

1 **DISCUSSION DRAFT**

2
3 **Proposed Regulations Regarding Additional Permitting**
4 **Requirements for All Dairy Facilities**

5
6 **May 22, 2009**
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9 During the 2009 regular legislative session, the New Mexico Legislature passed Senate Bill 206
10 that amended the Water Quality Act to require the Water Quality Control Commission (WQCC)
11 to adopt wastewater discharge regulations for the dairy industry. Senate Bill 206 was signed by
12 Governor Bill Richardson on April 8, 2009. The New Mexico Environment Department
13 (NMED) is the constituent agency to the WQCC that is responsible for the development of
14 proposed dairy wastewater discharge regulations for the WQCC's consideration.
15

16 NMED has developed a discussion draft of the proposed regulations and invites public review
17 and comment on the discussion draft. Written comments on the discussion draft may be
18 submitted to the NMED by e-mail at dairy.regs@state.nm.us or mailed to "New Mexico
19 Environment Department – Ground Water Quality Bureau, P.O. Box 5469, Santa Fe, NM 87502-
20 5469." Written comments must be submitted no later than July 2, 2009. The NMED anticipates
21 that a revised draft of the proposed regulations will be developed no later than August 2009, and
22 a hearing before the WQCC on the proposed regulations is expected to be held in November
23 2009.

1 **20.6.2.3200 ADDITIONAL PERMITTING REQUIREMENTS FOR ALL DAIRY FACILITIES**

2 [20.6.2.3200 NMAC – N, effective date]

3
4 **20.6.2.3201 PURPOSE:** The purpose of Sections 20.6.2.3200 through 20.6.2.3229 NMAC is to supplement
5 the general permitting requirements of Sections 20.6.2.3101 through 20.6.2.3114 NMAC to control discharges
6 specific to dairy facilities and their operations. The requirements of Sections 20.6.2.3101 through 20.6.2.3114
7 NMAC apply to all dairy facilities unless otherwise noted in Sections 20.6.2.3201 through 20.6.2.3229 NMAC.

8
9 **20.6.2.3202 DEFINITIONS:**

10 **A.** Terms defined in the Water Quality Act and Section 20.6.2.7 NMAC, but not defined in this
11 section will have the meaning as given in such.

12 **B.** Terms used in Sections 20.6.2.3200 through 20.6.2.3229 NMAC, but not in other sections of this
13 Part:

- 14 (1) “applicant” means the person(s) applying for a discharge permit.
- 15 (2) “dairy facility” or “facility” means the production area and the land application area.
- 16 (3) “discharge” means placement of water contaminants in a location and manner that they may move
17 directly or indirectly into surface or sub-surface water.
- 18 (4) “discharger” means any person who makes, controls, or is responsible for a discharge.
- 19 (5) “expiration” means the date upon which the term of a discharge permit ends.
- 20 (6) “flow meter” means a means a device used to measure the volume of water that passes a
21 particular reference section in a unit of time.
- 22 (7) “impoundment” means any structure used for storage or storage and disposal by evaporation of
23 wastewater, stormwater, or a combination of both wastewater and stormwater.
- 24 (8) “land application area” means those irrigated and cultivated fields or subfields collectively
25 authorized by the department through a discharge permit to receive wastewater applications as a source of nutrients
26 managed for crop production.
- 27 (9) “land application data sheet” means a form used to report all nitrogen inputs applied to each field
28 or subfield within the land application area. Land application data sheets shall also include the cropping status of
29 the field or subfield at the time of application (i.e., fallow, corn, wheat, etc.).
- 30 (11) “permittee” means person responsible for the facility’s compliance with the discharge permit.
- 31 (12) “production area” means that part of the animal feeding operation that includes the animal
32 confinement area, the manure and compost storage area, the raw materials storage area, and the wastewater and
33 stormwater containment areas. The animal confinement area includes but is not limited to open lots, housed lots,
34 feedlots, confinement barns, stall barns, free stall barns, milkrooms, milk centers, cowyards, barnyards, hospital
35 pens and barns, and animal walkways. The manure, residual solids and compost storage areas include but are not
36 limited to storage sheds, stockpiles, static piles, and composting piles. The raw materials storage areas include but
37 are not limited to feed silos, silage storage areas, feed storage barns and liquid feed tanks. The wastewater and

1 stormwater containment areas include but are not limited to settling separators, impoundments, transfer sumps,
2 runoff drainage channels, and areas within berms and diversions which prohibit uncontaminated stormwater from
3 coming into contact with contaminants.

4 (13) “significant water course” means a watercourse with a defined bed and bank named on a USGS
5 7.5 minute quadrangle map or a first order tributary of such watercourse.

6 (14) “stormwater” means direct precipitation on and runoff generated on the production area from a
7 storm event coming into contact with water contaminants.

8 (15) “termination” means permanent annulment of a discharge permit by the department.

9 (16) “wastewater” means water, except overflow from the drinking water system and stormwater, that
10 has come into contact with contaminants as a result from water being directly or indirectly used in the operation of
11 the dairy facility for any but not limited to the following: washing, cleaning, or flushing barns or other roof-covered
12 production areas; washing of animals; spray-cooling of animals (except in open lots); and cooling or cleaning of
13 feed mills and equipment.

14
15 **20.6.2.3203 REQUIREMENTS FOR DISCHARGING FROM DAIRY FACILITIES:** All dairy facilities
16 shall meet the requirements of Sections 20.6.2.3204, 20.6.2.3205, 20.6.2.3210, 20.6.2.3211, 20.6.2.3212,
17 20.6.2.3215, 20.6.2.3218, 20.6.2.3219, 20.6.2.3222, 20.6.2.3225, 20.6.2.3228 and 20.6.2.3229 NMAC. In addition,
18 dairy facilities discharging wastewater or stormwater to a land application area shall meet the requirements of
19 Sections 20.6.2.3213, 20.6.2.3216, 20.6.2.3220, 20.6.2.3223, and 20.6.2.3226 NMAC; and dairy facilities disposing
20 of wastewater or stormwater by evaporation shall meet the requirements of Sections 20.6.2.3214, 20.6.2.3217,
21 20.6.2.3221, 20.6.2.3224, and 20.6.2.3227 NMAC.

22
23 **20.6.2.3204 FEES:** Notwithstanding the permit fee requirements of Subsection F of 20.6.2.3114 NMAC:

24 **A.** A discharge permit fee shall be remitted annually. Permit fee payments shall be remitted to the
25 department no later than August 1 of each year and shall continue until termination of the discharge permit.

26 (1) The amount of the annual payment shall be one-fifth of the applicable permit fee, determined by
27 the permitted discharge volume, as specified in Table 1 of Section 20.6.2.3114 NMAC.

28 (2) For discharge permits which only authorize closure activities or post-closure monitoring, the
29 annual permit fee payment amount shall be one-fifth of the lowest fee for agricultural waste as specified in Table 1
30 of Section 20.6.2.3114 NMAC.

31 **B.** After the effective date of these regulations, any facility holding a discharge permit longer than the
32 term of the discharge permit shall begin remitting permit fee payments in accordance with subsection A of
33 20.6.3204 NMAC.

34
35 **20.6.2.3205 APPLICATION REQUIREMENTS FOR ALL DAIRY FACILITIES**

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1 **A.** An application for renewal, including facilities that have ceased discharging during the most
2 recent permit term and whose discharge permits have not been terminated by the department, shall be submitted to
3 the department at least 120 days before the discharge permit expiration date.

4 **B.** In lieu of the information required by Section 20.6.2.3106 NMAC, applicants applying for a new,
5 renewed, or modified discharge permit shall complete the application form specific to dairies provided by the
6 department. The application form shall be completed in its entirety, which also includes the submission of all
7 supporting technical documentation regardless of previous submission.

8 **C.** Applications for all dairy facilities shall include, at a minimum, the following information:

9 (1) Applicant and Affiliate(s) Contact Information

10 (a) Applicant's name, title and affiliation with facility, mailing address, phone number and the
11 signature(s) of the applicant or the individual(s) acting on behalf of the applicant.

12 (b) Facility manager's or operator's name, title and affiliation with facility, mailing address and
13 phone number.

14 (c) Application preparer's name, title and affiliation with facility, mailing address, phone
15 number and signature.

16 (d) Consultant's mailing address and phone number.

17 (2) Ownership and Lease Agreements

18 (a) Owner's name, title and affiliation with facility, mailing address and phone number.

19 (b) Legal documentation in the form of a signed affidavit indicating all person(s) having
20 ownership of the facility. Documentation shall include the name of each owner and the name of all associated
21 partners.

22 (c) If applicable, a copy of the lease agreement(s) signed by the owner(s) and leasee(s) relating
23 to the facility and fields or subfields within the land application area.

24 (d) If applicable, a copy of the legal agreement(s) signed by the intended permittee(s) and
25 owner(s) of the fields or subfields within the land application area.

26 (3) Facility Information and Location

27 (a) Facility name, physical address and county.

28 (b) Township, Range and Section for the entire facility, which includes the production area and
29 fields or subfields within the land application area.

30 (c) Date of initial discharge from an existing facility.

31 (4) Public Notice Preparation

32 (a) Applications for new, modified, or renewed and modified discharge permits shall identify a
33 newspaper of general circulation for the future display ad publication, the proposed location(s) of the 2-foot by 3-
34 foot sign, and the proposed off-site location of the 8.5-inch by 11-inch flyer, as required by Section 20.6.2.3108
35 NMAC.

36 (b) Applications for renewed discharge permits shall identify a newspaper of general
37 circulation for the future display ad publication as required by Section 20.6.2.3108 NMAC.

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1 (5) Pre-discharge total dissolved solids concentration in ground water, sample source (e.g.,
2 upgradient monitoring well, onsite supply well, nearby off-site supply well) and a copy of the laboratory analysis.
3 Applications for new facilities may include documentation in the form of a report or study. Such submissions shall
4 include the reference citation and a copy of relevant portion of the study.

5 (6) Discharge Volume

6 (a) Maximum daily discharge volume proposed and a description of the methods used to
7 determine the proposed volume.

8 (b) Identify all sources of wastewater which may include, but are not limited to, hospital barns,
9 maternity barns, bottlewashing operations and parlor/equipment washdown.

10 (c) Animal washing method(s) employed and the estimated daily discharge volume for the
11 method(s).

12 (d) Other wastewater discharges (i.e., domestic or industrial) at the facility not generated by
13 dairy operations. Permit identification numbers shall be submitted for those discharges that are already permitted.

14 (7) Wastewater Quality

15 (a) Applications for existing facilities shall include the previous two years of wastewater data
16 in tabular form and the maximum and mean values for total dissolved solids, chloride, sulfate, nitrate as nitrogen,
17 total Kjeldahl nitrogen and other constituents of concern that may be included in the wastewater at the facility. In
18 the event that data for a constituent(s) listed above has not been collected, the applicant shall sample wastewater for
19 the constituent(s) and submit a copy of the laboratory analysis with the application.

20 (b) Applications for new facilities shall include estimated concentrations of wastewater quality
21 for total dissolved solids, chloride, sulfate, nitrate as nitrogen, total Kjeldahl nitrogen and other constituents of
22 concern that may be included in the wastewater at the facility based on data collected at other dairy facilities with
23 similar discharge(s) volumes and wastewater management systems.

24 (c) Proposed locations of sampling ports required by Subsection T of 20.6.2.3215 NMAC. The
25 locations of existing sampling ports meeting the requirements of Subsection T of 20.6.2.3215 NMAC shall also be
26 identified.

27 (8) Identification and Physical Description of Facility

28 (a) A scaled map of the entire dairy facility in accordance with Subsection U of 20.6.2.3215
29 NMAC.

30 (b) Each impoundment, including existing, proposed, and previously utilized to which
31 discharge has ceased, shall be identified with regard to its purpose to store or dispose of wastewater or stormwater
32 by evaporation; date of original construction; past and existing liner material; date of current liner installation; and
33 storage or evaporative disposal capacity.

34 (c) Each field or subfield, including existing, proposed, and previously utilized to which
35 discharge has ceased, within the land application area shall be identified with regard to the date of initial discharge
36 of wastewater or stormwater; acreage; status with regard to having received wastewater or stormwater (i.e. never,

1 inactive, active); current method of backflow prevention employed; current method of wastewater and stormwater
2 application; and current method of irrigation water application.

3 (d) Additional wastewater and stormwater system components such as, but not limited to,
4 sumps and mix tanks, shall be identified with regard to their purpose; date of original construction; construction
5 material; dimensions; and capacity.

6 (e) Settled solids thickness measurements for each existing wastewater and combination
7 wastewater/stormwater impoundment as required by Subsection D of 20.6.2.3215 NMAC.

8 (f) A description of proposed and existing method(s) of solids separation in accordance with
9 Subsection F of 20.6.2.3215 NMAC.

10 (g) Location of all manure, silage and compost storage areas and a description of the method(s)
11 employed to protect the areas from stormwater runoff and run-on, and minimize leachate.

12 (9) Flow Metering System

13 (a) Method(s) of wastewater discharge and stormwater transfer or discharge (pumped versus
14 gravity flow).

