

**GROUND WATER DISCHARGE PERMIT - RENEWAL AND MODIFICATION
EXISTING DAIRY FACILITY with a LAND APPLICATION AREA
Sideline Dairy, DP-683**

I. INTRODUCTION AND SUMMARY

The New Mexico Environment Department (NMED) issues this Discharge Permit Renewal and Modification (Discharge Permit), DP-683, to Sideline Dairy, LLC (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 Sideline 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 550,000 gallons per day (gpd) of wastewater may be discharged from the production area. Wastewater flows from two parlors into their associated concrete-lined sump and is pumped to a passive weeping wall separator system and into a clay-lined combination wastewater and stormwater impoundment system for storage prior to land application. The clay-lined impoundment system consists of four impoundments, which the facility proposes, and is required, to synthetically line. Wastewater is land applied by center pivot and sideroll sprinkler irrigation to up to 732 acres of irrigated cropland under cultivation. The modification consists of decreasing the acreage of the land application area from 880 acres to 732 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 160 E. Jackson Road, approximately three miles southwest of Lake Arthur, in Sections 25, 26, 35 and 36, Township 15S, Range 25E, and Section 31, Township 15S, Range 26E, Chaves County. Ground water most likely to be affected is at a depth of approximately 23 to 43 feet and had a pre-discharge total dissolved solids concentration of approximately 1,390 milligrams per liter.

The original Discharge Permit was issued on July 25, 1991 and subsequently renewed and modified on August 20, 1997 and April 1, 2003. The application consists of the materials submitted by the Robert Martins (previous owner/permittee) dated March 31, 2008, 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, TDS, Cl and SO₄ have been exceeded according to the criteria of Sections 20.6.2.3101 and 20.6.2.3103 NMAC.
6. The dairy facility was existing as of the effective date of the Dairy Rule (December 31, 2011) and measures the volume of wastewater discharged to a wastewater

impoundment(s) using totalizing flow meters installed on the discharge lines 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) Wastewater Combination Wastewater/Stormwater Impoundments
 - i. **Lagoon 1** - authorized for use by this Discharge Permit.
 - ii. **Lagoon 2** - authorized for use by this Discharge Permit.
 - iii. **Lagoon 3** - authorized for use by this Discharge Permit.
 - iv. **Lagoon 4** - authorized for use by this Discharge Permit.
 - b) Wastewater Impoundments
 - i. **Old Lagoon Middle** - not authorized for use by this Discharge Permit; subject to closure and post-closure requirements.
 - ii. **Old Lagoon South** - not authorized for use by this Discharge Permit; subject to closure and post-closure requirements.
 - c) Stormwater Impoundments
 - i. **Stormwater Impoundment North** - authorized for use by this Discharge Permit.
 - ii. **Dry Cow Pens Stormwater Impoundment 1** - authorized for use by this Discharge Permit.
 - iii. **Dry Cow Pens Stormwater Impoundment 2** - authorized for use by this Discharge Permit.
 - iv. **Dry Cow Pens Stormwater Impoundment 3** - authorized for use by this Discharge Permit.
 - v. **Old Stormwater Catchment** - not authorized for use by this Discharge Permit; was authorized for use by the last Discharge Permit issued prior to the effective date of the Dairy Rule; subject to closure and post-closure ground water monitoring requirements. Located northeast of Pivot 1
 - d) Fields within the Land Application Area
 - i. **Pivot 1** - authorized for use by this Discharge Permit.
 - ii. **Pivot 2** - authorized for use by this Discharge Permit.
 - iii. **Pivot 3** - authorized for use by this Discharge Permit.
 - iv. **Pivot 4** - authorized for use by this Discharge Permit.
 - v. **Pivot 5** - authorized for use by this Discharge Permit.
 - vi. **Pivot 6** - authorized for use by this Discharge Permit.
 - vii. **Field 1** - authorized for use by this Discharge Permit.
 - viii. **Field 2** - not authorized for use by this Discharge Permit; was authorized for use by the last Discharge Permit issued prior to the effective date of the Dairy Rule; subject to closure and post-closure ground water monitoring requirements.
 - ix. **Field 3** - authorized for use by this Discharge Permit.
 - x. **Field 4** - not authorized for use by this Discharge Permit; was authorized for use by the last Discharge Permit issued prior to the effective date of the

Dairy Rule; subject to closure and post-closure ground water monitoring requirements.

