GROUND WATER DISCHARGE PERMIT - RENEWAL FOR CLOSURE
EXISTING DAIRY FACILITY with a LAND APPLICATION AREA
Chalk Hill Dairy, DP-911

I. INTRODUCTION AND SUMMARY

The New Mexico Environment Department (NMED) issues this Discharge Permit Renewal for Closure (Discharge Permit), DP-911, to Ag New Mexico FCS (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 to Chalk Hill Dairy (dairy facility) is to control water contaminants associated with the dairy facility and permanent closure activities, and provide oversight of post-closure monitoring. This Discharge Permit is issued 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 dairy facility permanently ceased wastewater discharge in November of 2007. The discharge contained water contaminants or toxic pollutants which may have been elevated above the standards of Section 20.6.2.3103 NMAC. The activities which produced the discharge, the location of the discharge, and the former quantity, quality and flow characteristics of the discharge are briefly described as follows:

The last Discharge Permit issued before the effective date of the Dairy Rule authorized a maximum wastewater discharge volume of 1,250 gallons per day (gpd) from the production area. Wastewater flowed to a concrete sump from where it was pumped to a gun sprinkler for land application on 9.61 acres of irrigated cropland under cultivation.

The dairy facility is located at 317 NM 267, approximately 3 miles west of Portales, in Section 32, Township 01S, Range 34E, Roosevelt County. Ground water most likely to be affected is at a depth of approximately 92 feet and had a pre-discharge total dissolved solids concentration of approximately 332 milligrams per liter.

The original Discharge Permit was issued on February 24, 1993 and subsequently renewed, renewed on August 15, 2000. The application consists of the materials submitted by John Campbell dated January 21, 2005 and materials contained in the administrative record associated with issuance of this Discharge Permit. Permanent closure of the dairy facility 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.

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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. This facility meets the definition of "dairy facility". Effluent or leachate discharged from this facility is subject to the Dairy Rule (20.6.6 NMAC). This dairy facility meets the definition of "existing dairy facility".

2. Effluent or leachate discharged from the dairy facility may move directly or indirectly into ground water within the meaning of Section 20.6.2.3104 NMAC.

3. Effluent or leachate discharged from the dairy facility 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. Effluent or leachate discharged from the dairy facility are 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 NO_3-N, Cl and TDS have been exceeded according to the criteria of Sections 20.6.2.3101 and 20.6.2.3103 NMAC.

6. Prior to permanently ceasing wastewater discharge, the dairy facility held a Discharge Permit that authorized the permittee to discharge up to 1,250 gpd of wastewater from the

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production area. Wastewater flowed to a concrete sump from where it was pumped to a gun sprinkler for land application on 9.61 acres of irrigated cropland under cultivation.

7. This Discharge Permit contains requirements associated with the following potential contaminant sources as identified in the last Discharge Permit issued prior to the effective date of the Dairy Rule (December 31, 2011), the application and/or the administrative record as of the effective date of this Discharge Permit:
   a) Stormwater Impoundment
      i. **Runoff Control Structure (RCS)**
   b) Fields within the Land Application Area
      i. **LAA-A**
      ii. **LAA-B**

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 shall perform closure activities and post-closure monitoring 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 shall perform closure activities and post-closure monitoring subject to the following requirements:

DAIRY RULE TRANSITION REQUIREMENTS

1. The permittee shall have 90 days from the effective date of this Discharge Permit (**by DATE**) to submit all the necessary information to comply with Sections 20.6.6.10 through 20.6.6.13 NMAC, in accordance with Subsection D of 20.6.6.35 NMAC. The permittee shall submit the necessary information by completing the application form for Renewal for Closure located at the following address:
   - http://www.nmenv.state.nm.us/gwb/NMED-GWQB-dairies.htm

   The following sections of the application form for renewal for closure shall be completed, and the form shall be signed by the permittee and notarized prior to submission.
   a) Introduction – *Applicant's Signature and Notary Certification only*
   b) Part I.A
   c) Part I.B.4
   d) Part II.A
   e) Part II.B.2

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f) Part II.B.3(a)
g) Part II.C
h) Part IV

CLOSURE REQUIREMENTS

2. 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.

3. The permittee used and was previously authorized to use the following impoundments which require closure and/or post-closure monitoring in accordance with Subsections A and B of 20.6.6.30 NMAC.
   a) **RCS** – received stormwater for collection prior to land application, as authorized by the last Discharge Permit issued on August 15, 2000. This impoundment exists unclosed as of the effective date of this Discharge Permit and is earthen-lined.

4. The permittee applied and was previously authorized to apply wastewater and/or stormwater to the land application area which consisted of the following fields:
   a) **LAA-A** – consists of 7.25 acres; applied by sprinkler gun. This field was authorized by the last Discharge permit 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.
   b) **LAA-B** – consists of 2.36 acres; applied by sprinkler gun. This field was authorized by the last Discharge permit 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.

5. The permittee shall complete the following items as summarized in the following table and submit to NMED as required:

Item No.	Action Required and Submittal Due to NMED	Due Date	Citation
A.	**Empty Stormwater from Impoundments:** Submit a plan for NMED approval for the disposal of stormwater from the stormwater impoundment. Implement disposal plan approved by NMED and empty the stormwater impoundment of stormwater.	**[within one year of effective date]**	20.6.6.30.A(1) NMAC

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Item No.	Action Required and Submittal Due to NMED	Due Date	Citation
B.	**Manure Solids and Compost Removal:** Remove manure solids and compost from surface areas at the dairy facility and transfer off-site for proper disposal.	**[within one year of effective date]**	20.6.6.30.A(1) NMAC
C.	**Solids Removal from Stormwater Impoundments:** Submit a plan to NMED for the disposal of manure solids from all stormwater and combination wastewater/stormwater impoundments. Implement disposal plan approved by NMED and dispose of manure solids from all stormwater and combination wastewater/stormwater impoundments.	**[within two years of effective date]**	20.6.6.30.A(1) NMAC
D.	**Re-grade Stormwater Impoundment:** Re-grade the stormwater impoundment with clean fill to blend with surface topography to prevent ponding.	**[within two years of effective date]**	20.6.6.30.A(1) NMAC
E.	**Monitoring Well Plugging and Abandonment:** Abandon the following well(s) previously used for monitoring in accordance with Subsection C of 20.6.6.30 NMAC. i) **MW-1** – located northeast of the corral system. ii) **MW-2** – located at the southeast corner of the facility. iii) **MW-3** – located southwest of the corral system. The well abandonment report shall be submitted to NMED within 60 days of completion of well plugging activities.	**[within 120 days of effective date]**	20.6.6.30.C NMAC

MONITORING REQUIREMENTS

6. The permittee shall comply with the requirements of Section 20.6.6.24 NMAC and shall submit to NMED all information or documentation required by the applicable portions of Section 20.6.6.24 NMAC.

7. 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**

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GROUND WATER MONITORING REQUIREMENTS

8. The permittee shall comply with the requirements of Sections 20.6.6.23 and 20.6.6.30 NMAC, and shall submit to NMED all information or documentation required by the applicable portions of Sections 20.6.6.23 and 20.6.6.30 NMAC.

9. Monitoring wells shall be constructed and completed in accordance with Subsection D of 20.6.6.23 NMAC.

10. Monitoring wells shall be permanently identified in accordance with Subsection C of 20.6.6.23 NMAC.

11. 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.	**Ground Water Monitoring – Existing Stormwater Impoundment:** Install the following monitoring well within 75 feet hydrologically downgradient of the top inside edge of the stormwater impoundment: i) **MW-5**, hydrologically downgradient of RCS.	**[120 days of effective date]**	20.6.6.23.A(3) NMAC
B.	**Ground Water Monitoring – Existing Land Application Area:** Install the following monitoring wells within 50 feet hydrologically downgradient of the downgradient boundary of fields within the land application area: i) **MW-6**, hydrologically downgradient of Field LAA-A. ii) **MW-7**, hydrologically downgradient of Field LAA-B.	**[120 days of effective date]**	20.6.6.23.A(4)(b) NMAC
C.	**Ground Water Monitoring – Upgradient:** Install a monitoring well, **MW-4**, hydrologically upgradient of all contamination sources at the dairy facility.	**[120 days of effective date]**	20.6.6.23.A(5) NMAC
D.	**Ground Water Sampling and Reporting – Routine:** 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.	**Quarterly**	20.6.6.23.G NMAC
E.	**Ground Water Sampling – New Monitoring Wells:** 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: i) **MW-4**, hydrologically upgradient of all contamination sources at the dairy facility. ii) **MW-5**, hydrologically downgradient of RCS.	**[150 days of effective date]**	20.6.6.23.H NMAC

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Item No.	Action Required and Submittal Due to NMED	Due Date	Citation
	iii) **MW-6**, hydrologically downgradient of Field LAA-A. iv) **MW-7**, hydrologically downgradient of Field LAA-B.		
F.	**Monitoring Well Survey and Ground Water Flow Determination:** Survey monitoring wells to a U.S. Geological Benchmark.	**[150 days of effective date]**	20.6.6.23.I NMAC
G.	**Monitoring Well Completion Report:** Submit a monitoring well completion report which includes information from all monitoring wells.	**[180 days of effective date]**	20.6.6.23.J NMAC
H.	**Ground Water Elevation Contour Maps:** 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.	**Quarterly**	20.6.6.23.L NMAC

12. Following completion of the requirements of Subsection A of 20.6.6.30 NMAC and NMED's confirmation of completion, pursuant to Subsection B of 20.6.6.30 NMAC, ground water monitoring shall continue in accordance with Section 20.6.6.23 NMAC until a minimum of eight consecutive ground water sampling events confirm that the standards of Section 20.6.2.3103 NMAC are not exceeded and the total nitrogen concentration in ground water is less than or equal to 10 milligrams per liter. If monitoring results show that one or more of the standards of Section 20.6.2.3103 NMAC is exceeded or the total nitrogen concentration in ground water is greater than 10 milligrams per liter, the permittee shall implement contingency requirements in accordance with Sections 20.6.6.27 NMAC. Upon notification from NMED that post-closure ground water monitoring may cease, the permittee shall abandon all monitoring wells and submit a report to NMED in accordance with Subsection C of 20.6.6.30 NMAC.

CONTINGENCY REQUIREMENTS

13. 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.

GENERAL REQUIREMENTS

14. 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.

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15. 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.

16. Transfer of a Discharge Permit for a dairy facility shall be completed in accordance with Section 20.6.6.34 NMAC.

17. The permittee is required to renew this Discharge Permit for Closure unless the permittee receives notice from NMED of termination of the Discharge Permit. The permittee shall submit an application for renewal for closure at least one year prior to the expiration date of this Discharge Permit in accordance with Section 20.6.6.10 NMAC.

18. 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: **[DATE]**
Expiration Date: **[DATE]**

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

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