15 (b) A description of the existing and proposed flow metering system in accordance with
16 Sections 20.6.2.3215, 20.6.2.3216 and 20.6.2.3217 NMAC.

17 (c) Proposed locations of flow meters required by and in accordance with Sections 20.6.2.3215,
18 20.6.2.3216 and 20.6.2.3217 NMAC. The locations of existing flow meters meeting the requirements of Sections
19 20.6.2.3215, 20.6.2.3216 and 20.6.2.3217 NMAC shall also be identified.

20 (10) Ground Water Flow Direction

21 (a) Applications for existing facilities shall indicate ground water flow direction beneath the
22 facility on a ground water elevation contour map based upon the most recent water level obtained with a water level
23 measuring device and survey data from onsite monitoring wells obtained from a survey, in accordance with Section
24 20.6.2.3218 NMAC. Depth-to-ground water measurements from the previous two years shall be included in tabular
25 form.

26 (b) Applications for new facilities shall indicate the ground water flow direction beneath the
27 facility based on regional water level data or published hydrogeologic information. Survey data from nearby
28 monitoring wells and a ground water elevation contour map indicating the direction of ground water flow may be
29 included. The sources of all information used to determine ground water flow direction shall be provided with the
30 application.

31 (11) Ground Water Quality and Monitoring Wells

32 (a) Applications for existing facilities shall include the previous two years of ground water data
33 from all onsite monitoring wells in tabular form and the maximum and mean values for total dissolved solids,
34 chloride, sulfate, nitrate as nitrogen and total Kjeldahl nitrogen. In the event that data for a constituent(s) listed
35 above has not been collected, the applicant shall sample ground water in accordance with Subsection E of
36 20.6.2.3218 NMAC for the constituent(s) and submit a copy of the laboratory analysis with the application.

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1 (b) Construction and lithologic logs of all existing monitoring wells that indicate the date of
2 installation and well driller.

3 (c) Proposed locations of new monitoring wells required by and in accordance with Section
4 20.6.2.3218 NMAC and the locations of existing monitoring wells.

5 (12) Surface Soil Survey and Vadose Zone Geology

6 (a) A regional soil survey map and associated descriptions identifying surface soil type(s).

7 (b) A description of the geological profile of the vadose zone. Applications for new facilities
8 shall include information from site-specific soil borings sampled in the locations of all proposed discharges, or
9 published literature relating to the regional vadose zone including the pertinent information and reference citation.
10 Applications for existing facilities shall include either the information required for new facilities or accurate and
11 detailed lithologic logs from onsite monitoring wells.

12 (13) An area map with topographic surface contours shall identify all of the following features
13 located within a 1-mile radius of the dairy facility:

14 (a) Flowing watercourses, lakebeds, sinkholes and playa lakes.

15 (b) Wells supplying water for a public water system, private domestic water wells and springs
16 used for human consumption.

17 (c) Irrigation supply wells.

18 (14) Flood potential shall be addressed by submission of the most recent 100-year flood zone map
19 developed by Federal Emergency Management Administration (FEMA) and a description of any engineered
20 measures used for flood protection.

21 (15) A description of the management practices employed for animal mortalities.

22 (16) Engineering and Surveying

23 (a) Plans and specifications in accordance with Sections 20.6.2.3212, 20.6.2.3213 and
24 20.6.2.3214 NMAC.

25 (b) Record drawings and final specifications for existing impoundments and associated liners.

26 (c) For existing impoundments where record drawings and final specifications do not exist,
27 physical dimensions shall be submitted.

28 (d) A grading and drainage report and plan in accordance with Paragraph (6) of Subsection A
29 of 20.6.2.3212 NMAC.

30 **D.** Applications for dairy facilities discharging to a land application area shall include in addition to
31 the requirements of Subsection C of 20.6.2.3205 NMAC, at a minimum, the following information:

32 (1) Documentation of irrigation water rights in accordance with Subsection F of 20.6.2.3216 NMAC.

33 (2) Documentation confirming existing infrastructure necessary to properly transfer, distribute and
34 apply wastewater and stormwater to the land application area in accordance with Subsection H of 20.6.2.3216
35 NMAC.

36 (3) A nutrient application proposal in accordance with Subsection K, and Subsection L if applicable,
37 of 20.6.2.3216 NMAC.

1 (4) Proposed locations of sampling ports required by Subsection N of 20.6.2.3216 NMAC. The
2 locations of existing sampling ports meeting the requirements of Subsection N of 20.6.2.3216 NMAC shall also be
3 identified.

4 (5) Applications for existing facilities shall include the previous five years of soil sampling data from
5 the land application area in tabular form and the maximum and mean values for nitrate as nitrogen and total Kjeldahl
6 nitrogen.

7 **E.** In the event that an existing discharge permit will expire while the facility is in the process of
8 completing permanent closure measures, or post-closure monitoring, an application shall be submitted for a
9 discharge permit in accordance with this section. Applicants intending to permanently close the facility or lacking
10 department confirmed closure of the facility shall submit an application for a discharge permit in accordance with
11 this section. In lieu of completing the application in its entirety as required in this section, the application shall be
12 completed to contain the information described in Paragraphs (1), (2), (3), (4), (5), (11), (12), (13), and (14) of
13 Subsection C of this section; Subparagraphs (a), (b), (c), and (d) of Paragraph (8) of Subsection C of this section;
14 Subparagraph (a) of Paragraph (10) of Subsection C of this section; Paragraph (2) of Subsection D of this section,
15 specifically pertaining to the past method(s) of wastewater and stormwater transfer and distribution to the land
16 application area; and Paragraph (5) of Subsection D of this section.

17 **F.** The department shall, within 60 days of the department's receipt of proof of notice in accordance
18 with the requirements of Subsections D and F of 20.6.2.3108 NMAC, review the application for technical
19 completeness. To be deemed technically complete, the application shall include, at a minimum, all of the
20 information required by Subsections C and D of 20.6.2.3205 NMAC completed in its entirety and the applicant's
21 receipt of proof of notice in accordance with the requirements of Subsections D and F of 20.6.2.3108 NMAC. If the
22 department determines that the application is not technically complete, the department shall mail notice of the
23 deficiencies to the applicant by certified mail within 60 days of receipt of the applicant's proof of notice, and identify
24 what additional information is necessary. The applicant shall have 30 days from the date of the notice of deficiency
25 to provide the information requested by the department.

26 **G.** In the event that the applicant does not provide to the department all of the information required
27 by Subsections C and D of 20.6.2.3205 NMAC that is identified in the notice of deficiency, the application shall not
28 be approved. The department shall mail notice of disapproval to the applicant by certified mail. Disapproval of the
29 application is not subject to appeal by the applicant and does not relieve the person making the discharge of the
30 obligation to submit a complete application in accordance with this section.

31
32 **20.6.2.3206 – 20.6.2.3209: [RESERVED]**

33
34 **20.6.2.3210 PROCEDURES FOR REQUESTING PUBLIC HEARINGS ON DAIRY FACILITIES**

35 **PERMITTING ACTIONS:** Hearings on proposed approval or disapproval of applications for discharge permits:
36 Requests for hearing from any person, including the applicant for a discharge permit, on the proposed approval or
37 disapproval of an application for a discharge permit shall be made and submitted to the department in accordance

1 with the requirements of Subsection K of 20.6.2.3108 NMAC. Requests for a hearing shall identify the specific
2 discharge permit requirements or conditions being disputed and the reasons such requirements or conditions are
3 being disputed, and shall be postmarked on or before the end of the public comment period. Requests for hearing on
4 disapproval of discharge permit applications due to lack of technical completeness shall not be approved. Hearings
5 held upon the secretary’s approval of requests for hearing shall be limited in scope to the disputed requirements or
6 conditions identified in requests for hearing. Hearing requests that do not meet all requirements of Subsection K of
7 20.6.2.3108 NMAC and this subsection shall be denied.

8
9 **20.6.2.3211 DAIRY FACILITY SETBACK REQUIREMENTS:**

10 **A. Facility Setback Requirements**

11 (1) Wastewater or combination wastewater/stormwater impoundments, sumps, milking parlors,
12 hospital barns, or any other part of the production area shall be located:

- 13 (a) greater than 200 feet from a continuously flowing watercourse;
- 14 (b) greater than 200 feet from the 100-year flood zone of any other significant watercourse;
- 15 (c) greater than 200 feet from a lakebed, sinkhole or playa lake (measured from the ordinary
16 high-water mark);
- 17 (d) greater than 350 feet from a private domestic water well or spring that supplies water for
18 human consumption; or
- 19 (e) greater than 1000 feet from any water well or spring that supplies water for a public water
20 system as defined by Part 20.7.10 NMAC.

21 (2) The requirements of this subsection shall not apply to dairy facilities in existence on the effective
22 date of this section.

23 **B. Land Application Area Setback Requirements**

- 24 (1) Any field or subfield within a land application area shall be located:
 - 25 (a) greater than 100 feet from a continuously flowing watercourse;
 - 26 (b) greater than 100 feet from the a 100-year flood zone of any other significant watercourse,
27 lakebed, sinkhole or playa lake (measured from the ordinary high-water mark);
 - 28 (c) greater than 100 feet from a private domestic water well or spring that supplies water for
29 human consumption; or
 - 30 (d) greater than 200 feet from any water well or spring that supplies water for a public water
31 system as defined by Part 20.7.10 NMAC.

32 (2) The requirements of this subsection shall not apply to dairy facilities in existence on the effective
33 date of this section.

34
35 **20.6.2.3212 ENGINEERING AND SURVEYING REQUIREMENTS FOR ALL DAIRY FACILITIES**

36 **A. Engineering Plans and Specifications Requirements**

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1 (1) A licensed New Mexico professional engineer shall certify all plans and specifications, supporting
2 design calculations, record drawings, final specifications, final capacity calculations, grading and drainage report
3 and plan, and other work products requiring the practice of engineering in accordance with, and rules authorized by,
4 the New Mexico Engineering and Surveying Practice Act.

5 (2) Any applicant or permittee proposing or required to construct a new or to improve an existing
6 wastewater, stormwater, or combination wastewater/stormwater impoundment, including relining of an existing
7 impoundment, shall submit for department approval comprehensive construction plans and specifications and
8 supporting design calculations. In the event of improvement(s) to an existing impoundment, the comprehensive
9 construction plans and specifications shall also address the management of wastewater or stormwater during
10 improvement preparation and construction.

11 (a) Proposed construction plans and specifications shall be submitted to the department with
12 the application for a new, renewed or modified discharge permit.

13 (b) Construction plans and specifications required by the department through a discharge
14 permit shall be submitted to the department within 90 days of the effective date of the discharge permit.

15 (3) Any applicant or permittee proposing or required to construct a new manure solids separator as a
16 component of a newly designed wastewater storage or disposal system shall submit for department approval
17 comprehensive construction plans and specifications and supporting design calculations to include the separator.

18 (a) Proposed construction plans and specifications shall be submitted to the department with
19 the application for a new, renewed or modified discharge permit.

20 (b) Construction plans and specifications required by the department through a discharge permit
21 shall be submitted to the department within 90 days of the effective date of the discharge permit.

22 (4) Any applicant or permittee proposing or required to construct a new manure solids separator as a
23 component of an existing wastewater storage or disposal system shall not be required to submit for department
24 approval construction plans and specifications and supporting design calculations for the separator.

25 (5) Any applicant or permittee proposing or required to install a flow meter(s) shall submit for
26 department approval construction plans and specifications for the device.

27 (a) Proposed construction plans and specifications shall be submitted to the department with
28 the application for a new, renewed or modified discharge permit.

29 (b) Construction plans and specifications required by the department through a discharge
30 permit shall be submitted to the department within 90 days of the effective date of the discharge permit.

31 (6) The applicant or permittee shall submit with the application for a new, renewed or modified
32 discharge permit, for department approval, a grading and drainage report and a grading and drainage plan, including
33 supplemental information associated with the plan.

34 (a) The grading and drainage report shall include, at a minimum, the following information: a
35 description of the drainage concept for the facility; a description of existing facility drainage conditions; a
36 description of the proposed post-development drainage conditions; a description of the calculations performed to

1 support the drainage analysis; and a map prepared from a 7.5 minute quadrangle map showing the facility location
2 and drainage basin influences on drainage flows at the facility from onsite and offsite locations.

3 (b) The grading and drainage plan shall include, at a minimum, the following information:
4 north arrow and scale; property boundaries; delineation of offsite watersheds that contribute drainage to the facility;
5 benchmark location, description and elevation; existing and proposed land contours; spot elevations at key points,
6 grade breaks, critical locations, floors or pads of existing and proposed structures, and inverts of piping associated
7 with the drainage system; identification of all existing and proposed onsite structures, including drainage facilities;
8 identification of internal contributory drainage areas, including roof areas, parking lots, and other disturbed areas;
9 flows in cubic feet/second and flow lines defined by arrows and spot elevations; and details of impoundments, inlets,
10 rundowns, emergency spillways, impoundment outlets, slopes, and all other significant drainage structures with
11 contours, cross-sections and spot elevations.

12 (c) Supplemental information supporting the grading and drainage plan shall be submitted to
13 the department with the plan and shall include, at a minimum, the following information: calculations for both
14 existing and post-development drainage conditions; hydraulic calculations demonstrating capacity or adequacy of
15 existing and proposed stormwater impoundments; hydraulic calculations demonstrating capacity of existing and
16 proposed conveyance channels to contain and transport runoff to the stormwater impoundment(s); and a description
17 of computer software, documents, circulars, manuals, etc. used to develop the drainage calculations.

18 **B. Engineering Design Requirements**

19 (1) Designs for wastewater and combination wastewater/stormwater impoundments shall include a
20 method(s) for separation of manure solids prior to discharging to an impoundment in order to maintain the
21 impoundment capacities required by Sections 20.6.2.3213 and 20.6.2.3214 NMAC.

22 (2) Stormwater impoundments intended to contain only stormwater shall be designed to contain
23 stormwater runoff generated from the production area and direct precipitation from a minimum of a 25-year, 24-
24 hour rainfall event.

25 (3) Stormwater conveyance channels shall be designed to contain and transport stormwater runoff
26 generated from the production area and direct precipitation from a minimum of a 25-year, 24-hour rainfall event.

27 (4) Any applicant or permittee proposing or required to construct a new or to improve an existing
28 wastewater or combination wastewater/stormwater impoundment, shall, at a minimum, utilize a liner meeting the
29 following requirements:

30 (a) Where depth to most shallow ground water is less than 50 feet, as documented through
31 appropriate well data and approved by the department, the impoundment shall, at a minimum, utilize an upper and
32 lower liner. The liner material shall have a hydraulic conductivity no greater than 10^{-13} centimeters/second, be
33 resistant to degradation by ultraviolet light, be compatible with the liquids anticipated to be discharged to the
34 impoundment, and have acceptable tensile strength and tear and puncture resistance. A leak detection system shall
35 be constructed between the upper and lower liners and shall consist of a drainage layer, filter layer, fluid collection
36 pipes, fluid collection sumps, and fluid removal system.

1 (i) A drainage layer shall be constructed of granular soil materials or geosynthetic
2 drainage net (geonet). The drainage material shall have a hydraulic conductivity of 10^{-2} centimeters/second or
3 greater. The drainage layer shall be constructed with a slope of at least two percent.

4 (ii) A filter layer shall be constructed above the drainage layer and below the upper
5 liner. A filter layer above a granular drainage layer shall be composed of granular soil materials that are finer than
6 the granular drainage layer or a geotextile filter fabric; a geotextile filter fabric shall be used as a filter layer above a
7 geosynthetic drainage net. A filter layer shall provide for adequate flow of fluid through the filter while providing
8 adequate retention of fine particles.

9 (iii) Perforated fluid collection pipes shall be installed to transmit fluid from the
10 drainage layer to a fluid collection sump(s). Collection pipe material, diameter, wall thickness, and slot size and
11 distribution shall be sufficient to prevent deflection, buckling, collapse or other failure. Collection pipes shall be
12 installed with slopes equivalent to the slope of the drainage layer. Collection pipe systems shall be designed to
13 allow for cleaning of all collection pipes with standard pipe cleaning equipment.

14 (iv) A fluid removal system shall be installed to remove fluid from the leak detection
15 system. The fluid removal system shall consist of a sump(s), a dedicated pump(s), an automated pump activation
16 system that activates the pump(s) when a specific fluid level is reached in a sump(s), and an automated alarm system
17 that provides warning of pump failure.

18 (b) Where depth to most shallow ground water is 50 feet or greater, as documented through
19 appropriate well data and approved by the department, the impoundment shall, at a minimum, utilize a liner that has
20 a hydraulic conductivity no greater than 10^{-13} centimeters/second, is resistant to degradation by ultraviolet light, is
21 compatible with the liquids anticipated to be discharged to the impoundment, and has acceptable tensile strength and
22 tear and puncture resistance.

23 (5) Stormwater impoundments required to be improved shall, at a minimum, utilize a liner that has a
24 hydraulic conductivity no greater than 10^{-13} centimeters/second, is resistant to degradation by ultraviolet light, is
25 compatible with the liquids anticipated to be discharged to the impoundment, and has acceptable tensile strength and
26 tear and puncture resistance.

27 (6) Impoundments shall meet the following design and construction requirements:

28 (a) Inside slopes shall be a maximum of three (horizontal) to one (vertical), and a minimum of
29 four (horizontal) to one (vertical). Outside slopes shall be a maximum of three (horizontal) to one (vertical).

30 (b) Sub-grade shall be compacted to a minimum of 90% of standard proctor density.

31 (c) The base of the impoundment shall be as uniform as possible and shall not vary more than
32 three inches from the average finished elevation.

33 (d) The minimum dike width shall be eight feet to allow vehicle traffic for maintenance.

34 (7) Impoundments requiring a liner shall meet the following additional design and construction
35 requirements:

36 (a) The liner shall be installed with sufficient liner material to accommodate shrinkage due to
37 temperature changes. Folds in the liner are not acceptable.

1 (b) The sub-grade shall be free of sharp rocks, vegetation and stubble to a depth of at least six
2 inches below the liner. Liners shall be placed on a sub-grade of sand or fine soil. The surface in contact with the
3 liner shall be smooth to allow for good contact between liner and sub-grade. The surface shall be dry during liner
4 installation.

5 (c) Liners shall be anchored in an anchor trench in the top of the berm. The trench shall be a
6 minimum of 12 inches wide, 12 inches deep and shall be set back at least 24 inches from the inside edge of the
7 berm.

8 (d) Liner panels shall be oriented such that all sidewall seams are vertical.

9 (e) A liner vent system shall be installed if an impoundment is installed over areas of
10 decomposing organic materials or shallow ground water.

11 (f) Any opening in the liner through which a pipe or other fixture protrudes shall be sealed in
12 accordance with the liner manufacturer's requirements. Liner penetrations shall be detailed in the construction plans
13 and record drawings.

14 (g) A liner shall not be installed in temperatures below freezing.

15 (h) The liner shall be installed by, or the installation supervised by, an individual that has the
16 necessary training and experience as required by the liner manufacturer.

17 (i) All manufacturer's installation and field seaming guidelines shall be followed.

18 (j) All liner seams shall be field tested by the installer and verification of the adequacy of the
19 seams shall be submitted to department along with the record drawings.

20 (k) Any concrete slabs installed on top of a liner for operational purposes shall be completed in
21 accordance with manufacturer and installer recommendations to ensure liner integrity.

22 **C.** A licensed New Mexico surveyor shall certify all surveys of wastewater, stormwater, and
23 combination wastewater/stormwater impoundments, monitoring well locations and casing elevations, and other
24 work products requiring the practice of surveying in accordance with and rules authorized by the New Mexico
25 Engineering and Surveying Practice Act.

26
27 **20.6.2.3213 ADDITIONAL ENGINEERING DESIGN REQUIREMENTS FOR DAIRY FACILITIES**
28 **DISCHARGING TO A LAND APPLICATION AREA:**

29 **A.** Wastewater impoundments intended to store wastewater prior to discharging to a land application
30 area shall be designed to contain the maximum daily discharge volume authorized by the discharge permit for a
31 minimum period of 60 days to accommodate periods when land application is not feasible, while maintaining two
32 feet of freeboard.

33 **B.** Impoundments intended to contain both wastewater and stormwater runoff for storage prior to
34 discharging to a land application area shall be designed to contain the maximum daily discharge volume authorized
35 by the discharge permit for a minimum period of 60 days to accommodate periods when land application is not
36 feasible and stormwater runoff and direct precipitation from a minimum of a 25-year, 24-hour rainfall event, while
37 maintaining two feet of freeboard.

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20.6.2.3214 ADDITIONAL ENGINEERING DESIGN REQUIREMENTS FOR DAIRY FACILITIES DISCHARGING TO AN EVAPORATIVE WASTEWATER DISPOSAL SYSTEM:

A. Wastewater impoundments intended to dispose of wastewater by evaporation shall be designed to contain the maximum daily discharge volume authorized by the discharge permit for disposal by evaporation, while maintaining two feet of freeboard at all times.

B. Combination wastewater/stormwater impoundments intended to contain both wastewater and stormwater runoff for disposal by evaporation shall be designed to contain the maximum daily discharge volume authorized by the discharge permit and stormwater runoff and direct precipitation from a minimum of a 25-year, 24-hour rainfall event for disposal by evaporation, while maintaining two feet of freeboard.

20.6.2.3215 OPERATIONAL REQUIREMENTS FOR ALL DAIRY FACILITIES:

A. Written notification shall be provided 90 days prior to the estimated discharge date indicating the date discharge is proposed to commence. Written verification of the actual date of discharge commencement shall be submitted to the department within 30 days of commencement.

B. Domestic wastewater shall not be commingled with wastewater or stormwater generated at a dairy facility. Domestic wastewater shall be treated or disposed in accordance with the requirements of Part 20.7.3 NMAC or a discharge permit issued solely for the discharge of domestic wastewater, as appropriate.

C. Construction of a new impoundment or improvements to an existing impoundment, including relining of an existing impoundment, shall be performed in accordance with the comprehensive construction plans and specifications and supporting design calculations approved by the department. The department shall be notified at least five working days prior to construction or improvement of an impoundment to allow for an inspection by department personnel. A statement signed and dated by a professional engineer verifying the impoundment liner material and installation was completed in accordance with Section 20.6.2.3212 NMAC shall be submitted with the record drawings.

(1) For new facilities, impoundment construction shall be completed and record drawings, final specifications and final capacity calculations shall be submitted to the department prior to discharging from the facility.

(2) For existing facilities, impoundment construction shall be completed within one year of the effective date of the discharge permit. Record drawings, final specifications and final capacity calculations shall be submitted to the department within 90 days of completion of impoundment construction.

D. The thickness of settled solids in each existing wastewater and combination wastewater/stormwater impoundment shall be measured according to the following procedure to demonstrate that impoundment capacities are consistent with the requirements of Sections 20.6.2.3212 through 20.6.2.3214 NMAC:

(1) The total surface area of the impoundment shall be divided into nine equal sub-areas.

(2) A settled solids measurement device shall be utilized to obtain one settled solids thickness measurement (to the nearest half-foot) per sub-area.

1 (3) The nine settled solids measurements shall be averaged and the average depth multiplied by the
2 surface area at the top of the settled solids layer of the impoundment to estimate the total volume of settled solids in
3 the impoundment.

4 (4) The estimated volume of settled solids shall be subtracted from the design capacity of the
5 impoundment (less two feet of freeboard) to estimate the actual free-liquid capacity.

6 (5) The settled solids measurements, calculations, estimation of total settled solids volume and
7 volume of free-liquid capacity for each impoundment shall be submitted to the department with the application for a
8 new, renewed or modified discharge permit.

9 **E.** The department may require for existing facilities an up-to-date survey of the existing wastewater,
10 stormwater, or combination wastewater/stormwater impoundments be submitted for department approval that
11 demonstrates compliance with the capacity requirements of Sections 20.6.2.3212 through 20.6.2.3214 NMAC. The
12 survey and capacity calculations shall be submitted to the department within 180 days of the effective date of the
13 discharge permit.

14 **F.** To maintain impoundment capacities as required by Sections 20.6.2.3213 and 20.6.2.3214
15 NMAC, manure solids separation shall be employed prior to discharging to a wastewater impoundment.

16 (1) New dairy facilities and facilities installing a new wastewater storage or disposal system shall,
17 prior to discharging to the new system, construct a manure solids separator(s) in accordance with the construction
18 plans and specifications approved by the department. Confirmation of solids separator construction shall be
19 submitted to the department prior to discharging to the new system and shall include the separator type(s),
20 location(s) and photographic documentation.

21 (2) Existing dairy facilities shall construct a manure solids separator(s) within 150 days of the
22 effective date of the discharge permit. Confirmation of solids separator construction shall be submitted to the
23 department within 180 days of the effective date of the discharge permit and shall include the separator type(s),
24 location(s) and photographic documentation.

25 **G.** A flow metering system shall be employed that utilizes flow measurement devices (flow meters)
26 to measure the volume of wastewater discharged at the facility and the volume of stormwater transferred or
27 discharged at the facility. Flow meter(s) shall be installed in accordance with the plans and specifications approved
28 by the department, the requirements of this section and as required by the department. Flow meters shall be
29 physically and permanently labeled with the discharge permit number, meter identification nomenclature required
30 by the department, and the month and year of meter installation. Confirmation of installation shall include a
31 description of the device type, manufacturer, meter identification, location, photographic documentation, record
32 drawings, and the results of the initial field calibration completed in accordance with the requirements of Subsection
33 E of 20.6.2.3219 NMAC. Flow meters shall be kept operational at all times.

34 (1) New facilities shall install flow meters and submit confirmation of flow meter installation to the
35 department prior to discharging from the facility.

1 (2) Existing facilities shall install flow meters within 150 days of the effective date of the discharge
2 permit and submit confirmation of flow meter installation to the department within 180 days of the effective date of
3 the discharge permit.

4 **H.** Flow meter location proposals shall be submitted with an application for a new, renewed or
5 modified discharge permit and approved by the department prior to installation. Proposals shall designate the
6 locations of all flow meters required to be installed by Sections 20.6.2.3215 through 20.6.2.3217 NMAC. Each
7 proposed meter location shall be indicated on the scaled map required by Subsection U of 20.6.2.3215 NMAC and
8 identified relative to the wastewater or stormwater flow it is intended to measure.