- xi. **Pasture 1** - not authorized for use by this Discharge Permit; was authorized for use by the last Discharge Permit issued prior to the effective date of the Dairy Rule; subject to closure and post-closure ground water monitoring requirements.
- xii. **Pasture 2** - not authorized for use by this Discharge Permit; was authorized for use by the last Discharge Permit issued prior to the effective date of the Dairy Rule; subject to closure and post-closure ground water monitoring requirements.
- xiii. **Pasture 3** - not authorized for use by this Discharge Permit; was authorized for use by the last Discharge Permit issued prior to the effective date of the Dairy Rule; subject to closure and post-closure ground water monitoring requirements.
- xiv. **Pasture 4** - not authorized for use by this Discharge Permit; was authorized for use by the last Discharge Permit issued prior to the effective date of the Dairy Rule; subject to closure and post-closure ground water monitoring requirements.
- xv. **Pasture 5** - not authorized for use by this Discharge Permit; was authorized for use by the last Discharge Permit issued prior to the effective date of the Dairy Rule; 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 550,000 gpd of wastewater from the production area. Wastewater flows from two parlors into their associated concrete-lined sump and is pumped to a passive weeping wall separator system and into a clay-lined combination wastewater and stormwater impoundment system for storage prior to land application. The clay-lined impoundment system consists of four impoundments, which

the facility proposes, and is required, to synthetically line. Wastewater is land applied by center pivot and sideroll sprinkler irrigation to up to 732 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) **Lagoon 1** – authorized to receive wastewater and stormwater for solids settling prior to flowing into the storage impoundments. This impoundment exists as of the effective date of this Discharge Permit; impoundment is clay-lined and will be synthetically lined. This impoundment receives wastewater discharged from the weeping wall separator system and discharges into Lagoon 3. Lagoon 1 is located east of the separator and south of Lagoon 2.
 - b) **Lagoon 2** – authorized to receive wastewater and stormwater for solids settling prior to flowing into the storage impoundments. This impoundment exists as of the effective date of this Discharge Permit; impoundment is clay-lined and will be synthetically lined. This impoundment receives wastewater discharged from the weeping wall separator system and discharges into Lagoon 3. Lagoon 2 is located east of the separator and north of Lagoon 1.
 - c) **Lagoon 3** – authorized to receive wastewater and stormwater storage prior to land application. This impoundment exists as of the effective date of this Discharge Permit; impoundment is clay-lined and will be synthetically lined. This impoundment receives wastewater discharged from Lagoons 1 and 2. Lagoon 3 is located east of Lagoons 1 and 2 and west of Lagoon 4.
 - d) **Lagoon 4** – authorized to receive wastewater and stormwater storage prior to land application. This impoundment exists as of the effective date of this Discharge Permit; impoundment is clay-lined and will be synthetically lined. This impoundment receives wastewater discharged from Lagoon 3. Lagoon 4 is located east of Lagoon 3.
 - e) **Stormwater Impoundment North** - authorized to collect stormwater for transfer to the clay-lined impoundment system or for application to fields within the land application area. This impoundment exists as of the effective date of this Discharge Permit and is unlined. This impoundment is located north of the clay-lined impoundment system and east of the production area of Dairy 1. Collects stormwater runoff from the dry cow and bull pens located east of Vineyard Rd. (aka, Co Rd 46).
 - f) **Dry Cow Pens Stormwater Impoundment Cell-1** - authorized to collect stormwater for transfer to the clay-lined impoundment system or for application to fields within the land application area. This impoundment exists as of the effective date of this Discharge Permit and is unlined. This impoundment was previously used as a manure-lined wastewater impoundment (Old Lagoon Northwest), and is first in series of this three impoundment system. Located in south of the dry cow pens and southeast of the Dairy 1 pens. Collects stormwater runoff from the dry cow pens located west of Vineyard Rd. (aka, Co Rd 46).
 - g) **Dry Cow Pens Stormwater Impoundment Cell-2** - authorized to collect stormwater for transfer to the clay-lined impoundment system or for application

to fields within the land application area. This impoundment exists as of the effective date of this Discharge Permit and is unlined. This impoundment was previously used as a manure-lined wastewater impoundment (Old Lagoon North Cell-1), and is second in series of this three impoundment system. Located south of the dry cow pens and east of Cell-1. Collects stormwater runoff from the dry cow pens located west of Vineyard Rd. (aka, Co Rd 46).

- h) **Dry Cow Pens Stormwater Impoundment Cell-3** - authorized to collect stormwater for transfer to the clay-lined impoundment system or for application to fields within the land application area. This impoundment exists as of the effective date of this Discharge Permit and is unlined. This impoundment was previously used as a manure-lined wastewater impoundment (Old Lagoon North Cell-2), and is third in series of this three impoundment system. Located south of Cell 2. Collects stormwater runoff from the dry cow pens located west of Vineyard Rd. (aka, Co Rd 46).
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 732 acres.
- a) **Pivot 1** – consists of 120 acres; application by center pivot. 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/stormwater as of the effective date of this Discharge Permit. This field is located south of the production area of Dairy 1.
 - b) **Pivot 2** – consists of 120 acres; application by center pivot. 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/stormwater as of the effective date of this Discharge Permit. This field is located east of Pivot 1 and south of the clay-lined impoundment system.
 - c) **Pivot 3** – consists of 120 acres; application by center pivot. 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/stormwater as of the effective date of this Discharge Permit. This field is located east of Pivot 2 and south of Pivot 4.
 - d) **Pivot 4** – consists of 120 acres; application by center pivot. 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/stormwater as of the effective date of this Discharge Permit. This field is located north of Pivot 3 and east of the clay-lined impoundment system.
 - e) **Pivot 5** – consists of 106 acres; application by center pivot. This field has been reconfigured under center pivot from fields in the previously known Johnson Farm Land Application Area. The Johnson Farm Land Application Area 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, but the location has not received wastewater and/or stormwater as of the effective date of this Discharge Permit. This field is located north of Dairy 1 and Field 1, north of Jackson Road.

- f) **Pivot 6** - consists of 75 acres; application by center pivot. This field is being reconfigured under center pivot from fields in the previously known Johnson Farm Land Application Area. The Johnson Farm Land Application Area 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, but the location has not received wastewater and/or stormwater as of the effective date of this Discharge Permit. This field is to be located northwest of Pivot 5.
- g) **Field 1** – consists of 24 acres; application by sideroll sprinkler. 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. This field is located north of the production area of Dairy 1.
- h) **Field 3** – consists of 47 acres; application by sideroll sprinkler. 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. This field is located north of the production area of Dairy 2.

DAIRY RULE TRANSITION REQUIREMENTS

- 4. 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 and/or Modification 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 and/or modification 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 II.A.1
- d) Part II.A.2(a) and (b)
- e) Part II.B.1 through 5, 6 and 7
- f) Part II.C
- g) Part II.D.3(a) and (b)
- h) Part II.E.1 and 3
- i) Part II.F
- j) Part IV.B

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>Impoundment Plans and Specifications:</u></p> <p>Submit construction plans and specifications for installation or improvement of an impoundment(s) to improve the clay-lined combination wastewater/stormwater impoundment system to achieve compliance with contingency requirements of Subsection B of 20.6.6.27 NMAC.</p>	[90 days of effective date]	20.6.6.17.C(1) 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 stormwater transferred from the stormwater impoundment(s) to the land application distribution system (pursuant to Subsection H of 20.6.6.21 NMAC)* <p>* If stormwater is transferred to the wastewater impoundment(s) and is not applied directly to the land application area, then installation and use of this meter(s) is not required.</p>	[90 days of effective date]	20.6.6.17.C(7) NMAC

OPERATIONAL REQUIREMENTS

7. 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.
8. 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

9. The permittee is authorized to transfer stormwater collected in the unlined stormwater impoundment(s) to the wastewater impoundment(s) or the distribution system for the land application area in accordance with Subsection I of 20.6.6.20 NMAC.
10. 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) **SW Meter-1** – to be located on the pipeline between Stormwater Impoundment North and the land application area to measure the volume stormwater applied to each field within the land application area. If stormwater is transferred to the wastewater impoundment and is not applied directly to the land application area, then installation and use of this meter is not required.
 - b) **SW Meter-2** – to be located on the pipeline between Dry Cow Pens Stormwater Impoundment Cell-1 and the land application area to measure the volume stormwater applied to each field within the land application area. If stormwater is transferred to the wastewater impoundment and is not applied directly to the land application area, then installation and use of this meter is not required.
 - c) **SW Meter-3** – to be located on the pipeline between Dry Cow Pens Stormwater Impoundment Cell-2 and the land application area to measure the volume stormwater applied to each field within the land application area. If stormwater is transferred to the wastewater impoundment and is not applied directly to the land application area, then installation and use of this meter is not required.
 - d) **SW Meter-4** – to be located on the pipeline between Dry Cow Pens Stormwater Impoundment Cell-3 and the land application area to measure the volume stormwater applied to each field within the land application area. If stormwater is transferred to the wastewater impoundment and is not applied directly to the land application area, then installation and use of this meter is not required.

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

11. Pursuant to Subsection D of 20.6.6.35 NMAC, the permittee shall have 90 days from the effective date of this Discharge Permit (by **DATE**) to 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.

12. The permittee is authorized to use the following existing flow meter(s) provided that the requirements of Subsection M of 20.6.6.20 NMAC have been met.
 - a) **Dairy 1 Sump Meter** – located at the discharge sump for Dairy 1; measures the volume of wastewater discharged from the production area of Dairy 1 to the combination wastewater/stormwater impoundment system.
 - b) **Dairy 2 Sump Meter** – located at the discharge sump for Dairy 2; measures the volume of wastewater discharged from the production area of Dairy 1 to the combination wastewater/stormwater impoundment system.
 - c) **LAA Meter** – located on the southern berm of Lagoon 3; measures the volume of wastewater/stormwater discharged from Lagoon 3 to each field within the land application area.
13. 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.
14. 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.
15. 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) **Pivot 1** – crops shall be harvested mechanically.
 - b) **Pivot 2** – crops shall be harvested mechanically.
 - c) **Pivot 3** – crops shall be harvested mechanically.
 - d) **Pivot 4** – crops shall be harvested mechanically.
 - e) **Pivot 5** – crops shall be harvested mechanically.
 - f) **Pivot 6** – crops shall be harvested mechanically.
 - g) **Field 1** – crops shall be harvested mechanically.
 - h) **Field 3** – 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.

16. 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>Impoundment Construction or Improvement:</u></p> <p>i) Complete construction of a new or improvements to an existing impoundment to achieve compliance with the Dairy Rule, in accordance with construction plans and specifications, and supporting design calculations.</p> <p>ii) Submit the Construction Certification Report verifying construction pursuant to Subsection C of 20.6.6.17 NMAC.</p>	<p>[1 yr of effective date]</p> <p>Within 90 days of completed impoundment construction.</p>	20.6.6.20.E NMAC
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>[150 days of effective date]</p> <p>[180 days of effective date]</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>	<p>Within 90 days of any addition or change.</p>	20.6.6.20.V NMAC
D.	<p><u>Nutrient Management Plan:</u></p> <p>Develop and submit annual updates to the NMP.</p>	<p>Annually: May 1</p>	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>[90 days of effective date]</p> <p>[180 days of effective date]</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>	<p>Annually: May 1</p>	20.6.6.21.N NMAC

GROUND WATER MONITORING REQUIREMENTS

17. 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.

18. Monitoring wells shall be constructed and completed in accordance with Subsection D of 20.6.6.23 NMAC.
19. Monitoring wells shall be permanently identified in accordance with Subsection C of 20.6.6.23 NMAC.
20. Pursuant to Subsection D of 20.6.6.35 NMAC, the permittee shall have 90 days from the effective date of this Discharge Permit (by **DATE**) to submit the information required by Paragraph (6) of Subsection A of 20.6.6.23 NMAC to verify that monitoring wells in existence as of the effective date of this Discharge Permit and prior to the effective date of the Dairy Rule (December 31, 2011) are appropriate for continued use for ground water monitoring.

The permittee is authorized to use the following monitoring well(s) provided that the requirements of Paragraph (6) of Subsection A of 20.6.6.23 NMAC are met.

- a) **MW-2**, hydrologically downgradient of Old Stormwater Catchment; located northeast of Pivot 1.
 - b) **MW-3**, hydrologically downgradient of Dry Cow Pens Stormwater Impoundment Cells 1, 2 and 3; located east of the southeast corner of Dry Cow Pens Stormwater Impoundment system.
 - c) **MW-6**, hydrologically upgradient of all contamination sources at the dairy facility; located northwest of Dairy 1 and west of Field 1.
 - d) **MW-8**, hydrologically downgradient of Lagoon 4; located east of the southeast corner of Lagoon 4.
21. 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 Combination Wastewater/Stormwater Impoundments:</u></p> <p>Install the following monitoring wells within 75 feet hydrologically downgradient of the top inside edge of each <u>existing</u> combination impoundment:</p> <ol style="list-style-type: none"> i) MW-11, hydrologically downgradient of Lagoons 2 & 3. ii) MW-12, hydrologically downgradient of Lagoon 1. 	[120 days of effective date]	20.6.6.23.A(2) NMAC and 20.6.6.23.A(7) NMAC
B.	<p><u>Ground Water Monitoring – Existing Stormwater Impoundments:</u></p> <p>Install the following monitoring wells within 75 feet hydrologically downgradient of the top inside edge of each <u>existing</u> stormwater impoundment:</p> <ol style="list-style-type: none"> i) MW-13, hydrologically downgradient of Stormwater Impoundment North. 	[120 days of effective date]	20.6.6.23.A(3) NMAC

Item No.	Action Required and Submittal Due to NMED	Due Date	Citation
C.	<p><u>Ground Water Monitoring – Existing Land Application Fields:</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> <ul style="list-style-type: none"> i) MW-14, hydrologically downgradient of Pivot 1 (replaces MW-2). ii) MW-15, hydrologically downgradient of Pivot 2. iii) MW-16, hydrologically downgradient of Pivot 3 (replaces MW-4). iv) MW-17, hydrologically downgradient of Pivot 4 (replaces MW-5). v) MW-18, hydrologically downgradient of Field 1. vi) MW-19, hydrologically downgradient of Field 1. vii) MW-20, hydrologically downgradient of Field 1. viii) MW-21, hydrologically downgradient of Field 1. ix) MW-22, hydrologically downgradient of Pastures 1 & 2. x) MW-23, hydrologically downgradient of Pasture 2. xi) MW-24, hydrologically downgradient of Pastures 4 & 5. 	<p>[120 days of effective date]</p>	<p>20.6.6.23.A(4) (a) and (b) NMAC</p>
D.	<p><u>Ground Water Monitoring –New Land Application Fields:</u></p> <p>Install the following monitoring wells within 50 feet hydrologically downgradient of the downgradient boundary of fields within the land application area:</p> <ul style="list-style-type: none"> i) MW-25, hydrologically downgradient of Pivot 5. ii) MW-26, hydrologically downgradient of Pivot 6. 	<p>Prior to applying wastewater or stormwater to the field.</p>	<p>20.6.6.23.A(4) (b) NMAC</p>
E.	<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</p>
F.	<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> <ul style="list-style-type: none"> i) MW-11, hydrologically downgradient of Lagoons 2 & 3. ii) MW-12, hydrologically downgradient of Lagoon 1. iii) MW-13, hydrologically downgradient of Stormwater Impoundment North. iv) MW-14, hydrologically downgradient of Pivot 1. v) MW-15, hydrologically downgradient of Pivot 2. vi) MW-16, hydrologically downgradient of Pivot 3. vii) MW-17, hydrologically downgradient of Pivot 4. 	<p>[150 days of effective date]</p>	<p>20.6.6.23.H NMAC</p>

Item No.	Action Required and Submittal Due to NMED	Due Date	Citation
	viii) MW-18 , hydrologically downgradient of Field 1. ix) MW-19 , hydrologically downgradient of Field 1. x) MW-20 , hydrologically downgradient of Field 1. xi) MW-21 , hydrologically downgradient of Field 1. xii) MW-22 , hydrologically downgradient of Pastures 1 & 2. xiii) MW-23 , hydrologically downgradient of Pasture 2. xiv) MW-24 , hydrologically downgradient of Pastures 4 & 5.		
G.	<p><u>Ground Water Sampling – New Monitoring Wells for New Fields:</u></p> <p>Collect ground water samples from 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). 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-25, hydrologically downgradient of Pivot 5. ii) MW-26, hydrologically downgradient of Pivot 6.</p>	<p>Within 30 days of well completion.</p>	<p>20.6.6.23.H NMAC</p>
H.	<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>[150 days of effective date]</p> <p>Upon well completion, to be included in the well completion report.</p>	<p>20.6.6.23.I NMAC</p>
I.	<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>	<p>[180 days of effective date]</p>	<p>20.6.6.23.J NMAC</p>
J.	<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>	<p>Within 60 days of well completion.</p>	<p>20.6.6.23.J NMAC</p>
K.	<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>	<p>Quarterly</p>	<p>20.6.6.23.L NMAC</p>

MONITORING REQUIREMENTS

- 22. 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.
- 23. 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**

- 24. 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 Measurement and Reporting:</u></p> <p>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.</p>	Quarterly	20.6.6.24.C NMAC
B.	<p><u>Stormwater Sampling and Reporting:</u></p> <p>Collect and analyze stormwater samples on a quarterly basis from each stormwater impoundment and submit results.</p>	Quarterly	20.6.6.24.D NMAC
C.	<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
D.	<p><u>Volume of Wastewater and Wastewater/Stormwater 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
E.	<p><u>Volume of Stormwater Land Applied – Measurement and Reporting:</u></p> <p>Measure the volume of all stormwater applications to each field within the land application area using a flow meter(s) and submit the information.</p>	Quarterly	20.6.6.25.B NMAC

Item No.	Action Required and Submittal Due to NMED	Due Date	Citation
F.	<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
G.	<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
H.	<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
I.	<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
J.	<p><u>Land Application Data Sheets:</u></p> <p>Complete and submit land application data sheets (LADS) for each field within the land application area.</p>	Quarterly	20.6.6.25.G NMAC
K.	<p><u>Crop Yield Documentation:</u></p> <p>Submit crop yield documentation and plant and harvest dates of each crop grown.</p>	Quarterly	20.6.6.25.H NMAC
L.	<p><u>Nitrogen Concentration of Harvested Crop:</u></p> <p>Determine the percent total nitrogen and dry matter of each harvested crop and submit results.</p>	Quarterly	20.6.6.25.I NMAC
M.	<p><u>Nitrogen Removal Summary of Harvested Crop:</u></p> <p>Develop and submit a nitrogen removal summary for each crop grown on each field within the land application area.</p>	Quarterly	20.6.6.25.J NMAC
N.	<p><u>Soil Sampling – Initial Event in a Discharge Permit Term:</u></p> <p>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.</p>	May 1, 2013	20.6.6.25.K NMAC

Item No.	Action Required and Submittal Due to NMED	Due Date	Citation
O.	<p><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.</p>	<p>Annually: May 1</p>	<p>20.6.6.25.L NMAC</p>

CONTINGENCY REQUIREMENTS

25. 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

26. 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.
27. The following wells previously used for monitoring under the previous Discharge Permit and the facility’s Abatement Plan, shall only be abandoned by the permittee upon written notification by certified mail from NMED. Upon such notification, the wells shall be abandoned in accordance with Subsection C of 20.6.6.30 NMAC. The permittee is not required to perform routine ground water sampling from these wells for this Discharge Permit, but may be required to do so pursuant to the Abatement Plan. Additionally, NMED may collect ground water samples from the well(s) pursuant to Subsection D of 20.6.2.3107 NMAC.
- a) **MW-1** – located west of Lagoon 2.
 - b) **MW-4** – located southeast of Pivot 3.
 - c) **MW-5** – located southeast of Pivot 4.
 - d) **MW-7** – located southeast of the former animal disposal pits.
 - e) **MW-9** – located in the southeast corner of the property, east of what was an old land application area.
 - f) **MW-10** – located northwest of the former animal disposal pits.

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

28. Within two years of the effective date of the Discharge Permit (**by DATE**), the permittee shall complete closure of the following impoundment(s) in accordance with Paragraph (2) of Subsection A of 20.6.6.30 NMAC.

- a) **Old Lagoon Middle** – located at south of Dry Cow Pens Stormwater Impoundment Cell-3 and east of Field 2. Previously used as a manure-lined wastewater storage impoundment.
- b) **Old Lagoon South** – located at south of Old Lagoon Middle and east of Field 2. Previously used as a manure-lined wastewater storage impoundment.

GENERAL REQUIREMENTS

29. 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.
30. 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.
31. Transfer of a Discharge Permit for a dairy facility shall be completed in accordance with Section 20.6.6.34 NMAC.
32. 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.
33. 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

Sideline Dairy, **DP-683**

Effective Date

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Effective Date: **DATE**

Expiration Date: **DATE**

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

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