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WATER QUALITY
CONTROL COMMISSION

STATE OF NEW MEXICO
BEFORE THE WATER QUALITY CONTROL COMMISSION

In the Matter of:	)	
PROPOSED AMENDMENT TO 20.6.2 NMAC (Diary Rules)	)	**No.: WQCC 09-13 (R)**

NOTICE OF PROPOSED LANGUAGE CHANGES

The New Mexico Environment Department ("Department") proposes changes to the language of various provisions of its March 29 version of its proposed dairy rule, found at NMED Rebuttal Attachment 2. The proposed changes are attached. The proposed changes are an attempt to resolve issues raised by the Commission and other parties, and to clarify the intent of the rule.

The Department has discussed these proposed changes with both DIGCE and the Coalition. While they maintain their substantive positions on issues, they do not object to the filing of this notice with the proposed language changes, though such agreement does not signify that the parties are in agreement on all the proposed changes.

1. Section 3205 A: The Department is willing to include a provision requiring a preapplication meeting in Santa Fe. This issue was raised by DIGCE, and the Department is willing to include a provision as shown in the attached language in Section 3205A.

2. Section 3205 B: The Department proposes the attached language change to clarify when the application for a renewal permit is due. The substance is not changed.

3. Section 3205 C: The Department proposes the attached language change to clarify the purpose and content of the form or forms to be developed by the Department for applications. This is in response to concerns raised by DIGCE.

4. Section 3205 G: The Department proposes the attached language to further clarify the meaning of "technical completeness" as used in this paragraph. The Department also proposes to allow an applicant 60 days to submit further technical information if he is notified that the application is not technically complete. The Department formerly was proposing a deadline of 30 days. This is in response to concerns raised by DIGCE.

5. Section 3217 C: The Department proposes the attached language regarding the contents of a Grading and Drainage Report and Plan for purposes of clarification and simplification. This is in response to concerns raised by DIGCE.

6. Section 3217 D: The Department proposes the attached language regarding the applicability of federal CAFO rules to stormwater impoundments. The rule is clarified to state that the Department does not regulate the capacity requirements for stormwater; however a dairy facility is not exempt from any applicable local, state or federal regulation, including federal CAFO regulations (40 CFR 122 and 412). This is in response to concerns raised by DIGCE.

7. Section 3220 A: The Department proposes to reduce the notice period for notice to the Department for placement of livestock at a new dairy facility from 90 days to 30 days. This is in response to concerns raised by DIGCE.

8. Section 3220 H: The Department proposes the attached language change to clarify that it does not enforce federal CAFO regulations.

9. Section 3220 T, U and V: The Department proposes the attached language change to clarify how leachate from manure solids separators, manure and compost storage and silage storage should by managed. This is in response to concerns raised by DIGCE.

10. Section 3220 Z: The Department proposes to modify the languge regarding initial borings to be undertaken by an applicant to determine the depth to groundwater at the facility. The purpose is to reduce costs to the dairy facility.

11. Section 3221 C: The Department proposes the attached language change to clarify the intent of the provision that wastewater and stormwater be uniformly applied to the land application area consistent with the nutrient management plan.

12. Section 3221 F, O, P: The Department proposes to amend this provision such that a particular backflow prevention device, known as a reduced pressure principle backflow prevention assembly can be used in lieu of an air gap. This is in response to concerns raised by DIGCE.

13. Section 3221 G, H, M: The proposed changes to these paragraphs are simply for the purpose of clarification.

14. Section 3223 D(14): This proposed change is to clarify that well sealing shall be done in compliance with state engineer requirements, and also includes a language clarification.

15. Section 3223 M: This proposed change is to allow a dairy facility to employ a third party to conduct downhole monitoring well inspections, rather than waiting for the

Department to inspect and potentially having to remove a downhole pump. The language includes a protocol for such procedures, using a downhole well inspection camera.

16. Section 3224 C: This proposed change is to reduce the frequency of required flow meter readings. This is in response to concerns raised by DIGCE.

17. Section 3226: This proposed change is to reduce the sampling frequency for evaporative wastewater disposal impoundments from quarterly to semi-annually. This is in response to concerns raised by DIGCE.

18. Section 3227: These proposed changes are to clarify that if a dairy believes that groundwater contamination in a monitoring well is from a source other than the dairy, the dairy may seek a variance from the requirement that it submit a corrective action plan and repair or reline an impoundment.

Respectfully submitted,

NEW MEXICO ENVIRONMENT DEPARTMENT
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CERTIFICATE OF SERVICE

I certify that on May 4, 2010, I served this **NOTICE OF PROPOSED LANGUAGE CHANGES**, by electronic mail, to:

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20.6.2.3205 GENERAL APPLICATION REQUIREMENTS FOR ALL DAIRY FACILITIES~~:~~. This section specifies the general requirements for discharge permit applications for all types of dairy facilities.

A. In lieu of ~~Notwithstanding~~ Subsection F of 20.6.2.3106 NMAC, a permittee shall submit an application for renewal of a discharge permit for a dairy facility to the department at least one year before the discharge permit expiration date, unless closure of the facility is approved by the department before that date. ~~Notwithstanding Paragraph (11) of Subsection A of 20.6.2.3107 NMAC, a permittee with a discharge permit that will expire while a dairy facility is in the process of completing permanent closure measures or post-closure monitoring shall submit a renewal application for closure to the department at least one year before the discharge permit expiration date.~~ At least 180 days before the due date for an application for renewal, a permittee may request a pre-application meeting with the department. The pre-application meeting shall be held in Santa Fe, unless otherwise agreed by the department. Requests shall be made in writing and submitted to the department by certified mail. If a permittee requests a pre-application meeting, the department shall contact the permittee to discuss and schedule a date for the pre-application meeting. The department shall respond to the permittee's request in writing by certified mail to confirm the pre-application meeting date. The pre-application meeting shall occur no less than 60 days before the application due date. If the permittee or his representative fails to participate in the scheduled pre-application meeting, the permittee forfeits the opportunity for a pre-application meeting.

B. For a dairy facility that has not been constructed or operated, a permittee shall submit to the department at least one year before the discharge permit expiration date an application for renewal pursuant to Subsection A of this section or ~~may submit~~ a statement ~~to the department at least one year before the discharge permit expiration date~~ certifying that the dairy facility has not been and will not be constructed or operated and that no discharges have occurred or will occur. Upon the department's verification of the certification, the department shall terminate the discharge permit, if necessary, and retire the discharge permit number from use.

C. Instead of the information required by Subsection C of 20.6.2.3106 NMAC, an applicant:

(1) for a new discharge permit, shall provide the information and supporting technical documentation pursuant to this section and Section 20.6.2.3206 NMAC;

(2) for a renewed or modified discharge permit, shall provide the information and supporting technical documentation pursuant to this section and Section 20.6.2.3207 NMAC; or

(3) for a renewed discharge permit for closure, shall provide the information and supporting technical documentation pursuant to this section and Section 20.6.2.3208 NMAC.

D. The department shall create a discharge permit application form ~~specific to~~ for dairy facilities applying for a new discharge permit, for dairy facilities applying for a renewed, modified or renewed and modified discharge permit, and for dairy facilities applying for a discharge permit for closure to collect the information required by this section. The information requested on the form(s) shall be limited to the information required by this section. An applicant shall use the department's form to provide the information required by this section. An application shall consist of the appropriate form and required supporting documentation, regardless of previous submissions. The applicant shall attest to the truth of the information and supporting documentation in the application, and sign the form. The form shall be signed in the presence of a notary and notarized. The applicant

shall provide to the department a hard copy (paper format) of the original signed and notarized completed application form and all supporting documentation. The applicant shall also provide an electronic copy of the original signed and notarized application and all supporting documentation in portable document format (PDF) on a compact disc (CD) or digital versatile disc (DVD).

E. If an applicant filing an application for a new discharge permit does not certify that the dairy facility complies with the setback requirements of Section 20.6.2.3216 NMAC, as required by Subsection D of 20.6.2.3206 NMAC, the department shall reject the application. The department shall provide notice of the rejection to the applicant by certified mail.

F. Within 60 days of the department's receipt of proof of notice pursuant to Subsection D of 20.6.2.3108 NMAC, the department shall review the application for technical completeness. If proof of notice is not submitted to the department pursuant to Subsection D of 20.6.2.3108 NMAC, the department shall notify the applicant by certified mail of the violation and provide 15 days from the date of postal notice for the applicant to submit the proof pursuant to Subsection D of 20.6.2.3108 NMAC. If proof of notice is not submitted to the department following the issuance of a notice of violation, the department may deny the application.

G. For an application to be deemed technically complete, an application shall include the information required by Subsection C of this section. Submittals or supporting documentation that require the certification of persons specified in the dairy rule are deemed technically complete if the documentation is prepared in accordance with the dairy rule and is certified by persons specified in the dairy rule. If the department determines that an application is not technically complete, the department shall provide notice of technical deficiency to the applicant by certified mail within 60 days of receipt of the applicant's proof of notice. The applicant shall have ~~30~~60 days from the date of postal ~~the~~ notice of the technical deficiency correspondence to provide the information required by this section.

(1) If an application is technically complete, the department shall make available a proposed approval of a discharge permit (i.e., draft discharge permit) or denial of a discharge permit application, pursuant to Subsection H of 20.6.2.3108 NMAC.

(2) If an applicant filing an application for a new discharge permit does not provide all information required by this section to the department within ~~30~~60 days of the date of postal ~~the~~ notice of the technical deficiency correspondence, the department shall deny the application. The department shall provide notice of denial to the applicant by certified mail.

(3) If an applicant for a renewed or modified discharge permit does not provide all information required by this section to the department within ~~30~~ 60 days of the date of postal ~~the~~ notice of the technical deficiency correspondence, the department may deny the application or may propose a discharge permit for approval consistent with the requirements of these regulations.

~~(a)~~ If the department denies the application, the department shall provide notice of denial to the applicant by certified mail.

~~(b) If, following an unsatisfied notice of technical deficiency, the department proposes approval of the discharge permit and the secretary approves the discharge permit, the permittee shall submit the~~

~~required information in the notice of technical deficiency within 30 days of the effective date of the discharge permit.~~

H. The department may impose additional conditions on a discharge permit in accordance with Section 74-6-5 NMSA 1978. If the department proposes an additional condition in a discharge permit that is not included in the dairy rules, the department shall include a written explanation of the reason for the additional condition with the copy of the proposed approval sent to the applicant pursuant to Subsection H of 20.6.2.3108 NMAC. Written comments about the additional condition may be submitted to the department during the 30-day comment period provided by Subsection K of 20.6.2.3108 NMAC. A hearing may be requested about the additional condition as provided by Section 20.6.2.3215 NMAC.

~~**I.** With the exception of Subparagraph (a) of Paragraph (3) of Subsection C of 20.6.2.3109 NMAC and provided that the requirements of Section 20.6.2.3205 NMAC are met, the secretary shall approve a discharge permit or deny an application for a discharge permit pursuant to Section 20.6.2.3109 NMAC.~~

I. The secretary shall approve a discharge permit provided that:

(1) the requirements of the dairy rule are met;

(2) the provisions of 20.6.2.3109 NMAC are met, with the exception of Subsection C of 20.6.2.3109 NMAC; and

(3) denial of an application for a discharge permit is not required pursuant to Subsection E of Section 74-6-5 NMSA 1978.

20.6.2.3217 ENGINEERING AND SURVEYING REQUIREMENTS FOR ALL DAIRY FACILITIES:

A. Practice of Engineering: All plans and specifications, supporting design calculations, record drawings, final specifications, final capacity calculations, grading and drainage reports and plans, and other work products requiring the practice of engineering shall bear the seal and signature of a licensed New Mexico professional engineer pursuant to the New Mexico Engineering and Surveying Practice Act, Sections 61-23-1 through 61-23-32 NMSA 1978, and the rules promulgated under that authority.

B. Practice of Surveying: All surveys of wastewater, stormwater, and combination wastewater/stormwater impoundments, monitoring well locations and casing elevations, and other work products requiring the practice of surveying shall bear the seal and signature of a licensed New Mexico professional surveyor pursuant to the New Mexico Engineering and Surveying Practice, Sections 61-23-1 through 61-23-32 NMSA 1978, and the rules promulgated under that authority.

C. Engineering Plans and Specifications Requirements:

(1) **Impoundment Plans and Specifications:** An applicant or permittee proposing or required to construct a new impoundment or to improve an existing impoundment, including relining of an existing impoundment, shall submit detailed and complete construction plans and specifications and supporting design calculations developed pursuant to this section and Section 20.6.2.3220 NMAC. The applicant or permittee proposing or required to construct an impoundment shall document compliance with the requirements of the Dam Safety Bureau of the State Engineer pursuant to Section 72-5-32 NMSA 1978, and rules promulgated under that authority, unless exempt by law from such requirements. The construction plans and specifications for an improvement(s) to an existing impoundment shall address the management of wastewater or stormwater during preparation and construction of the improvements.

(a) Construction plans and specifications proposed by the applicant or permittee shall be submitted to the department with the application for a new, renewed or modified discharge permit.

(b) Construction plans and specifications not proposed by the applicant or permittee but required to achieve compliance with the dairy rules shall be submitted to the department within 90 days of the effective date of the discharge permit.

(2) **Impoundment CQA/CQC:** Construction of a new impoundment or improvement to an existing impoundment shall be done in accordance with a Construction Quality Assurance/Construction Quality Control (CQA/CQC) Plan. A CQA/CQC Plan shall be included as part of the design plans and specifications. The CQA/CQC Plan shall outline the observations and tests to be used to ensure that construction of the impoundment meets, at a minimum, all design criteria, plans and specifications. All testing and evaluation reports shall be signed and sealed by a licensed New Mexico professional engineer experienced in lagoon construction and liner installation. The CQA/CQC Plan shall include, at a minimum, the following elements.

(a) The identity of persons responsible for overseeing the CQA/CQC program. The person responsible for overseeing with the CQA/CQC plan shall be a licensed New Mexico professional

engineer experienced in lagoon construction and liner installation~~, and have at least three years experience in lagoon construction and lining.~~

(b) A discussion of how inspections will be performed.

(c) The location, availability, applicability and calibration of testing equipment and facilities, both field and laboratory.

(d) The procedures for observing and testing the liner material.

(e) The procedures for reviewing inspection test results and laboratory and field sampling test results.

(f) The actions to be taken to replace or repair liner material should deficiencies be identified.

(g) The procedures for seaming synthetic liners.

(h) The reporting procedures for all inspections and test data.

(3) **Impoundment Improvement - Wastewater/Stormwater Management:** An applicant or permittee proposing or required to improve an existing impoundment, including relining of an existing impoundment, shall submit a plan for managing wastewater or stormwater during the improvement as part of the design plans and specifications. The plan for wastewater or stormwater management shall include the following minimum elements and be implemented upon department approval:

(a) a description of how on-going wastewater discharges or stormwater collection will be handled and disposed of during improvement to the impoundment;

(b) a description of how solids and wastewater or stormwater within the impoundment will be removed and disposed of prior to beginning improvement to the impoundment;

(c) a schedule for implementation through completion of the project; and

(d) if the plan proposes temporary use of a location for the discharge of wastewater not authorized by the effective discharge permit, the applicant or permittee shall request temporary permission to discharge from the department.

(4) **Manure Solids Separation Plans and Specifications - New Wastewater System:** An applicant or permittee proposing or required to construct a new manure solids separator as a component of a newly designed wastewater storage or disposal system shall submit construction plans and specifications and supporting design calculations that include the separator, pursuant to this section.

(a) Construction plans and specifications proposed by the applicant or permittee shall be submitted to the department with the application for a new, renewed or modified discharge permit.

(b) Construction plans and specifications not proposed by the applicant or permittee but required to achieve compliance with the dairy rules shall be submitted to the department within 90 days of the effective date of the discharge permit.

(5) **Manure Solids Separation Plans and Specifications - Existing Wastewater System:** An applicant or permittee proposing or required to construct a new manure solids separator as a component of an existing wastewater storage or disposal system shall submit a scaled design schematic and supporting

documentation, including design calculations. The separator shall be designed to accommodate, at a minimum, the maximum daily discharge volume authorized by the discharge permit, and the volume of manure solids associated with the wastewater discharge. Components of the separator that collect, contain or store manure solids prior to removal or land application shall be designed with an impervious material(s) to minimize generation and infiltration of leachate.

(a) A scaled design schematic and supporting documentation for a proposed separator shall be submitted to the department with the application for a new, renewed or modified discharge permit.

(b) A scaled design schematic and supporting documentation for a separator not proposed by the applicant or permittee but required to achieve compliance with the dairy rules shall be submitted to the department within 90 days of the effective date of the discharge permit.

(6) **Grading and Drainage Report and Plan:** An applicant or permittee shall submit with the application for a new, renewed or modified discharge permit, a grading and drainage report and a grading and drainage plan, including supplemental information associated with the plan. The submittal shall include, at a minimum, the following information:

(a) A scaled map showing:

(i) The dairy facility and the property boundaries of the dairy facility;

(ii) All existing and proposed structures at the dairy facility, with the associated finished floor elevations;

(iii) Existing and proposed ground surface contours at two foot vertical intervals;

(iv) All existing and proposed storm-water management structures at the dairy facility including construction materials, size, type, slope, capacity and inlet and invert elevation of the structures, as applicable.

(b) A copy of the relevant FEMA Flood Insurance Rate Map (FIRM) or Flood Boundary and Floodway Map with the dairy facility clearly identified along with all Flood Zones;~~The grading and drainage report shall include, at a minimum, the following information: a description of the drainage concept for the dairy facility;~~

(c) A description of existing drainage conditions at the dairy facility;

(d) A~~a~~ description of the proposed post-development drainage conditions; ~~a description of the calculations performed to support the drainage analysis; and a map prepared from a 7.5 minute quadrangle map showing the dairy facility location and drainage basin influences on drainage flows at the dairy facility from on-site and off-site locations.~~

~~(b) The grading and drainage plan shall include, at a minimum, the following information: north arrow and scale; property boundaries; delineation of off-site watersheds that contribute drainage to the dairy facility; permanent benchmark locations, descriptions and elevations; existing and proposed land contours; spot elevations at key points, grade breaks, critical locations, floors or pads of existing and proposed structures, and inverts of piping associated with the drainage system; identification~~

~~of all existing and proposed on-site structures, including drainage features; identification of internal contributory drainage areas, including roof areas, parking lots, and other disturbed areas; flows in cubic feet/second and flow lines defined by arrows and spot elevations; and details of impoundments, inlets, rundowns, emergency spillways, impoundment outlets, slopes, and all other significant drainage structures with contours, cross-sections and spot elevations.~~

(e) Supplemental information supporting the grading and drainage plan shall be submitted to the department with the plan and shall include, at a minimum, the following information:

(i) All hydrologic and hydraulic calculations for design storm events used;~~calculations for both existing and post-development drainage conditions;~~

(ii) H~~h~~ydraulic calculations demonstrating capacity or adequacy of existing and proposed stormwater impoundments;

(iii) H~~h~~ydraulic calculations demonstrating capacity of existing and proposed conveyance channels to contain and transport runoff to the stormwater impoundment(s); and

(iv) A~~a~~ description of computer software, documents, circulars, manuals, etc. used to develop the hydrologic and hydraulic calculations.

(7) **Flow Metering Plans and Specifications:** An applicant or permittee proposing or required to install a flow meter(s) shall submit documentation to support the selection of the proposed device along with construction plans and specifications detailing the installation or construction of ~~for~~ each device.

(a) Construction plans and specifications proposed by the applicant or permittee shall be submitted to the department with the application for a new, renewed or modified discharge permit.

(b) Construction plans and specifications not proposed by the applicant or permittee but required to achieve compliance with the dairy rules shall be submitted to the department within 90 days of the effective date of the discharge permit.

D. Engineering Design Requirements:

(1) **Impoundment Capacity Requirements:** Impoundments designed to store wastewater prior to discharging to a land application area or to dispose of wastewater by evaporation shall meet the capacity requirements specified in the dairy rule. The dairy rule does not specify capacity requirements for the containment of stormwater. However, the dairy rule does not exempt a dairy facility from other applicable local, state and federal regulations or laws, including the EPA regulatory requirements for Concentrated Animal Feeding Operations pursuant to 40 Code of Federal Regulations, Parts 122 and 412, as amended.

(~~1~~2) **Impoundment Capacities – Wastewater or Wastewater/Stormwater Combination:**

(a) Capacity requirements for dairy facilities discharging to a land application area:

(i) The wastewater impoundments intended to store wastewater prior to discharging to a land application area shall be designed to contain ~~collectively~~ the maximum daily discharge volume authorized by the discharge permit for a minimum period of 60 days to accommodate

periods when land application is not feasible, while preserving two feet of freeboard. This capacity requirement may be satisfied by a single wastewater impoundment or by the collective capacity of multiple impoundments intended to store wastewater or wastewater/stormwater.

(ii) The combination wastewater/stormwater impoundments intended to contain both wastewater and stormwater runoff for storage prior to discharging to a land application area shall be designed to contain ~~collectively~~ the sum of the maximum daily discharge volume authorized by the discharge permit for a minimum period of 60 days to accommodate periods when land application is not feasible~~;~~ and the additional volume intended for the containment of stormwater runoff and direct precipitation~~ as specified by current EPA regulatory requirements for Concentrated Animal Feeding Operations pursuant to 40 Code of Federal Regulations, Parts 122 and 412, as amended~~, while preserving two feet of freeboard. This capacity requirement may be satisfied by a single wastewater impoundment or by the collective capacity of multiple impoundments intended to store wastewater or wastewater/stormwater.

(b) Capacity requirements for dairy facilities discharging to an evaporative wastewater disposal system:

(i) The wastewater impoundments intended to dispose of wastewater by evaporation shall be designed to contain ~~collectively~~ the maximum daily discharge volume authorized by the discharge permit for disposal by evaporation, while preserving two feet of freeboard. This capacity requirement may be satisfied by a single wastewater impoundment or by the collective capacity of multiple impoundments intended to dispose of wastewater by evaporation.

(ii) The combination wastewater/stormwater impoundments intended to dispose of both wastewater and stormwater runoff by evaporation shall be designed ~~to contain collectively~~ for disposal by evaporation, the sum of the maximum daily discharge volume authorized by the discharge permit~~;~~ and the additional volume intended for the containment of stormwater runoff and direct precipitation~~ and stormwater runoff and direct precipitation as specified by current EPA regulatory requirements for Concentrated Animal Feeding Operations pursuant to 40 Code of Federal Regulations, Parts 122 and 412, as amended, for disposal by evaporation~~ while preserving two feet of freeboard. This capacity requirement may be satisfied by a single combination wastewater/stormwater impoundment or by the collective capacity of multiple impoundments intended to dispose of wastewater or wastewater/stormwater by evaporation.

(c) An impoundment designed and used for solids settling shall not be used to satisfy the impoundment capacity requirements of this subsection.

~~(2) **Impoundment Capacity - Stormwater:** Stormwater impoundments intended to contain only stormwater shall be designed to contain stormwater runoff and direct precipitation as specified by current EPA regulatory requirements for Concentrated Animal Feeding Operations pursuant to 40 Code of Federal Regulations, Parts 122 and 412, as amended.~~

(3) **Stormwater Conveyance Channels:** Stormwater conveyance channels shall be designed in accordance with the grading and drainage report and plan required by this section.~~to contain~~

~~and transport stormwater runoff and direct precipitation to stormwater impoundments as specified by current EPA regulatory requirements for Concentrated Animal Feeding Operations pursuant to 40 Code of Federal Regulations, Parts 122 and 412, as amended.~~

(4) **Impoundment Design and Construction - General:** Impoundments required to be synthetically lined ~~Wastewater and combination wastewater/stormwater I~~impoundments~~, and stormwater impoundments required to achieve compliance with the dairy rules,~~ shall meet the following design and construction requirements:

(a) T~~t~~he inside slopes of an impoundment shall be a maximum of three (horizontal) to one (vertical), and a minimum of four (horizontal) to one (vertical);

(b) T~~t~~he outside slopes of an impoundment shall be a maximum of three (horizontal) to one (vertical);

(c) T~~t~~he sub-grade of an impoundment shall be compacted to a minimum of 95 percent of standard proctor density. If the existing material is unsuitable for compaction, a minimum depth of 18 inches of suitable material shall be used as subgrade;

(d) The subgrade of an impoundment shall provide a firm, unyielding surface with no sharp changes or abrupt breaks in grade~~Tthe finished grade of the floor of an~~~~the impoundment shall be as uniform as possible and shall not have surface deviations which vary more than +/- plus or minus 1.5 inches from the finished grade~~; and

(e) T~~t~~he minimum dike width of an impoundment shall be ~~eight~~ 12 feet to allow vehicle traffic for maintenance.

(5) **Impoundment Design and Construction - Liner:** Synthetic impoundment liners ~~All impoundments shall be lined in accordance with this section, unless otherwise specified in the dairy rules. Impoundment liners~~ shall meet the following additional design and construction requirements.

(a) The liner shall be installed with sufficient slack in the liner material to accommodate shrinkage due to temperature changes. Folds in the liner material shall not be present in the completed liner.

(b) The sub-grade shall be free of sharp rocks, vegetation and stubble to a depth of at least six inches below the liner. ~~Liners shall be placed on a sub-grade of sand or fine soil.~~ The surface in contact with the liner shall be smooth to allow for good contact between liner and sub-grade. The surface shall be dry during liner installation. The liner installer shall provide the owner with a subgrade acceptance certificate prior to installing the liner indicating acceptance of the earthwork.

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

(d) The liner panels shall be oriented such that all sidewall seams are vertical.

(e) If practicable, decomposing organic materials shall be removed from areas over which a liner will be installed. If such materials remain, a~~A~~ liner vent system shall be installed~~ if an impoundment is installed over areas of decomposing organic materials.~~

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

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

(h) Manufacturer's installation and field seaming guidelines shall be followed.

(i) Liner seams shall be field tested by the installer and verification of the adequacy of the seams shall be submitted to department along with the record drawings.

(j) Concrete slabs installed on top of a liner for operational purposes shall be completed in accordance with manufacturer and installer recommendations to ensure liner integrity.

(6) **Impoundment Liner – Wastewater or Wastewater/Stormwater Combination:** An applicant or permittee proposing or required to construct a new or to improve an existing wastewater or combination wastewater/stormwater impoundment, shall, at a minimum, utilize a liner meeting the following requirements.

(a) Where the vertical distance between the seasonal high ground water level and the finished grade of the floor of the impoundment is less than or equal to 50 feet as documented through the most recent ground water data obtained from an on-site test boring(s) or monitoring well(s), the impoundment shall, at a minimum, utilize an upper (primary) and lower (secondary) liner. The upper liner material shall be a minimum of 60-mil high density polyethylene (HDPE) or other material having equivalent characteristics with regard to permeability, resistance to degradation by ultraviolet light, compatibility with the liquids anticipated to be collected in the impoundment, tensile strength, and tear and puncture resistance. The lower liner material shall be a minimum of 40-mil HDPE or other material having equivalent characteristics with regard to permeability, compatibility with the liquids anticipated to be collected in the impoundment, tensile strength, and tear and puncture resistance. A leak detection system shall be constructed between the upper and lower liners and shall consist of a drainage layer, filter layer, fluid collection pipes, fluid collection sumps, and fluid removal system.

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

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

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

(iv) A fluid removal system shall be installed to remove fluid from the leak detection system. The fluid removal system shall consist of a sump(s), a dedicated pump(s), an automated pump activation system that activates the pump(s) when a specific fluid level is reached in a sump(s), a totalizing flow meter to measure to measure the volume of leachate pumped from the system, and an automated alarm system that provides warning of pump failure.

(b) Where the vertical distance from the seasonal high ground water level and the finished grade of the floor of the impoundment is greater than 50 feet as documented through the most recent ground water data obtained from an on-site test boring(s) or monitoring well(s), the impoundment shall, at a minimum, utilize a single liner that is at least 60-mil HDPE or other material having equivalent characteristics with regard to permeability, resistance to degradation by ultraviolet light, compatibility with the liquids anticipated to be collected in the impoundment, tensile strength, and tear and puncture resistance.

(7) **Impoundment Liner - Stormwater:** Any applicant or permittee ~~proposing or~~ required to improve an existing stormwater impoundment pursuant to Subsection B of 20.6.2.3227 NMAC shall, at a minimum, utilize a liner that is at least 60-mil HDPE or other material having equivalent characteristics with regard to permeability, resistance to degradation by ultraviolet light, compatibility with the liquids anticipated to be collected in the impoundment, tensile strength, and tear and puncture resistance.

(8) **Separation Between Impoundments and Ground Water:** Impoundments shall not be constructed in a location where the vertical distance between the seasonal high ground water level and the finished grade of the floor of the impoundment is less than or equal to four feet as documented through the most recent ground water data obtained from an on-site test boring(s) or monitoring well(s).

(9) **Impoundment Spillways:** Impoundments intended to contain only wastewater shall not be designed with a spillway.

20.6.2.3220 OPERATIONAL REQUIREMENTS FOR ALL DAIRY FACILITIES:

A. Notice of Presence of Livestock and Wastewater Discharge: A permittee shall provide written notice to the department of the commencement, cessation, or recommencement of wastewater discharge or the placement, removal, or reintroduction of livestock as follows.

(1) **For new dairy facilities.**

(a) **Placement of Livestock.** A permittee shall provide written notice to the department a minimum of ~~90~~ 30 days before the placement of any livestock at the dairy facility. A permittee shall provide written verification to the department of the actual date of placement of any livestock within 30 days of placement.

(b) **Commencement of Wastewater Discharge:** A minimum of ~~90~~ 30 days prior to the estimated initial wastewater discharge date a permittee shall provide written notice to the department indicating the date discharge is proposed to commence. A permittee shall provide written verification to the department of the actual date of discharge commencement within 30 days of commencement.

(2) **For existing dairy facilities:**

(a) **Removal or Reintroduction of Livestock:** A permittee shall provide written notice to the department indicating the date of removal of all livestock from the dairy facility or the date of reintroduction of any livestock at the dairy facility, if all livestock were previously removed, within 30 days of livestock removal or reintroduction.

(b) **Cessation of Wastewater Discharge:** A permittee shall provide written notice to the department indicating the date wastewater discharge ceased at the dairy facility within 30 days of the cessation of discharge.

(c) **Recommencement of Wastewater Discharge:** Written notification shall be submitted to the department a minimum of ~~90~~ 30 days prior to the date wastewater discharge is expected to recommence. A permittee shall provide written notice to the department of the actual date of discharge recommencement within 30 days of recommencement.

H. Stormwater Conveyance~~ and Collection~~: A permittee shall divert stormwater from the corrals and other applicable areas at the dairy facility (i.e., calf pens, alleys, feed storage and mixing, etc.) ~~into the stormwater or combination wastewater/stormwater impoundment(s)~~ in accordance with the grading and drainage plan required by Subsection C of 20.6.2.3217 NMAC~~ and as specified by current EPA regulatory requirements for Concentrated Animal Feeding Operations pursuant to 40 Code of Federal Regulations, Parts 122 and 412, as amended~~. Stormwater shall be conveyed in a manner that ~~Conveyance channels shall be constructed and maintained to~~ minimizes ponding and infiltration of stormwater.

S. Pipe and Fixture Inspection and Maintenance: A permittee shall maintain pipes and fixtures utilized for the conveyance or distribution of wastewater or stormwater at the dairy facility to prevent the unauthorized release of wastewater or stormwater. The permittee shall visually inspect pipes and fixtures on a ~~daily~~ weekly basis for evidence of leaks or failure, and shall maintain written records at the dairy facility of all such inspections including repairs to the pipes and fixtures. Where pipes and fixtures cannot be visually inspected because they are buried, the permittee shall inspect the area directly surrounding the features for evidence of leaks or

failure (e.g., saturated surface soil, surfacing wastewater, etc.). If there is evidence an unauthorized discharge has resulted from damaged or faulty pipe(s) or fixture(s), the permittee shall repair or replace the pipe(s) or fixture(s) within ~~24~~ 72 hours of discovery. The permittee shall report the unauthorized discharge to the department pursuant to Section 20.6.2.1203 NMAC.

T. Leachate Management - Manure Solids Separation System: A permittee shall manage the solids captured by and removed from the manure solids separation system(s) and stored at the dairy facility before removal or land application to minimize generation and infiltration of leachate. ~~Leachate from manure solids removed from the manure solids separation system shall be collected and contained on an impervious surface before disposal.~~ The manure solids removed from the manure solids separation system and leachate generated from those solids shall be collected and contained on an impervious surface before disposal.

U. Leachate Management – Manure and Compost Storage: Unless land application of manure solids and composted materials is authorized by a discharge permit, a permittee shall remove manure solids and composted material from the dairy facility. A permittee shall minimize the generation and infiltration of leachate from stockpiled manure solids and composted material before removal from the dairy facility by diverting stormwater run-on and run-off, and preventing ~~the~~ ponding ~~of water~~ within areas used for manure and compost stockpiling.

V. Leachate Management – Silage Storage: ~~A permittee shall minimize the ponding of leachate from silage storage areas.~~ A permittee shall minimize the generation and infiltration of leachate from silage storage areas and prevent ponding within silage storage areas. Leachate generated from the silage storage areas shall be collected and contained on an impervious surface before disposal.

W. Scaled Map of Dairy Facility: An applicant or permittee shall submit a scaled map of the dairy facility to the department with an application for a new, renewed or modified discharge permit. The map shall be clear and legible, and drawn to a scale such that all necessary information is plainly shown and identified. The map shall show the scale in feet or metric measure, a graphical scale, a north arrow, and the effective date of the map. Documentation identifying the means used to locate the mapped objects (i.e., global positioning system (GPS), land survey, digital map interpolation, etc.) and the relative accuracy of the data (i.e., ~~+/- XX~~ within a specified distance expressed in feet or meters) shall be included with the map. Any object that cannot be directly shown due to its location inside of existing structures, or because it is buried without surface identification, shall be identified on the map in a schematic format and identified as such. The map shall include the following objects:

(1) the overall dairy facility layout (barns, feed storage areas, pens, etc.);
(2) the location of all sumps;
(3) the location of all manure solids separators;
(4) the location of all wastewater, stormwater, and combination impoundments;
(5) the location of all mix tanks;
(6) the location and acreage of each field within the land application area;
(7) the location of all monitoring wells;
(8) the location of all irrigation wells;

(9) the location of all meters measuring wastewater discharges to and from impoundments;

(10) the location of all meters measuring stormwater applied to the land application area;

(11) the location of all fixed pumps for discharge and transfer of wastewater or stormwater;

(12) the location of all wastewater and stormwater distribution pipelines;

(13) the location of each ditch irrigation system, acequia, irrigation canal and drain;

(14) the location of all backflow prevention methods or devices;

(15) all wastewater sampling locations, with the exception of impoundments for disposal by evaporation; and

(16) location of all septic tanks and leachfields.

~~Z. **Determination of Depth-to-Most-Shallow Ground Water and Lithology - Test Boring:** An applicant or permittee for a dairy facility without a monitoring well intersecting most-shallow ground water shall provide to the department the depth-to-most-shallow ground water and a lithologic log determined by one site-specific test boring with the application for a new, renewed or modified discharge permit. The test boring shall be drilled in the area of lowest elevation within the production area. The boring advancement shall cease upon encountering most-shallow ground water. Depth-to-most-shallow ground water shall be measured immediately upon ceasing drilling of the boring and again 24 hours following ceasing drilling. Lithology shall be characterized pursuant to American Society of Testing and Materials (ASTM) Test Method D 2487 or D 2488 or characterized using standard visual geologic or soils descriptions that shall include lithology, grain size, color (Munsell Soil Color Charts may be used), texture, sorting, percent gravel and degree of induration.~~

Z. **Determination of Ground Water Conditions:** An applicant or permittee for a dairy facility without a monitoring well from which depth-to–most-shallow ground water can be measured in accordance with the procedure required by Paragraph (1) of Subsection F of 20.6.2.3223 NMAC shall evaluate ground water conditions by the following methods.

(1) The applicant or permittee shall obtain records from the Office of the State Engineer for all wells on file with the Office of the State Engineer located within one mile of the boundary of the dairy facility. The applicant or permittee shall submit to the department ~~information~~ in tabular format the following information obtained from Office of the State Engineer records: ~~for all wells on file with the Office of the State Engineer located within one mile of the boundary of the dairy facility. The information obtained from well records shall indicate~~ the well identification information; location of each well by latitude/longitude and township, range, and section; use of each well; depth to ground water in each well; and total depth of each well.

(2) If any well record information submitted pursuant to Paragraph (1) of this subsection indicates that depth to ground water is less than 100 feet, or in lieu of the requirement of Paragraph (1) of this subsection, the applicant or permittee shall conduct the following activities.

(i) The applicant or permittee shall drill one site-specific test boring to the depth of most-shallow ground water or a depth of 75~~0~~ feet (measured from the ground surface), whichever is encountered first. The test boring shall be drilled in an area of low elevation within the production area outside of an existing or proposed impoundment.

(ii) The applicant or permittee shall describe the lithology from the ground surface to the completed borehole depth and document the depth of most-shallow ground water or the absence of ground water within 750 feet of the ground surface. If ground water is encountered within 750 feet of the ground surface, the depth of most-shallow ground water shall be measured immediately upon ceasing drilling of the boring and again 24 hours following ceasing drilling. Lithology shall be characterized pursuant to American Society of Testing and Materials (ASTM) Test Method D 2487 or D 2488 or characterized using standard visual geologic or soils descriptions that shall include lithology, grain size, color (Munsell Soil Color Charts may be used), texture, sorting, percent gravel and degree of induration. The lithologic log and most-shallow ground water information shall be submitted to the department with the application for a new, renewed or modified discharge permit.

(iii) Upon completion of ground water measurements, unless the borehole is completed as a monitoring or production well, the borehole shall be immediately abandoned by emplacing neat cement grout, bentonite based plugging material, or other sealing material approved by the state engineer in accordance with Part 19.27.4 NMAC in the borehole from the bottom of the borehole to the ground surface. A written record of borehole abandonment shall be submitted to the department with the application for a new, renewed or modified discharge permit and shall describe the type of grout used and the depth interval sealed with grout. If a monitoring well is constructed in the borehole, the monitoring well shall be constructed in accordance with Subsection D of 20.6.2.3223 NMAC, and a construction log including well record information specified by Part 19.27.4 NMAC shall be submitted to the department with the application for a new, renewed or modified discharge permit.

20.6.2.3221 ADDITIONAL OPERATIONAL REQUIREMENTS FOR DAIRY FACILITIES WITH A LAND APPLICATION AREA:

A. Impoundment Storage Capacity Management – Wastewater and Wastewater/Stormwater Combination: A permittee shall operate and maintain a wastewater or combination wastewater/stormwater impoundment(s) for the purpose of storing wastewater prior to discharging to the land application area. A permittee shall manage wastewater or combination wastewater/stormwater impoundments to maintain the free-liquid capacity and two feet of freeboard required by Subsection D of 20.6.2.3217 NMAC.

B. Prohibition of Irrigation Water Storage in Permitted Impoundments: A permittee shall not introduce irrigation water into any impoundment authorized by a discharge permit for the storage of wastewater or stormwater.

C. Authorized Land Application of Wastewater and Stormwater: A permittee shall apply wastewater and stormwater to fields within the land application area, up to the maximum acreage of irrigated cropland specifically authorized by a discharge permit. Wastewater and stormwater shall be distributed uniformly over the field at the planned rate consistent with the nutrient management plan (NMP);~~applied uniformly evenly over the fields in which application is occurring, and~~ ponding shall be minimized.

D. Irrigation Water Rights – Documentation: An applicant or permittee shall submit documentation of irrigation water rights from the Office of the State Engineer for all fields within the land application area to the department with the application for a new, renewed or modified discharge permit. Land application shall not be authorized unless the documentation demonstrates adequate water rights are held for irrigation to produce and harvest the crops necessary for the removal of nitrogen while the permit is in effect as required in this section.

E. Land Application Area – Fresh Irrigation Water Required: Wastewater shall only be applied to fields within the land application area receiving fresh irrigation water. Fresh irrigation water shall be used as the primary source to meet the water consumptive needs of the crop to support crop production and nutrient removal. Wastewater and stormwater are intended as sources of crop nutrients and shall not be used as a primary source to meet the water consumptive needs of the crop.

F. Wastewater/Irrigation Water Blending: A permittee shall not combine wastewater with irrigation water in an impoundment, ~~or in the fresh irrigation water supply lines.~~ Wastewater may be blended in-line (i.e., fresh irrigation water supply lines) when fresh water irrigation lines are equipped with a reduced pressure principle backflow prevention assembly (RP). Wastewater may also be blended in a mix-tank(s), applied alternately in the same irrigation line which has been physically disconnected from supply wells, or applied in a separate line, as authorized by a discharge permit.

G. Land Application Area – Existing Infrastructure: An applicant or permittee shall submit documentation for the existing infrastructure necessary to transfer, distribute and apply wastewater or stormwater to ~~all~~ fields within the land application area that ~~have previously received~~will receive

wastewater or stormwater to the department with the application for a new, renewed or modified discharge permit. The documentation shall consist of a narrative statement and photographic documentation that confirm the existing land application distribution system including the type(s) and location(s) of the systems, and the method(s) of backflow prevention employed.

H. Land Application Area – New Infrastructure: Before the initial application of wastewater or stormwater to any field within the land application area that has not previously received wastewater or stormwater, an applicant or permittee shall install a land application distribution system to distribute wastewater and stormwater to ~~all~~ those fields. ~~that will be receiving wastewater and stormwater.~~ The land application distribution system shall be utilized to distribute and apply wastewater and stormwater to fields within the land application area to meet the requirements of this section. Before the initial application of wastewater or stormwater to any field within the land application area, an applicant or permittee shall submit documentation confirming installation of the land application distribution system, including the type(s) and location(s) of the system(s), and the method(s) employed for backflow prevention.

I. Flow Metering - Wastewater to Land Application Area: A permittee shall install flow meters to measure the volume of wastewater discharged from the wastewater or combination wastewater/stormwater impoundments to the land application area. The flow meter(s) shall be installed on the discharge line(s) from the wastewater impoundment(s) to the distribution system for the land application area. Meter installation and confirmation of meter installation shall be performed pursuant to Subsection K, L, and N of 20.6.2.3220 NMAC.

J. Flow Metering - Stormwater to Land Application Area: For a dairy facility transferring stormwater from a stormwater impoundment directly to a distribution system for the land application area, a permittee shall install flow meters to measure the volume of stormwater applied directly to the land application area. The flow meter(s) shall be installed on the transfer line(s) from the stormwater impoundment(s) to the distribution system for the land application area. Meter installation and confirmation of meter installation shall be performed pursuant to Subsection K, L, and N of 20.6.2.3220 NMAC.

K. Nutrient Management Plan: Nutrients and other constituents present in wastewater and stormwater shall be applied to irrigated cropland under cultivation in accordance with the requirements of a nutrient management plan (NMP) submitted to the department with the application for a new, renewed, or modified discharge permit. The amount of nitrogen from all combined nitrogen sources, including but not limited to wastewater, stormwater, manure solids, composted material, ~~irritation~~ irrigation water and other additional fertilizer(s), along with residual soil nitrogen and nitrogen credits from leguminous crops, shall be applied to each field within the land application area in accordance with the NMP. The NMP shall be developed through utilization of the natural resources conservation service (NRCS) national comprehensive nutrient management plan development templates as adopted by the New Mexico NRCS ~~New Mexico field office~~ and in accordance with the NRCS ~~nutrient management~~ conservation practice standard for New

Mexico, nutrient management - code 590. ~~The NMP shall contain all components identified in the Natural Resources Conservation Service General Manual Title 190, Part 402, and the Natural Resources Conservation Service Conservation Practice Standard 590 for New Mexico.~~ The NMP shall be developed, signed and dated annually by an individual certified by the American Society of Agronomy as a Certified Crop Advisor (CCA) or Certified Professional Agronomist (CPAg) and by an individual certified by the New Mexico Natural Resources Conservation Service as a Nutrient Management Planner ~~conservation planner comprehensive nutrient management plan~~. Plant material and soil sampling protocols in the NMP shall be, at a minimum, equivalent to the requirements of Subsections I, K, and L of 20.6.2.3225 NMAC. The NMP shall identify the method of crop removal to be employed. The NMP shall be developed for the term of the discharge permit, updated annually, and implemented pursuant to the dairy rules. The permittee shall submit annual updates to the NMP to the department in the monitoring report due by May 1 of each year.

L. Crop Removal – Mechanical or Grazing: A permittee shall remove crops from fields within the land application area by mechanical harvest unless an alternative proposal for the use of grazing is submitted with the application for a new, renewed, or modified discharge permit. If grazing is the method proposed for crop removal, the nutrient management plan (NMP) prepared pursuant to Subsection K of this section shall include a proposal for the use of grazing for crop removal by means of an actively managed rotational grazing system which promotes uniform grazing and waste distribution throughout the field(s) (and pastures within the field). Proposals shall quantify the degree of nitrogen removal expected to be achieved by grazing, and shall provide scientific documentation supporting the estimated nitrogen removal and justification for the selection of input parameters used in calculations or computer modeling. The NMP proposing grazing for crop removal shall be implemented in its entirety. Annual updates to the NMP shall include updates to the grazing plan as well as report actual weight gains, actual nitrogen uptake of the crop, and estimated crop and nutrient removal from the previous season. An NMP which proposes grazing for crop removal shall also include, at a minimum, the following elements:

(1) the length of the grazing season;

(2) the size and number of animals to be grazed;

(3) the estimated weight gain of animals to be grazed, or estimated intake for maintenance or milk production;

(4) the calculations to determine stocking rates, ~~and~~ total acreage needed and residency period;

(5) the plant species used to establish pastures and the pasture renovation practices to be employed;

(6) the yield of plant species grown in each pasture and the forage supplied on a monthly basis; and

(7) the grazing management system employed and a map indicating key features of the system including water tanks, fencing, and pasture layout with numbering system and acreage of each

pasture.

M. Crop Removal - Changes to Method(s): If a permittee proposes to change the method(s) (i.e., mechanical versus grazing) of crop removal on any field within the land application area authorized by the discharge permit, the permittee shall apply to modify the discharge permit. The permittee shall submit an application which includes the proposed change(s) pursuant to Subsection K and L of this section. The permittee shall not implement the changes unless the department issues a modified permit approving the changes.

N. Irrigation Ditches – Inspection and Maintenance: Irrigation ditches used to land apply wastewater or stormwater at a dairy facility shall be concrete-lined with sealed expansion joints. The permittee shall visually inspect the ditch system on a monthly basis to ensure proper maintenance. Any damage to a lined ditch shall be repaired immediately. A log shall be kept on-site documenting the inspection findings and repairs made, and the log shall be made available to the department upon request.

O. Backflow Prevention: A permittee shall protect all water wells used within the land application distribution system from contamination by wastewater or stormwater backflow by installing and maintaining backflow prevention methods or devices. Backflow prevention shall be achieved by a total disconnect (physical air gap separation of at least two times the pipe diameter or complete piping separation when wastewater is being pumped) or by the installation of a reduced pressure principal backflow prevention assembly (RP) between the fresh irrigation water supply and wastewater and stormwater delivery systems.

(1) A permittee for a new dairy facility shall install backflow prevention methods or devices and submit written confirmation of installation to the department before discharging at the dairy facility.

(2) A permittee for an existing dairy facility that lacks backflow protection as required by this subsection shall install backflow prevention methods or devices within 90 days of the effective date of the discharge permit. The permittee shall submit written confirmation of installation to the department within 180 days of the effective date of the discharge permit.

P. Backflow Prevention By Reduced Pressure Principle Backflow Prevention Assembly – Inspection and Maintenance: A permittee shall have each reduced pressure principle backflow prevention assembly (RP) inspected and tested by a certified backflow prevention assembly tester at the time of installation, repair, or relocation, and at least on an annual schedule thereafter. The backflow prevention assembly tester shall have successfully completed a 40-hour backflow prevention course based on the University of Southern California's backflow prevention standards and test procedures, and obtained certification demonstrating completion. A malfunctioning RP device shall be repaired or replaced within 30 days of discovery, and use of all supply lines associated with the RP device shall cease until repair or replacement has been completed. Copies of the inspection and maintenance records and test results for each RP device associated with the backflow prevention program shall be submitted to the department annually in the monitoring reports due by May 1.

~~P~~Q. **Supply Well Protection:** With the exception of monitoring wells, all wells located within the land application area of ~~on~~ a dairy facility shall have a surface pad constructed in accordance with the recommendations of Subsection G of 19.27.4.29 NMAC and a permanent well cap or cover pursuant to Subsection I of 19.27.4.29 NMAC.

20.6.2.3221 ADDITIONAL OPERATIONAL REQUIREMENTS FOR DAIRY FACILITIES WITH A LAND APPLICATION AREA:

A. Impoundment Storage Capacity Management – Wastewater and Wastewater/Stormwater Combination: A permittee shall operate and maintain a wastewater or combination wastewater/stormwater impoundment(s) for the purpose of storing wastewater prior to discharging to the land application area. A permittee shall manage wastewater or combination wastewater/stormwater impoundments to maintain the free-liquid capacity and two feet of freeboard required by Subsection D of 20.6.2.3217 NMAC.

B. Prohibition of Irrigation Water Storage in Permitted Impoundments: A permittee shall not introduce irrigation water into any impoundment authorized by a discharge permit for the storage of wastewater or stormwater.

C. Authorized Land Application of Wastewater and Stormwater: A permittee shall apply wastewater and stormwater to fields within the land application area, up to the maximum acreage of irrigated cropland specifically authorized by a discharge permit. Wastewater and stormwater shall be distributed uniformly over the field at the planned rate consistent with the nutrient management plan (NMP);~~applied uniformly evenly over the fields in which application is occurring, and~~ ponding shall be minimized.

D. Irrigation Water Rights – Documentation: An applicant or permittee shall submit documentation of irrigation water rights from the Office of the State Engineer for all fields within the land application area to the department with the application for a new, renewed or modified discharge permit. Land application shall not be authorized unless the documentation demonstrates adequate water rights are held for irrigation to produce and harvest the crops necessary for the removal of nitrogen while the permit is in effect as required in this section.

E. Land Application Area – