reporting:</u></p> <p>Measure the volume of all wastewater discharges to each field within the land application area using a flow meter(s) and submit the information.</p>	Quarterly	20.6.6.25.A NMAC
D.	<p><u>Wastewater to be Land Applied – Sampling and Reporting:</u></p> <p>The permittee shall collect a representative wastewater sample (consisting of eight subsamples) from each wastewater or combination wastewater/stormwater impoundment. Analyze each representative wastewater sample on a quarterly basis and submit results.</p>	Quarterly	20.6.6.25.C NMAC
E.	<p><u>Manure Solids – Nitrogen Content:</u></p> <p>Should a permittee choose to use actual nitrogen content values of on-site manure solids for the purpose of applying to the land application area, the permittee shall collect and analyze samples annually, and submit results.</p>	Quarterly	20.6.6.25.D NMAC
F.	<p><u>Irrigation Water – Sampling, Volume Applied and Reporting:</u></p> <p>Collect and analyze fresh irrigation water samples on an annual basis from each irrigation well associated with the land application area. Estimate the annual volume of irrigation water applied to each field from each well. Submit estimated volumes and analytical results.</p>	Annually: May 1	20.6.6.25.E NMAC
G.	<p><u>Fertilizer Application Reporting:</u></p> <p>Maintain and submit a log of all additional fertilizer applied to each field within the land application area.</p>	Quarterly	20.6.6.25.F NMAC

Item No.	Action Required and Submittal Due to NMED	Due Date	Citation
H.	<u>Land Application Data Sheets:</u> Complete and submit land application data sheets (LADS) for each field within the land application area.	Quarterly	20.6.6.25.G NMAC
I.	<u>Crop Yield Documentation:</u> Submit crop yield documentation and plant and harvest dates of each crop grown.	Quarterly	20.6.6.25.H NMAC
J.	<u>Nitrogen Concentration of Harvested Crop:</u> Determine the percent total nitrogen and dry matter of each harvested crop and submit results.	Quarterly	20.6.6.25.I NMAC
K.	<u>Nitrogen Removal Summary of Harvested Crop:</u> Develop and submit a nitrogen removal summary for each crop grown on each field within the land application area.	Quarterly	20.6.6.25.J NMAC
L.	<u>Soil Sampling – Initial Event in a Discharge Permit Term:</u> Collect and analyze <u>initial</u> soil samples from each field in the land application area for the first soil sampling event during the first year following the effective date of this Discharge Permit. Submit the results.	May 1, 2015	20.6.6.25.K NMAC
M.	<u>Soil Sampling – Routine:</u> Collect and analyze <u>routine</u> soil samples annually from each field in the land application area beginning the year following the initial sampling event. Submit the results.	Annually: May 1	20.6.6.25.L NMAC

CONTINGENCY REQUIREMENTS

29. The permittee shall comply with the requirements of Section 20.6.6.27 NMAC and shall submit to NMED all information or documentation required by the applicable portions of Section 20.6.6.27 NMAC.

CLOSURE REQUIREMENTS

30. 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.
31. Within 120 days of the effective date of the Discharge Permit (**by November 18, 2014**), the permittee shall abandon the following well(s) previously used for monitoring in accordance with Subsection C of 20.6.6.30 NMAC.
- a) **MW-1** – located south of heifer corrals.
 - b) **MW-2** – located southeast of Field 4.

- c) **MW-3** – located east of Field 3.

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

GENERAL REQUIREMENTS

32. 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.
33. 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.
34. Transfer of a Discharge Permit for a dairy facility shall be completed in accordance with Section 20.6.6.34 NMAC.
35. 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.
36. 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

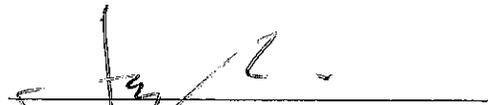
Jarratt Dairy, DP-1176

July 21, 2014

Page 15 of 15

Effective Date: **July 21, 2014**

Expiration Date: **July 21, 2019**

A handwritten signature in black ink, appearing to read "Jerry Schoepner", is written over a horizontal line.

JERRY SCHOEPPNER

Chief, Ground Water Quality Bureau

New Mexico Environment Department