9 **I.** Wastewater metering shall be accomplished by the following methods:

10 (1) For pumped flow discharge situations, a closed-pipe velocity sensing totalizing flow meter(s)
11 shall be installed on the pressurized transfer line(s) from all wastewater sources discharged to the wastewater
12 impoundment(s).

13 (2) For gravity flow discharge situations, an open-channel primary flow measuring device(s) (flume
14 or weir), equipped with head sensing and totalizing mechanisms, shall be installed on the transfer line(s) from all
15 wastewater sources discharged to the wastewater impoundment(s).

16 **J.** Stormwater metering shall be accomplished by the following methods:

17 (1) For pumped flow transfer or discharge situations, a closed-pipe velocity sensing totalizing flow
18 meter(s) shall be installed on the pressurized transfer line(s) from the stormwater impoundment(s) to the wastewater
19 impoundment(s) or land application area, as approved by the department.

20 (2) For gravity flow transfer or discharge situations (gravity flow), an open-channel primary flow
21 measuring device(s) (flume or weir), equipped with head sensing and totalizing mechanisms, shall be installed on
22 the transfer line(s) from the stormwater impoundment(s) to the wastewater impoundment(s) or land application area.

23 **K.** An applicant or permittee proposing to use an existing flow meter(s) shall submit for department
24 approval a proposal to demonstrate that the existing flow meter(s) is installed in accordance with the requirements of
25 this section. The proposal shall be submitted with an application for a new, renewed and modified discharge permit
26 and shall include, at a minimum, the following documentation:

27 (1) The location of each existing flow meter indicated on the scaled map required by Subsection U of
28 this section and identified relative to the wastewater or stormwater flow it is intended to measure.

29 (2) A copy of the manufacturer plans and technical specifications specific to each existing flow
30 meter.

31 (3) A field calibration report for each existing flow meter, completed in accordance with Subsection
32 E of 20.6.2.3219 NMAC.

33 **L.** Solids removed from the manure solids separation system(s) and stored at the facility prior to
34 removal or land application shall be managed to minimize generation and infiltration of leachate. Leachate from
35 manure solids shall be collected and contained on an impervious surface prior to disposal. Disposal shall be in
36 accordance with any applicable local, state, or federal regulations.

1 **M.** Stormwater shall be diverted from the corrals and other applicable areas at the facility (i.e., calf
2 pens, alleys, feed storage and mixing, etc.) into the stormwater or combination wastewater/stormwater
3 impoundment(s) in accordance with the approved grading and drainage plan. Conveyance channels shall be
4 constructed and maintained to minimize ponding and infiltration of stormwater.

5 **N.** Stormwater collected in unlined impoundment(s) shall be pumped to the wastewater
6 impoundment(s) or the distribution system for the land application area as soon as possible after a storm event to
7 minimize the potential for movement to ground water and to restore the necessary free capacity to contain, at a
8 minimum, the volume of stormwater runoff and direct precipitation generated by a 25-year, 24-hour rainfall event.
9 Stormwater collected in synthetically lined impoundment(s) shall be pumped to the wastewater impoundment(s) or
10 the distribution system for the land application area as soon as possible after a storm event to restore the necessary
11 free capacity to contain, at a minimum, the volume of stormwater runoff and direct precipitation generated by a 25-
12 year, 24-hour rainfall event. Operational pumps shall be maintained on-site at all times for the transfer of
13 stormwater from stormwater impoundment(s) to the wastewater impoundment(s) or the distribution system for the
14 land application area, as approved by the department.

15 **O.** Impoundments shall be maintained in such a manner that prevents conditions which could affect
16 the structural integrity of the impoundments and the associated liners. Such conditions include, but are not limited
17 to erosion damage; animal burrows or other animal damage; the presence of vegetation including aquatic plants,
18 weeds, woody shrubs or trees growing within five feet of the impoundment edge or within the impoundment itself;
19 evidence of seepage; evidence of berm subsidence; and the presence of large debris or large quantities of debris in
20 the impoundments. Impoundments and surrounding berms shall be inspected on a monthly basis to ensure proper
21 condition and control vegetation growing around the impoundments in a manner that is protective of the liners. Any
22 evidence of damage to a berm or liner of an impoundment shall be reported to the department within 24 hours of
23 discovery.

24 **P.** In order to maintain the required capacity for wastewater, stormwater and combination
25 wastewater/stormwater impoundments as specified in Sections 20.6.2.3212 through 20.6.2.3214 NMAC, solids shall
26 be removed from the impoundments as needed in a manner that is protective of the impoundment liner. A plan shall
27 be submitted for the removal, storage and disposal of the solids-slurry, including a schedule for implementation
28 through completion, to the department for approval. In the event the plan proposes land application of the solids-
29 slurry, the plan must also include analytical results of a representative sample of the solids-slurry to be applied. The
30 plan shall be implemented upon department approval.

31 **Q.** Management practices prior to removal of manure solids and composted material stored at the
32 facility shall minimize the generation and infiltration of leachate by diverting stormwater run-on and run-off and by
33 preventing the ponding of water within areas used for manure and compost stockpiling.

34 **R.** Manure solids and composted material, unless authorized by the discharge permit to be land
35 applied at the permitted facility, shall be removed from the entire permitted facility and handled in accordance with
36 any applicable local, state, or federal regulations.

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1 **S.** Ponding of leachate from silage storage areas shall be minimized and collected and contained on
2 an impervious surface prior to disposal. Disposal shall be in accordance with any applicable local, state, or federal
3 regulations.

4 **T.** An in-line stormwater sampling port(s) shall be installed on the transfer line from the stormwater
5 impoundment(s) to the wastewater impoundment(s) or on the transfer line from the stormwater impoundment(s) to
6 the land application area. The proposed location(s) of the sampling port(s) shall be submitted with the application
7 for a new, renewed or modified discharge permit and approved by the department prior to installation.

8 (1) New facilities shall install the sampling port(s) and submit confirmation of installation, including
9 location and photographic documentation, to the department prior to discharging from the facility.

10 (2) Existing facilities shall install the sampling port(s) within 90 days of the effective date of the
11 discharge permit. Confirmation of sampling port installation, including location and photographic documentation,
12 shall be submitted to the department within 180 days of the effective date of the discharge permit.

13 **U.** A scaled map of the entire facility shall be prepared and submitted to the department with the
14 application for a new, renewed or modified discharge permit. The map shall be clear and legible, and drawn to a
15 scale such that all necessary information is plainly shown and identified. The map shall show the scale in feet or
16 metric measure, a graphical scale, a north arrow, and the effective date of the map. Documentation identifying the
17 means used to locate the mapped objects (i.e., GPS, land survey, digital map interpolation, etc.) and the relative
18 accuracy of the data (i.e., +/- XX feet or meters) shall be included with the map. Any object that cannot be directly
19 shown due to its location inside of existing structures or because it is buried without surface identification, shall be
20 identified on the map in a schematic format and identified as such. The map shall include the following objects:

- 21 (1) Overall dairy facility layout (barns, feed storage areas, pens, etc.);
22 (2) Location of sumps;
23 (3) Location of manure solids separators;
24 (4) Location of all wastewater, stormwater, and combination wastewater/stormwater impoundments;
25 (5) Location of all mix tanks;
26 (6) Location and acreage of each field or subfield within the land application area;
27 (7) Location of all monitoring wells;
28 (8) Location of meters measuring wastewater discharges to and from impoundments;
29 (9) Location of meters measuring stormwater transferred from impoundments;
30 (10) Location of all transfer and discharge pumps;
31 (11) Location of all wastewater and stormwater distribution pipelines; and
32 (12) Location of all backflow prevention.
33 (13) Location of all wastewater and stormwater sampling ports.

34 **V.** The facility map required by this section shall be updated and resubmitted to the department
35 within 90 days of any additions or changes to the facility layout which includes any of the items required by this
36 section.

1 W. All animal mortalities which are to be disposed of (buried or composted) on dairy facilities shall
2 be managed in accordance with the following requirements:

- 3 (1) Only mortalities originating at the facility shall be disposed of at the facility.
- 4 (2) Mortalities shall not be stored near wells or surface water prior to disposal.
- 5 (3) Stormwater run-on to disposal areas shall be prevented by use of berms or other physical barriers.
- 6 (4) Mortalities disposed of by burial shall be placed in pits where the bottom of the pit shall be at
7 least 30 feet above the high water table.
- 8 (5) Burial pits shall be at least 200 feet from private or public wells, or any continuously flowing
9 water course; and at least 100 feet from the 100-year flood zone of any other significant watercourse.
- 10 (6) Mortality composting shall be accomplished by an individual certified by and in accordance with
11 the requirements of the Compost Facility Operator Certification Program and the Mortality and Butcher Waste
12 Composting Guidelines, administered by the New Mexico Environment Department Solid Waste Bureau.

13
14 **20.6.2.3216 ADDITIONAL OPERATIONAL REQUIREMENTS FOR DAIRY FACILITIES**
15 **DISCHARGING TO A LAND APPLICATION AREA:**

16 A. Flow meters shall be installed to measure the volume of wastewater discharged from the
17 wastewater or combination wastewater/stormwater impoundment(s) to the land application area. A flow meter(s)
18 shall be installed on the transfer line(s) from the wastewater impoundment(s) to the distribution system for the land
19 application area. Meter installation and confirmation of meter installation shall be performed in accordance with the
20 requirements of Subsection G of 20.6.2.3215 NMAC and as required by the department.

21 B. For facilities transferring stormwater from the stormwater impoundment(s) to the wastewater
22 impoundment(s) for storage prior to land application, a flow meter(s) shall be installed to measure the volume of
23 stormwater transferred. The flow meter(s) shall be installed on the transfer line(s) from the stormwater
24 impoundment(s) to the wastewater impoundment(s). Meter installation and confirmation of meter installation shall
25 be performed in accordance with the requirements of Subsection G of 20.6.2.3215 NMAC and as required by the
26 department.

27 C. For facilities applying stormwater from the stormwater impoundment(s) directly to the distribution
28 system for the land application area, flow meters shall be installed to measure the volume of stormwater applied
29 directly to the land application area. A flow meter(s) shall be installed on the transfer line(s) from the stormwater
30 impoundment(s) to the distribution system for the land application area. Meter installation and confirmation of
31 meter installation shall be performed in accordance with the requirements of Subsection G of 20.6.2.3215 NMAC
32 and as required by the department.

33 D. Wastewater or combination wastewater/stormwater impoundment(s) shall be operated and
34 maintained for the purpose of storing wastewater prior to discharging to the land application area. Capacity of the
35 wastewater or combination wastewater/stormwater impoundment(s) shall be managed in accordance with the
36 requirements of Section 20.6.2.3213 NMAC.

37 E. Irrigation water shall not be introduced into any impoundment authorized by the department for

1 the storage of wastewater or stormwater.

2 **F.** Documentation of irrigation water rights from the Office of the State Engineer for all fields or
3 subfields within the land application area shall be submitted to the department with the application for a new,
4 renewed or modified discharge permit. The documentation shall demonstrate adequate irrigation water is available
5 to produce and harvest the crops necessary for the removal of nitrogen applied in wastewater and stormwater in
6 accordance with Subsection C of 20.6.2.3109 NMAC.

7 **G.** Wastewater shall only be applied to fields or subfields within the land application area receiving
8 fresh irrigation water on a regular basis. Only fresh irrigation water shall be used to meet the water consumptive
9 need of the crop to support crop production and nutrient removal.

10 **H.** Documentation of the existing infrastructure necessary to properly transfer, distribute and apply
11 wastewater or stormwater to all fields or subfields within the land application area that have previously received
12 wastewater shall be submitted to the department with the application for a new, renewed or modified discharge
13 permit. Written documentation shall confirm the existing land application distribution system including the types
14 and locations of the systems, the methods of backflow prevention employed, and photographic documentation.

15 **I.** Prior to initial discharge to any field or subfield within the land application area that has not
16 previously received wastewater or stormwater, a land application distribution system shall be installed to transfer
17 wastewater and stormwater to all fields or subfields that will be actively receiving wastewater and stormwater. The
18 land application distribution system shall be utilized to properly distribute and apply wastewater and stormwater to
19 fields and subfields within the land application area to meet the requirements of this section. Prior to initial
20 discharge to any field or subfield within the land application area, documentation confirming installation of the land
21 application distribution system, including the type and location of the system, the method of backflow prevention
22 employed and photographic documentation shall be submitted to the department.

23 **J.** Wastewater and stormwater shall be applied to fields and subfields within the land application area
24 and up to the maximum acreage of irrigated cropland specifically authorized by department through a discharge
25 permit. Wastewater shall not be mixed with irrigation water in-line or in the impoundment(s), but may be blended
26 in a mix-tank, or applied alternately in the same line or in a separate line, as authorized by the department.
27 Wastewater and stormwater shall be distributed evenly over the entire area of application and ponding shall be
28 minimized.

29 **K.** Nutrients and other constituents present in wastewater and stormwater shall be applied to irrigated
30 cropland under cultivation according to the following requirements:

31 (1) The amount of nitrogen applied to each field or subfield within the land application area from all
32 combined nitrogen sources, such as but not limited to wastewater, stormwater, manure solids, composted material,
33 irrigation water and other additional fertilizer(s), along with residual soil nitrogen and nitrogen credits from
34 leguminous crops, shall be performed in accordance with a plan demonstrating that the nitrogen applied does not
35 exceed by more than 25% the amount reasonably expected to be taken up and removed by a mechanically harvested
36 crop. The plan shall contain, at a minimum, the crop(s) to be grown for all fields or subfields within the land
37 application area, estimated or actual crop yields, estimated or actual nitrogen content of the harvested crop(s),

1 estimated amounts of all nitrogen sources to be land applied from the dairy facility and an estimated nitrogen
2 balance for the facility. The nitrogen content of the aforementioned inputs shall not be adjusted to account for
3 volatilization or mineralization processes. The plan shall be submitted to the department with the application for a
4 new, renewed, or modified discharge permit.

5 (2) In lieu of paragraph (1) above, a proposal to apply wastewater and stormwater to each field or
6 subfield within the land application area in accordance with the requirements of an approved nutrient management
7 plan may be submitted to the department. The nutrient management plan shall be signed and dated by an individual
8 certified by the American Society of Agronomy as a Certified Crop Advisor (CCA) or Certified Professional
9 Agronomist (CPAg). In addition, the plan must be signed and dated by a Nutrient Management Planner certified by
10 the New Mexico Natural Resources Conservation Service. A nutrient management plan shall be developed and
11 contain all plan component identified in accordance with the Natural Resources Conservation Service General
12 Manual Title 190, Part 402, and the Natural Resources Conservation Service Conservation Practice Standard 590 for
13 New Mexico. Plant material and soil sampling shall be equivalent to the requirements of Subsections I, K, and L of
14 20.6.2.3220 NMAC, and the method of crop removal to be employed shall be identified. A proposed nutrient
15 management plan shall be submitted to the department with the application for a new, renewed, or modified
16 discharge permit. An approved nutrient management plan shall be implemented as required by the department.

17 **L.** Crop removal from fields or subfields within the land application area shall be accomplished by
18 mechanical harvest. The use of grazing as a means of crop removal as an alternative to mechanical harvest may be
19 proposed for department approval. Proposals for the use of grazing for crop removal shall be included in a nutrient
20 management plan prepared in accordance with the requirements of paragraph (2) of subsection K of this section,
21 shall quantify the degree of nitrogen removal expected to be achieved by grazing, and shall provide scientific
22 documentation supporting the estimated nitrogen removal including scientific documentation and justification for
23 the selection of input parameters used in calculations or computer modeling. A nutrient management plan proposing
24 grazing for crop removal shall be submitted to the department with the application for a new, renewed, or modified
25 discharge permit. An approved nutrient management plan using grazing for crop removal shall be implemented in
26 its entirety as required by the department. A nutrient management plan proposing grazing for crop removal shall
27 also include, but are not limited to, the following elements:

- 28 (1) Length of grazing season
- 29 (2) Size and number of animals to be grazed.
- 30 (3) Calculations to determine stocking rates and total acreage needed.
- 31 (4) Plant species use to establish pastures and pasture renovation practices to be employed.
- 32 (5) Yield of species grown in each pasture and the forage supplied on a monthly basis.
- 33 (6) Map showing the cattle lanes, water tanks, fencing and paddock layout with numbering system
34 and acreage of each paddock.
- 35 (7) Grazing management system employed.

1 **M.** Each dairy facility shall install and maintain backflow prevention to protect all wells used in the
2 land application distribution system from contamination by wastewater backflow. Backflow prevention shall be
3 achieved by a total disconnect (physical air gap) between the fresh irrigation water and wastewater delivery systems.

4 (1) New facilities shall install backflow protection and submit installation confirmation to the
5 department, including photographic documentation prior to discharging from the facility.

6 (2) Existing facilities shall install backflow protection within 90 days of the effective date of the
7 discharge permit. Confirmation of installation, including photographic documentation, shall be submitted to the
8 department within 180 days of the effective date of the discharge permit.

9 **N.** An in-line wastewater sampling port(s) shall be installed on the transfer line(s) from the
10 wastewater or combination wastewater/stormwater impoundment(s) to the distribution system for the land
11 application area. The proposed location(s) of the sampling port(s) shall be submitted with the application for a new,
12 renewed or modified discharge permit and approved by the department prior to installation.

13 (1) New facilities shall install a sampling port(s) and submit installation confirmation to the
14 department, including location and photographic documentation, prior to discharging from the facility.

15 (2) Existing facilities shall install a sampling port within 90 days of the effective date of the discharge
16 permit. Confirmation of installation, including location and photographic documentation, shall be submitted to the
17 department within 180 days of the effective date of the discharge permit.

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19 **20.6.2.3217 ADDITIONAL OPERATIONAL REQUIREMENTS FOR DAIRY FACILITIES**
20 **DISCHARGING TO AN EVAPORATIVE WASTEWATER DISPOSAL SYSTEM:**

21 **A.** For facilities transferring stormwater from the stormwater impoundment(s) to the wastewater
22 impoundment(s) for disposal by evaporation, flow meters shall be installed to measure the volume of stormwater
23 transferred. A flow meter(s) shall be installed on the transfer line(s) from the stormwater impoundment(s) to the
24 wastewater impoundment(s). Flow meter installation and confirmation shall be performed in accordance with the
25 requirements of Subsection G of 20.6.2.3215 NMAC and as required by the department.

26 **B.** The wastewater or combination wastewater/stormwater impoundment(s) shall be operated and
27 maintained for the purpose of disposing of wastewater or both wastewater and stormwater by evaporation. Capacity
28 of the wastewater or combination wastewater/stormwater impoundment(s) shall be maintained in accordance with
29 the requirements of Section 20.6.2.3214 NMAC.

30
31 **20.6.2.3218 GROUND WATER MONITORING REQUIREMENTS FOR ALL DAIRY FACILITIES:**

32 **A.** Monitoring of ground water quality shall be required hydrologically downgradient of each
33 potential source of ground water contamination, including but not limited to wastewater, stormwater, and
34 combination wastewater/stormwater impoundments, and fields in the land application area. Monitoring wells shall
35 be located as close to the potential source as is practicable to detect exceedance(s) or trends towards exceedance(s) of
36 the ground water standards at the earliest possible occurrence, so that source control or abatement may be
37 implemented as soon as possible. A minimum of one monitoring well shall be installed hydrologically

1 downgradient of each potential contamination source and previously utilized impoundments and fields to which
2 discharge has ceased and shall be located within 50 feet of the toe of the berm of each impoundment and within 50
3 feet of the edge of each field within the land application area. When appropriate, based on the documented ground
4 water flow direction, the department may authorize one monitoring well to monitor more than one field within the
5 land application area. Additionally, at least one monitoring well shall be installed hydrologically upgradient of
6 potential ground water contamination sources at the facility in order to establish ground water quality conditions at a
7 location not likely to be affected by potential contamination sources at the facility.

8 (1) Monitoring wells intended to monitor ground water hydrologically downgradient of
9 impoundments and fields within the land application area shall be installed as follows:

10 (a) For new facilities, monitoring wells shall be installed prior to discharging from the facility.

11 (b) For existing facilities, monitoring wells shall be installed within 90 days of the effective
12 date of the discharge permit.

13 (c) Existing facilities activating a new field(s) or installing a new impoundment(s) shall install
14 a monitoring well(s) prior to discharging to the field(s) or impoundment(s).

15 (2) Monitoring wells intended to monitor ground water hydrologically upgradient of the entire facility
16 shall be installed as follows:

17 (a) Monitoring wells shall be installed at new facilities prior to discharging from the facility.

18 (b) Monitoring wells shall be installed at existing facilities within 90 days of the effective date
19 of the discharge permit.

20 **B.** All monitoring wells identified for ground water sampling by the department shall be identified by
21 a well identification tag. The tag shall be:

22 (1) Made of aluminum

23 (2) At least two inches by four inches in size

24 (3) Engraved with the discharge permit number; well identification nomenclature identified by the
25 department: name of the well driller and New Mexico well driller license number; and the month and year of well
26 installation.

27 (4) For above-grade wells, the tag shall be affixed to the exterior of the steel well shroud using rivets,
28 bolts or a steel band. For wells finished below-grade, the tag shall be placed inside the well vault adjacent to the
29 well riser.

30 **C.** Monitoring well location proposals shall be submitted with the application for a new, renewed or
31 modified discharge permit for review and approval by the department. Proposals shall designate the locations of all
32 monitoring wells required to be installed by this section. Proposals shall include at a minimum the following
33 information:

34 (1) A proposed location of each monitoring well relative to the source it is intended to monitor shall
35 be indicated on the scaled map required by Subsection U of 20.6.2.3215 NMAC.

1 (2) A written description of the specific location proposed for each monitoring well including the
2 distance in feet and compass bearing of each monitoring well from the toe of the impoundment berm or edge of the
3 field it is intended to monitor.

4 (3) Ground water flow direction beneath the facility used to determine the proposed monitoring well
5 location(s), including supporting documentation used to determine ground water flow direction.

6 **D.** Monitoring wells shall be constructed in accordance with Part 19.27.4 NMAC and the following
7 requirements:

8 (1) All well drilling activities shall be performed by an individual with a current and valid well driller
9 license issued by the State of New Mexico in accordance with Part 19.27.4 NMAC.

10 (2) Drilling methods that allow for accurate determinations of water table locations shall be
11 employed. All drill bits, drill rods, and down-hole tools shall be thoroughly cleaned immediately prior to the start of
12 drilling. The bore hole diameter shall be drilled a minimum of 4 inches larger than the casing diameter to allow for
13 the emplacement of sand and sealant.

14 (3) After completion, the well shall be allowed to stabilize for a minimum of 12 hours before
15 development is initiated.

16 (4) The well shall be developed so that formation water flows freely through the screen and is not
17 turbid, and all sediment and drilling disturbances are removed from the well.

18 (5) Schedule 40 (or heavier) PVC pipe, stainless steel pipe, or carbon steel pipe shall be used as
19 casing. The casing shall have an inside diameter not less than two inches. The casing material selected for use shall
20 be compatible with the anticipated chemistry of the ground water and appropriate for the contaminants of interest at
21 the facility. The casing material and thickness selected for use shall have sufficient collapse strength to withstand
22 the pressure exerted by grouts used as annular seals and thermal properties sufficient to withstand the heat generated
23 by the hydration of cement-based grouts.

24 (6) Casing sections shall be joined using welded or threaded joints; the method selected shall provide
25 sufficient joint strength for the specific well installation.

26 (7) The casing shall extend from the top of the screen to at least one foot above ground surface. The
27 top of the casing shall be fitted with a removable cap, and the exposed casing shall be protected by a locking steel
28 well shroud. The shroud shall be large enough in diameter to allow easy access for removal of the cap.
29 Alternatively, monitoring wells may be completed below grade. In this case, the casing shall extend from the top of
30 the screen to six to twelve inches below the ground surface; the monitoring wells shall be sealed with locking,
31 expandable well plugs; a flush-mount, watertight well vault that is rated to withstand traffic loads shall be emplaced
32 around the wellhead; and the cover shall be secured with at least one bolt. The vault cover shall indicate that the
33 wellhead of a monitoring well is contained within the vault.

34 (8) A 20-foot section (maximum) of continuous-slot, machine slotted, or other manufactured PVC or
35 stainless steel well screen shall be installed across the water table. Screens created by cutting slots into solid casing
36 with saws or other tools shall not be used. The screen material selected for use shall be compatible with the
37 anticipated chemistry of the ground water and appropriate for the contaminants of interest at the facility.

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1 (a) Requests for a 30-foot section of well screen may be approved by the department when the
2 most recent two years of ground water level data demonstrates a declining water level trend of at least two feet per
3 year. Data supporting ground water levels shall be specific to monitoring wells located at the facility and obtained
4 with a water level measuring device as required by this section.

5 (b) Requests for additional screen length shall be submitted to the department in the application
6 for a new, renewed or modified discharge permit.

7 (9) Screen sections shall be joined using welded or threaded joints; the method selected shall provide
8 sufficient joint strength for the specific well installation and shall not introduce constituents that may reasonably be
9 considered contaminants of interest at the facility. A cap shall be attached to the bottom of the well screen; sumps
10 (i.e., casing attached to the bottom of a well screen) shall not be installed.

11 (10) The bottom of the screen shall be installed no more than 15 feet below the water table; or 25 feet
12 below the water table when additional screen length is approved by the department. The top of the well screen shall
13 be positioned not less than five feet above the water table. The well screen slots shall be appropriately sized for the
14 formation materials.

15 (11) Casing and well screen shall be centered in the borehole by installing centralizers near the top
16 and bottom of the well screen.

17 (12) A filter pack shall be installed around the screen by filling the annular space from the bottom of
18 the screen to two feet above the top of the screen with clean silica sand. The filter pack shall be properly sized to
19 prevent fine particles in the formation from entering the well. For wells deeper than 30 feet, the sand shall be
20 emplaced by a tremmie pipe. The well shall be surged or bailed to settle the filter pack and additional sand added, if
21 necessary, before the bentonite seal is emplaced.

22 (13) A bentonite seal shall be constructed immediately above the filter pack by emplacing bentonite
23 chips or pellets (three-eighths inch in size or smaller) in a manner that prevents bridging of the chips/pellets in the
24 annular space. The bentonite seal shall be three feet in thickness and hydrated with clean water. Adequate time
25 shall be allowed for expansion of the bentonite seal before installation of the annular space seal.

26 (14) The annular space above the bentonite seal shall be sealed with a bentonite-cement grout (five
27 lbs. of powdered bentonite, 94 lbs. of Portland cement, and six and a half to eight and a half gallons of clean water),
28 neat cement grout (94 lbs. of Portland cement and five to six gallons of clean water), or bentonite grout (20 percent
29 solids, created by mixing 50 lbs. of bentonite grout with 24 gallons of clean water). Emplacement of the annular
30 space seal shall be performed by using a tremmie pipe (flow by gravity or pumping through the pipe). Annular
31 space seals shall extend from the top of the bentonite seal to the ground surface (for wells completed above grade) or
32 to a level three to six inches below the top of casing (for wells completed below grade).

33 (15) A concrete pad (two-foot minimum radius, four-inch minimum thickness) shall be poured
34 around the shroud or well vault and wellhead. The concrete and surrounding soil shall be sloped to direct rainfall
35 and runoff away from the wellhead.

36 **E.** All ground water sample collection, preservation, transport and analysis shall be performed
37 according to the following procedure, unless an alternate method is approved by the department:

1 (1) Depth-to-water shall be measured from the top of well casing at point of survey to the nearest
2 0.01 feet using an electronic water level indicator consisting of dual conductor wire encased in a cable or tape
3 graduated to 0.01 feet, a probe attached to the end of the conductor wire, and a visual or audible indicator;

4 (2) Three well volumes of water shall be purged from the well prior to sample collection;

5 (3) Following purging and immediately prior to sample collection the following field parameters shall
6 be measured and recorded: pH, specific conductance, and temperature;

7 (4) Samples from the well shall be obtained for analysis in accordance with the methods authorized
8 by Subsection B of 20.6.2.3107 NMAC;

9 (5) Samples shall be prepared, preserved and transported to a qualified analytical laboratory for
10 analysis in accordance with the methods authorized by Section D of 20.6.2.3219 NMAC.

11 **F.** Ground water samples shall be collected in all newly installed monitoring wells. Samples shall be
12 analyzed for nitrate as nitrogen, total Kjeldahl nitrogen, chloride, sulfate and total dissolved solids, and other
13 constituents that may be required by the department, in accordance with the requirements of this section.

14 (1) Samples shall be collected from the newly installed monitoring well(s) at new facilities prior to
15 discharging from the facility.

16 (2) Samples shall be collected from the newly installed monitoring wells at existing facilities within
17 120 days of the effective date of the discharge permit.

18 **G.** All monitoring wells approved by the department shall be surveyed to a U.S. Geological Survey
19 (USGS) or other permanent benchmark. Survey data shall include northing, easting and elevation to the nearest
20 hundredth of a foot or in accordance with the "Minimum Standards for Surveying in New Mexico", Part 12.8.2
21 NMAC. A survey elevation shall be established at the top-of-casing, with a permanent marking indicating the point
22 of survey. The survey shall be completed and certified by a licensed New Mexico professional surveyor. Depth-to-
23 water shall be measured from the point of survey to the nearest hundredth of a foot in all surveyed wells, and the
24 data shall be used to develop a map showing the location of all monitoring wells and the direction and gradient of
25 ground water flow at the facility.

26 (1) All monitoring well(s) shall be surveyed at new facilities prior to discharging from the facility.

27 (2) All monitoring wells shall be surveyed at existing facilities within 120 days of the effective date
28 of the discharge permit.

29 **H.** For facilities required by this section to survey the existing monitoring wells in accordance with
30 this section, the monitoring well survey report shall be submitted to the department within 180 days of the effective
31 date of the discharge permit. The report shall contain the depth-to-water measured in each monitoring well, and a
32 surveyed map showing the locations of the monitoring wells and the direction and gradient of shallow ground water
33 flow at the facility.

34 **I.** A monitoring well completion report pertaining to all monitoring wells approved by the
35 department shall be submitted to the department. For new facilities the report shall be submitted prior to discharging
36 from the facility. For existing facilities the report shall be submitted within 180 days after the effective date of the

1 discharge permit or within 60 days of completion as required by the department. The report shall contain the
2 following information:

3 (1) Construction and lithologic logs for the new monitoring wells including well record information
4 specified by Part 19.27.4 NMAC.

5 (2) Depth-to-water measured in each new and existing monitoring well.

6 (3) Survey data and a survey map showing the locations of each new and existing monitoring well
7 and a ground water elevation contour map developed in accordance with Subsection K of this section.

8 (4) Analytical results of ground water samples collected from the new monitoring wells, including
9 laboratory quality assurance and quality control summary reports, and field parameters measurements.

10 **J.** Ground water samples shall be collected quarterly from all monitoring wells specified by the
11 department. Samples shall be analyzed for nitrate as nitrogen, total Kjeldahl nitrogen, chloride, sulfate and total
12 dissolved solids, and other constituents that may be required by the department, in accordance with the requirements
13 of this section. Depth-to-water and field parameter measurements, analytical results, including laboratory quality
14 assurance and quality control summary report, and a facility layout map showing the location and number of each
15 well, shall be submitted to the department in the quarterly or annual monitoring reports as required by the
16 department.

17 **K.** Ground water elevation contour maps shall be developed on a quarterly basis using data associated
18 with all monitoring wells used for monitoring at the dairy facility. Top of casing elevation data obtained from
19 monitoring well surveys and quarterly depth-to-water measurements in monitoring wells shall be used to calculate
20 ground water elevations at monitoring well locations. Ground water elevations between monitoring well locations
21 shall be estimated using common interpolation methods. Ground water elevation contour lines shall be drawn by
22 connecting points of equal elevation. Ground water elevations shall be expressed in feet and a contour interval no
23 greater than 0.5 feet shall be used. Ground water elevation contour maps shall depict the ground water flow
24 direction based on the orientation of the ground water elevation contours. Ground water elevation contour maps
25 shall be submitted to the department in the quarterly or annual monitoring reports as required by the department.

26 **L.** The department shall have the option to perform downhole inspections of all monitoring wells.
27 The department shall establish the inspection date, identify the monitoring wells to be inspected, and provide at least
28 60 days notice to the permittee by certified mail. All existing dedicated pumps shall be removed at least 48 hours
29 prior to department inspection to allow adequate settling time of sediment agitated from pump removal. Should a
30 facility decide to install dedicated pumps in any of the monitoring wells, the department shall be notified prior to
31 pump installation so that downhole well inspection(s) can be scheduled prior to pump installation.

32 **M.** Any additional monitoring wells required to be installed due to the enactment of a contingency or
33 a corrective action plan shall be installed in accordance with this section.

34
35 **20.6.2.3219 MONITORING REQUIREMENTS FOR ALL DAIRY FACILITIES**

36 **A.** Monitoring reports shall be submitted to the department on an annual schedule. Facilities with a
37 record of noncompliance with the requirements of the previous discharge permit may be required to submit

1 monitoring reports on a quarterly schedule. Monitoring reports shall be submitted in accordance with Sections
2 20.6.2.3218 through 20.6.2.3221 NMAC and as required by the department.

3 **B.** Facilities required by the department to submit monitoring reports on an annual schedule shall
4 submit annual monitoring reports to the department no later than August 1 of each year. Annual monitoring reports
5 shall contain monitoring data and information collected as required by the department during the third and fourth
6 quarters of the prior calendar year and the first and second quarters of the current calendar year. Annual monitoring
7 reports shall include the results of quarterly monitoring which shall be performed according to the following
8 schedule: January 1 through March 31 (first quarter); April 1 through June 30 (second quarter); July 1 through
9 September 30 (third quarter); and October 1 through December 31 (fourth quarter).

10 **C.** Facilities required by the department to submit monitoring reports on a quarterly schedule shall
11 submit quarterly monitoring reports to the department containing monitoring data and information collected as
12 required by the department during the prior quarter. Quarterly monitoring reports shall be submitted according to
13 the following schedule: January 1 through March 31 (first quarter) – report due by May 1; April 1 through June 30
14 (second quarter) – report due by August 1; July 1 through September 30 (third quarter) – report due by November 1;
15 and October 1 through December 31 (fourth quarter) – report due by February 1.

16 **D.** Sampling and analysis of water shall be conducted in accordance with Subsection B of
17 20.6.2.3107 NMAC, and sampling and analysis of soil shall be conducted in accordance with Methods of Soil
18 Analysis: Part 1. Physical and Mineralogical Methods and Part 2. Chemical and Microbiological Properties,
19 American Society of Agronomy. Alternative methods for sampling and analysis may be proposed with the
20 application for a new, renewed or modified discharge permit for approval by the department.

21 **E.** All flow meter(s) shall be capable of having their accuracy ascertained under actual working
22 (field) conditions. A description of the field calibration method to be utilized shall be developed for each flow meter
23 and that method shall be utilized to check the accuracy of each respective meter. Field calibrations shall be
24 performed upon installation and, at a minimum, annually thereafter. Flow meter(s) shall be calibrated to within +/-
25 10% of actual flow, as measured under field conditions. Field calibrations shall be performed by an individual
26 knowledgeable in flow measurement and in the installation/operation of the particular device in use. The results of
27 annual field calibrations shall be submitted to the department annually in the monitoring report due by August 1.
28 The flow meter calibration report shall include:

- 29 (1) The location and meter identification nomenclature identified by the department.
- 30 (2) The method of flow meter calibration used.
- 31 (3) The measured accuracy of each flow meter prior to adjustment indicating the positive or negative
32 offset as a percentage of actual flow as determined by an in-field calibration check.
- 33 (4) The measured accuracy of each flow meter following adjustment, if necessary, indicating the
34 positive or negative offset as a percentage of actual flow of the meter.
- 35 (5) Any flow meter repairs made during the previous year or during calibration.

36 **F.** The monthly volume of wastewater discharged from all wastewater sources to the wastewater
37 impoundment(s) shall be measured using a flow meter(s). Monthly meter readings including units of measurement,

1 and average daily and monthly discharge volumes reported in gallons shall be submitted to the department in the
2 quarterly or annual monitoring reports as required by the department.

3 **G.** Stormwater samples shall be collected from the in-line sampling port(s) on a quarterly basis and
4 analyzed for nitrate as nitrogen, total Kjeldahl nitrogen, chloride, sulfate and total dissolved solids, and other
5 constituents that may be required by the department, in accordance with the requirements of this section. In the
6 event that stormwater is not generated during a particular quarter, a statement that no precipitation occurred shall be
7 submitted to the department. Analytical results, or a statement of no precipitation, shall be submitted to the
8 department in the quarterly or annual monitoring reports as required by the department.

9
10 **20.6.2.3220 ADDITIONAL MONITORING REQUIREMENTS FOR DAIRY FACILITIES**
11 **DISCHARGING TO A LAND APPLICATION AREA:**

12 **A.** All discharges shall be measured and recorded from the wastewater or combination
13 wastewater/stormwater impoundment(s) to each field or subfield within the land application area. A log shall be
14 maintained indicating the date and location of each discharge, flow meter readings immediately prior to and after
15 each discharge, and the calculated total volume of each discharge reported in gallons and acre-feet. A copy of the
16 log entries including units of measurement shall be submitted to the department in the quarterly or annual
17 monitoring reports as required by the department.

18 **B.** All stormwater transfers made from the stormwater impoundment(s) to the wastewater
19 impoundment(s) for storage prior to land application, shall be measured and recorded. A log shall be maintained
20 indicating the date and location of each stormwater transfer, flow meter readings immediately prior to and after each
21 stormwater transfer, and the calculated total volume of each stormwater transfer reported in gallons and acre-feet. A
22 copy of the log entries including units of measurement shall be submitted to the department in the quarterly or
23 annual monitoring reports as required by the department.

24 **C.** Stormwater directly applied to the land application area shall be measured and recorded from the
25 stormwater impoundment(s) to each field or subfield within the land application area. A log shall be maintained
26 indicating the date and location of each discharge, flow meter readings immediately prior to and after each
27 discharge, and the calculated total volume of each discharge reported in gallons and acre-feet. A copy of the log
28 entries including units of measurement shall be submitted to the department in the quarterly or annual monitoring
29 reports as required by the department.

30 **D.** For facilities discharging wastewater from the impoundment(s) to the land application area using
31 irrigation ditches; all ditches shall be concrete-lined. The ditch system shall be visually inspected on a monthly
32 basis to ensure proper maintenance. Any damage to the lined ditches shall be repaired immediately. A log shall be
33 kept on-site documenting the inspection findings and repairs made, and the log shall be made available to the
34 department upon request.

35 **E.** Wastewater samples shall be collected from the in-line sampling port(s) on a quarterly basis and
36 analyzed for nitrate as nitrogen, total Kjeldahl nitrogen, chloride, sulfate and total dissolved solids, and other
37 constituents that may be required by the department, in accordance with the requirements Subsection D of

1 20.6.2.3219 NMAC. The wastewater sample shall be collected while irrigating, but not during the first hour of
2 irrigation. In the event that land application of wastewater does not occur during a particular quarter, a wastewater
3 sample shall be collected during the first wastewater application event of the following quarter. The regularly
4 scheduled quarterly wastewater sample shall also be collected within the quarter, during a later application event.
5 Analytical results shall be submitted to the department in the quarterly or annual monitoring reports as required by
6 the department.

7 **F.** Irrigation wells used to supply fresh water to the fields or subfields in the land application area
8 shall be monitored to account for additional potential nitrogen supplied to the land application area in the following
9 manner:

10 (1) Each irrigation well shall be identified in association with the field(s) or subfield(s) to which it
11 supplies fresh water.

12 (2) An annual sample of irrigation water supplied from each well shall be collected and analyzed for
13 nitrate as nitrogen and total Kjeldahl nitrogen, in accordance with the requirements Subsection D of 20.6.2.3219
14 NMAC.

15 (3) The annual volume of irrigation water shall be estimated from each well applied to each field or
16 subfield in the land application area.

17 (4) Analytical results and the annual estimated volume of irrigation water applied from each well to
18 each field or subfield in the land application area shall be submitted to the department in the quarterly monitoring
19 reports due by August 1 or annual monitoring reports as required by the department.

20 **G.** The nitrogen content of the manure solids applied to each field or subfield in the land application
21 area shall be estimated at 25 pounds per ton. Should the permittee choose to use actual nitrogen content values of
22 on-site manure solids, a plan for sampling manure solids and analyzing for total Kjeldahl nitrogen and moisture
23 content shall submit for department approval.

24 **H.** Yield documentation and plant and harvest dates of each crop grown shall be submitted to the
25 department in the quarterly or annual monitoring reports as required by the department. Yield documentation shall
26 consist of copies of scale-weight tickets or harvest summaries based on scale-weights.

27 **I.** The total nitrogen concentration of each harvested crop shall be determined to verify plant
28 nitrogen removal levels. A composite sample consisting of 15 sub-samples of plant material shall be taken from
29 each field or subfield during the final harvest of each crop grown per year. Samples shall be analyzed for percent
30 total nitrogen and percent dry matter. Analytical reports shall be submitted to the department in the quarterly or
31 annual monitoring reports as required by the department.

32 **J.** A nitrogen removal summary shall be submitted for each crop grown on each field or subfield in
33 the land application area utilizing crop yield and nitrogen concentration information collected in accordance with the
34 requirements of this section. The summary shall be submitted to the department in the quarterly or annual
35 monitoring reports as required by the department.

36 **K.** For the first soil sampling event following the effective date of the discharge permit, soil samples
37 shall be collected from each field or subfield in the land application area. Composite soil samples shall be collected

1 between December 1 and May 31 for all fields or subfields regardless of whether the field or subfield is cropped,
2 remains fallow, or has received wastewater or stormwater. One surface composite soil sample (first-foot) and two
3 sub-surface composite soil samples (second-foot and third-foot) shall be collected from each field or subfield.

4 Composite soil samples shall be collected and analyzed according to the following procedure:

5 (1) Each surface and sub-surface soil sample shall consist of a single composite of 15 soil cores
6 collected randomly throughout each field or subfield. If a field is divided into subfields (i.e., two separate crops on a
7 single pivot), soil samples shall be collected from each subfield. Should a field or subfield consist of considerably
8 different soil textures (i.e., sandy and silty clay); soil samples shall be collected from each soil texture within each
9 field or subfield;

10 (2) Surface soil samples (first-foot) shall be collected from a depth of 0 to 12 inches;

11 (3) Each second-foot sub-surface soil sample shall be collected from a depth of 12 to 24 inches;

12 (4) Each third-foot sub-surface soil sample shall be collected from a depth of 24 to 36 inches.

13 (5) Each surface and sub-surface composite sample shall be analyzed for pH, electrical conductivity,
14 total Kjeldahl nitrogen, nitrate as nitrogen, chloride, organic matter, potassium, phosphorus, sodium, calcium,
15 magnesium, bicarbonate, sulfate, soil texture, and sodium adsorption ratio.

16 (6) pH, electrical conductivity, sodium, calcium, magnesium, and sulfate shall be analyzed using a
17 saturated paste extract in accordance with the analytical methodology required by Subsection D of 20.6.2.3219
18 NMAC. Phosphorus shall be analyzed using the Olsen sodium bicarbonate method in accordance with the analytical
19 methodology required by Subsection D of 20.6.2.3219 NMAC. Nitrate as nitrogen shall be analyzed by a 2 molar
20 KCl extract in accordance with the analytical methodology required by Subsection D of 20.6.2.3219 NMAC. Total
21 Kjeldahl nitrogen, chloride, organic matter, potassium, bicarbonate, soil texture, and sodium adsorption ratio shall
22 be analyzed in accordance with the analytical methodology required by Subsection D of 20.6.2.3219 NMAC.

23 (7) The analytical results and a map showing the fields or subfields as well as the sampling locations
24 within each field/subfield shall be submitted to the department in the quarterly or annual monitoring reports as
25 required by the department.

26 **L.** Following the initial soil sampling required by this section, annual soil samples shall be collected
27 from each field or subfield in the land application area that has received or is actively receiving wastewater or
28 stormwater. Composite soil samples shall be collected between December 1 and May 31. For those fields or
29 subfields that have never before received wastewater, soil samples shall be collected immediately prior to initial
30 wastewater application and annually thereafter. Once a field or subfield has received wastewater it shall be sampled
31 annually regardless of whether the field or subfield is cropped, remains fallow, or has recently received wastewater
32 or stormwater. One surface composite soil sample (first-foot) and two sub-surface composite soil samples (second-
33 foot and third-foot) shall be collected from each field or subfield. Composite soil samples shall be collected and
34 analyzed according to the following procedure:

35 (1) Each surface and sub-surface soil sample shall consist of a single composite of 15 soil cores
36 collected randomly throughout each field or subfield. If a field is divided into different subfields (i.e., two separate
37 crops on a single pivot), soil samples shall be collected from each subfield. Should a field or subfield consist of

1 considerably different soil textures (i.e., sandy and silty clay); soil samples shall be collected from each soil texture
2 within each field or subfield;

3 (2) Surface soil samples (first-foot) shall be collected from a depth of 0 to 12 inches;

4 (3) Each second-foot sub-surface soil sample shall be collected from a depth of 12 to 24 inches;

5 (4) Each third-foot sub-surface soil sample shall be collected from a depth of 24 to 36 inches;

6 (5) Surface soil samples shall be analyzed for pH, electrical conductivity, nitrate as nitrogen,
7 chloride, organic matter, potassium, phosphorus, sodium, calcium, magnesium, and sodium adsorption ratio;

8 (6) Sub-surface soil samples shall be analyzed for electrical conductivity, nitrate as nitrogen, and
9 chloride;

10 (7) pH, electrical conductivity, sodium, calcium, and magnesium shall be analyzed using a saturated
11 paste extract in accordance with the analytical methodology required by Subsection D of 20.6.2.3219 NMAC.

12 Phosphorus shall be analyzed using the Olsen sodium bicarbonate method in accordance with the analytical
13 methodology required by Subsection D of 20.6.2.3219 NMAC. Nitrate as nitrogen shall be analyzed by a 2 molar
14 KCl extract in accordance with the analytical methodology required by Subsection D of 20.6.2.3219 NMAC.

15 Chloride, organic matter, potassium, and sodium adsorption ratio shall be analyzed in accordance with the analytical
16 methodology required by Subsection D of 20.6.2.3219 NMAC.

17 (8) The analytical results and a map showing the fields or subfields as well as the sampling locations
18 within each field/subfield shall be submitted to the department in the quarterly or annual monitoring reports as
19 required by the department.

20 **M.** A log shall be maintained of all additional fertilizer(s) applied to each field or subfield of the land
21 application area. The log shall contain the date of fertilizer application, the type and fertilizer analysis, and the
22 amount of fertilizer applied in pounds per acre to each field or subfield. A copy of the log entries shall be submitted
23 to the department in the quarterly or annual monitoring reports as required by the department.

24 **N.** Land Application Data Sheets shall be completed for each field or subfield in the land application
25 area, which document the crop grown and amount of total nitrogen applied from wastewater, stormwater, manure
26 solids, composted material, irrigation water and other additional fertilizer(s), along with residual soil nitrogen and
27 nitrogen credits from leguminous crops. The Land Application Data Sheet or a statement that land application did
28 not occur shall be submitted to the department in the quarterly or annual monitoring reports as required by the
29 department. The Land Application Data Sheet shall include, at a minimum, the following elements:

30 (1) The total monthly volume, report in acre-feet, of wastewater and stormwater applied to each field
31 or subfield of the land application area, obtained from monthly flow meter readings.

32 (2) The total nitrogen concentration of wastewater and stormwater obtained from the corresponding
33 quarterly analyses.

34 (3) The total monthly volume, reported in tons per acre, of manure solids applied to each field or
35 subfield of the land application area.

36 (4) The total nitrogen content of the manure solids shall be estimated at 25 pounds per tons or
37 determined from analysis of manure solids samples collected in accordance with the approved sampling plan.

1 Analytical results for total Kjeldahl nitrogen and moisture content shall be submitted with the Land Application
2 Data Sheets.

3 (5) The total nitrogen concentration within the irrigation water and the amount of irrigation water
4 applied.

5 (6) The amount of nitrogen reported in pounds per acre from additional fertilizer(s) applied.

6 (7) The amount of residual soil nitrogen and nitrogen from leguminous crops credited to each field or
7 subfield of the land application area.

8
9 **20.6.2.3221 ADDITIONAL MONITORING REQUIREMENTS FOR DAIRY FACILITIES**

10 **DISCHARGING TO AN EVAPORATIVE WASTEWATER DISPOSAL SYSTEM:**

11 **A.** All stormwater transfers made from the stormwater impoundment(s) to the wastewater
12 impoundment(s) for disposal by evaporation shall be measured and recorded. A log shall be maintained indicating the
13 date and location of each stormwater transfer, flow meter readings immediately prior to and after each stormwater
14 transfer, and the calculated total volume of each stormwater transfer reported in gallons and acre-feet. A copy of the
15 log entries including units of measurement shall be submitted to the department in the quarterly or annual
16 monitoring reports as required by the department.

17 **B.** Wastewater grab samples shall be collected from each wastewater or combination
18 wastewater/stormwater impoundment(s) used for disposal by evaporation on a quarterly basis and analyze the
19 samples for nitrate as nitrogen, total Kjeldahl nitrogen, chloride, sulfate and total dissolved solids, and other
20 constituents that may be required by the department, in accordance with the requirements of Subsection D of
21 20.6.2.3219 NMAC. Analytical results and a map showing the wastewater sampling location(s) shall be submitted
22 to the department in the quarterly or annual monitoring reports as required by the department.

23
24 **20.6.2.3222 CONTINGENCY REQUIREMENTS FOR ALL DAIRY FACILITIES**

25 **A.** In the event ground water monitoring indicates that one or more of the ground water standards of
26 Section 20.6.2.3103 NMAC are violated, the following actions shall be taken:

27 (1) A second sample shall be collected in accordance with the requirements of Section 20.6.2.3218
28 NMAC, from the monitoring well(s) within 30 days of the initial sample analysis date to verify the initial results.

29 (2) Analytical results shall be submitted for both the initial and second ground water samples to the
30 department within 30 days of the analysis date of the second ground water sample.

31 (3) In the event analytical results of the second ground water sample verify the exceedance of one or
32 more of the ground water standards of Section 20.6.2.3103 NMAC, within 60 days of the second sample analysis
33 date a corrective action plan and an abatement plan shall be submitted to the department and implemented upon
34 department approval.

35 (a) The corrective action plan shall propose source control measures and a schedule for
36 implementation through completion.

1 (b) The abatement plan shall be completed in accordance with Sections 20.6.2.4000 through
2 20.6.2.4115 NMAC.

3 **B.** In the event that information available to the department indicates that a monitoring well(s)
4 required by the department is not located hydrologically downgradient of the intended discharge location(s) or is not
5 installed in accordance with the requirements of Section 20.6.2.3218 NMAC, a replacement monitoring well(s) shall
6 be installed within 90 days of notification from the department and a survey of the replacement monitoring well(s)
7 shall be performed within 120 days of notification from the department in accordance with the requirements of
8 Section 20.6.2.3218 NMAC. The replacement monitoring well location(s) shall be proposed by the permittee within
9 30 days of notification from the department, in accordance with the requirements of this section, and shall be
10 approved by the department prior to installation. The monitoring well(s) shall be completed in accordance with the
11 requirements of Section 20.6.2.3218 NMAC. A monitoring well completion report shall be developed in accordance
12 with Section 20.6.2.3218 NMAC and submitted to the department within 180 days of notification from the
13 department.

14 **C.** In the event the average daily discharge volume reported as required by Subsection F of
15 20.6.2.3219 NMAC exceeds the maximum daily discharge volume authorized by the discharge permit by more than
16 ten percent for three or more monthly measurement events within a 12-month period, a corrective action plan for
17 reducing the discharge volume or an application for a modified or renewed and modified discharge permit shall be
18 submitted to the department in accordance with Section 20.6.2.3205 NMAC within 60 days of the third exceedance.

19 **D.** In the event the survey or capacity calculations of an existing wastewater, stormwater, or
20 combination wastewater/stormwater impoundment indicates that the impoundment is not capable of meeting the
21 capacity requirements as required in Sections 20.6.2.3212, 20.6.2.3213, or 20.6.2.3214 NMAC, a corrective action
22 plan shall be submitted for department approval within 30 days of submittal of the survey or capacity calculations
23 and implemented upon department approval. The plan may include, but is not limited to, proposals for constructing
24 an additional impoundment, reducing the maximum daily discharge volume, changing wastewater or stormwater
25 management practices, or installing an advanced treatment system, and shall include a schedule for implementation
26 through completion.

27 **E.** In the event that a minimum of two feet of freeboard cannot be maintained in the wastewater or
28 combination wastewater/stormwater impoundment, a corrective action plan shall be submitted for department
29 approval within 30 days of the date of the initial exceedance of the freeboard requirement and implemented upon
30 department approval. The plan may include, but is not limited to, proposals for constructing an additional
31 impoundment, reducing the maximum daily discharge volume, changing wastewater or stormwater management
32 practices, or installing an advanced treatment system, and shall include schedule for implementation through
33 completion.

34 **F.** In the event that damage to the berms or the liner of an impoundment occurs or conditions exist
35 that may comprise the structural integrity of the impoundment, the damage or condition shall be reported to the
36 department within 24 hours of discovery. A corrective action plan describing any actions taken or proposed to be
37 taken to repair the damage or condition shall be submitted to the department within 15 days of the reported

1 discovery. Any proposed corrective action plan shall be implemented within 30 days of approval by the department.
2 In the event that the corrective action plan is not satisfactory to the department, a revised corrective action plan shall
3 be submitted to the department within 15 days of written notification from the department.

4 **G.** In the event of a spill or release that is not authorized under the discharge permit, notifications and
5 corrective actions shall be initiated as required in Section 20.6.2.1203 NMAC. Wastewater or stormwater shall be
6 contained, pumped and transferred to a permitted sump, impoundment, or land application area. Wastewater or
7 stormwater applied to the land application area shall conform to the requirements of Sections 20.6.2.3216 and
8 20.6.2.3220 NMAC. Failed components shall be repaired or replaced within 48 hours from the time of failure or as
9 soon as possible.

10
11 **20.6.2.3223 ADDITIONAL CONTINGENCY REQUIREMENTS FOR DAIRY FACILITIES**
12 **DISCHARGING TO A LAND APPLICATION AREA:**

13 **A.** In the event that reporting indicates that nitrogen has been over-applied to a field(s) or subfield(s)
14 in the land application area, a corrective action plan, including a schedule for implementation through completion,
15 shall be submitted for department approval within 30 days of the violation identified in the monitoring reports.
16 Within 30 days of department approval the corrective action plan shall be initiated and completed in accordance
17 with the approved schedule. The corrective action plan shall propose actions to reduce nitrogen loading to the land
18 application area and perform deep soil nitrogen sampling in each field or subfield of the land application area in
19 accordance with the following procedure:

20 (1) Composite soil samples shall be collected at depths of two, four, six, eight, and 10 feet from three
21 separate soil cores. Composite samples for each depth shall be assembled from the three cores.

22 (2) Composite soil samples shall be analyzed for nitrate as nitrogen and total Kjeldahl nitrogen.
23 Nitrate as nitrogen shall be analyzed by a 2 molar KCl extract in accordance with the analytical methodology
24 required by Subsection D of 20.6.2.3219 NMAC. Total Kjeldahl nitrogen shall be analyzed in accordance with the
25 analytical methodology required by Subsection D of 20.6.2.3219 NMAC.

26 (3) The analytical results and a map showing sampling locations within the fields or subfields shall be
27 submitted to the department in the quarterly or annual monitoring reports as required by the department.

28 (4) In the event the department determines from deep soil sampling that nitrogen has been over-
29 applied to a field(s) or subfield in the land application area, within 30 days of notification from the department deep
30 soil nitrogen sampling shall continue on an annual basis thereafter until notified by the department that such
31 sampling is no longer required.

32 **B.** Upon department review of analytical results from surface or sub-surface soil sampling, and
33 determination that nitrogen may be migrating toward ground water, a corrective action plan shall be submitted to the
34 department within 30 days of notification by the department. The corrective action plan shall address reduction of
35 nitrogen concentrations in soil and include a schedule for implementation through completion. The plan shall also
36 include source control measures, such as a reduction in the amount of wastewater, stormwater, manure solids or
37 other nitrogen sources applied to the land application area, expansion of the land application area, changes in crop

1 rotation or development of a new or revision of an existing nutrient management plan. Within 30 days of
2 department approval the corrective action plan shall be initiated and completed in accordance with the approved
3 schedule.

4
5 **20.6.2.3224 ADDITIONAL CONTINGENCY REQUIREMENTS FOR DAIRY FACILITIES**

6 **DISCHARGING TO AN EVAPORATIVE WASTEWATER DISPOSAL SYSTEM:** In the event that a
7 combination wastewater/stormwater impoundment used for disposal by evaporation does not have free capacity
8 below the two-foot freeboard level to contain the volume of stormwater generated from the production area by a 25-
9 year, 24-hours rainfall event and direct precipitation, a corrective action plan shall be submitted for department
10 approval within seven days of the date of discovery of insufficient free capacity and implemented upon department
11 approval. The plan shall include, but is not limited to, a request for temporary permission to discharge to allow
12 immediate removal and disposal of combined wastewater and stormwater, a proposal for long-term corrective
13 actions which may include constructing an additional impoundment, reducing the maximum daily discharge volume,
14 changing wastewater or stormwater management practices, or installing an advanced treatment system, and a
15 schedule for implementation through completion of required actions.

16
17 **20.6.2.3225 CLOSURE REQUIREMENTS FOR ALL DAIRY FACILITIES**

18 **A.** For permanent closure of a facility the following actions shall be performed:

- 19 (1) The department shall be notified no later than 30 days after discharge has permanently ceased.
20 (2) Installation of all monitoring wells shall be completed in accordance with the requirements of
21 Section 20.6.2.3218 NMAC and as required by the department.
22 (3) All impoundments shall be emptied of wastewater and stormwater within six months of
23 permanently ceasing discharge. Wastewater and stormwater removed from impoundments shall be discharged to the
24 designated land application area, as authorized by the discharge permit. In the event that land application is not
25 authorized by the discharge permit, a disposal plan shall be submitted for department approval and the plan
26 implemented upon department approval.
27 (4) Manure solids shall be removed from impoundments within two years of permanently ceasing
28 discharge. Manure solids shall be applied to the designated land application area, as authorized by the discharge
29 permit. In the event that land application is not authorized by the discharge permit, a disposal plan shall be
30 submitted for department approval and the plan implemented upon department approval.
31 (5) All manure solids and compost shall be removed from the facility and applied to the designated
32 land application area, as authorized by the discharge permit, or transferred offsite for proper disposal within one year
33 of permanently ceasing discharge.
34 (6) Impoundment liner(s) shall be perforated or removed and the impoundment shall be re-graded
35 with clean fill to blend with surface topography to prevent ponding within one year of permanently ceasing
36 discharge.

37 **B.** Following completion and confirmation by the department of the requirements of Subsection A of

1 this section, ground water monitoring shall continue in accordance with Section 20.6.2.3218 NMAC until a
2 minimum of eight consecutive ground water sampling events confirm that the standards of Section 20.6.2.3103
3 NMAC are not exceeded. If monitoring results show that one or more of the standards of Section 20.6.2.3103
4 NMAC is exceeded, the contingency plan shall be implemented as required by Section 20.6.2.3222 NMAC. Upon
5 notification from the department that post-closure ground water monitoring may cease, all monitoring wells shall be
6 abandoned and a report shall be submitted to the department in accordance with Subsection C of this section.

7 **C.** Upon notification from the department, monitoring wells shall be abandoned in accordance with
8 Part 19.27.4 NMAC and the following requirements:

9 (1) The well casing shall be removed and bentonite-cement grout, neat cement grout, or bentonite
10 grout, prepared as specified in this section, shall be placed from the bottom of the borehole to the ground surface
11 using a tremmie pipe.

12 (2) In the event the casing cannot be removed, bentonite-cement grout, neat cement grout, or
13 bentonite grout shall be emplaced in the well using a tremmie pipe from the bottom of the well to the ground
14 surface.

15 (3) A well abandonment report shall be prepared by the permittee and shall provide information
16 equivalent to the plugging record requirements of Part 19.27.4 NMAC. The well abandonment report shall be
17 submitted to the department within 60 days of completion of well plugging activities.

18
19 **20.6.2.3226 ADDITIONAL CLOSURE REQUIREMENTS FOR DAIRY FACILITIES DISCHARGING**
20 **TO A LAND APPLICATION AREA: [RESERVED]**

21
22 **20.6.2.3227 ADDITIONAL CLOSURE REQUIREMENTS FOR DAIRY FACILITIES DISCHARGING**
23 **TO AN EVAPORATIVE WASTEWATER DISPOSAL SYSTEM: [RESERVED]**

24
25 **20.6.2.3228 RECORD RETENTION REQUIREMENTS FOR ALL DAIRY FACILITIES**

26 **A.** A written record shall be retained at the facility of all data and information related to field
27 measurements, sampling, and analysis conducted pursuant to this part and the discharge permit. The following
28 information shall be recorded and shall be made available to the department upon request:

29 (1) The dates, exact place and times of sampling or field measurements;

30 (2) The name and job title of the individuals who performed each sample collection or field
31 measurement;

32 (3) The date of the analysis of each sample;

33 (4) The name and address of the laboratory and the name and job title of the person that performed
34 the analysis of each sample;

35 (5) The analytical technique or method used to analyze each sample or take each field measurement;

36 (6) The results of each analysis or field measurement, including raw data;

37 (7) The results of any split, spiked, duplicate or repeat sample; and

1 (8) A description of the quality assurance and quality control procedures used.

2 **B.** A written record shall be retained at the facility of any spills, seeps, or leaks of effluent, and of
3 leachate or process fluids not authorized by the discharge permit. Records shall be made available to the department
4 upon request.

5 **C.** A written record shall be retained at the facility of the operation, maintenance, and repair of all
6 facilities/equipment used to treat, store or dispose of wastewater, measure flow rates, monitor water quality, or
7 collect other data required by the department. Records shall include repair, replacement or calibration of any
8 monitoring equipment and repair or replacement of any equipment used in the waste or wastewater treatment and
9 disposal system. Records shall be made available to the department upon request.

10 **D.** Records of all monitoring information shall be retained at the facility, including all calibration and
11 maintenance records, copies of all reports required by the department, and the application for the discharge permit.
12 Records shall be retained for a period of at least 10 years from the date of the sample collection, measurement,
13 report or application.

14
15 **20.6.2.3229 CONTINUING EFFECT OF PRIOR ACTIONS DURING TRANSITION; EXCEPTIONS**

16 **A.** A discharge permit issued pursuant to Section 20.6.2.3109 NMAC that has not expired on or
17 before the effective date of Sections 20.6.2.3200 through 20.6.2.3229 NMAC shall remain in effect and enforceable
18 pursuant to the terms and conditions of the discharge permit.

19 **B.** Sections 20.6.2.3204 and 20.6.2.3211 through 20.6.2.3228 NMAC shall apply to any discharge
20 permit issued after the effective date of Sections 20.6.2.3200 through 20.6.2.3229. An application for a new,
21 renewed or modified discharge permit submitted to the department prior to the effective date of Sections 20.6.2.3200
22 to 20.6.2.3229 NMAC, shall be accepted by the department if the application has been deemed administratively
23 complete and the requirements of Subsections D and F of 20.6.2.3108 NMAC have been satisfied. The permittee
24 shall have ninety days from the date of the discharge permit issuance to submit all the necessary information to
25 comply with Sections 20.6.2.3211 through 20.6.2.3228 NMAC, as specified in Section 20.6.2.3205 NMAC. Any
26 timelines specified in Sections 20.6.2.3211 through 20.6.2.3228 NMAC shall be extended by ninety days.

27 **C.** Any facility discharging, capable of recommencing discharging, or that has ceased discharging
28 within the term of its most recent discharge permit shall continue all monitoring and submittal of monitoring reports
29 as prescribed in the most recent discharge permit until the department issues a renewed or renewed and modified
30 discharge permit.

31 **D.** Any draft discharge permit issued by the department pursuant to Section 20.6.2.3109 NMAC but
32 not made final prior to the effective date of Sections 20.6.2.3200 to 20.6.2.3229 NMAC is withdrawn. If any permit
33 fee had been submitted prior to the department's withdrawal of the draft discharge permit, the permit fee shall be
34 applied towards the permit fee required by Section 20.6.2.3204 NMAC.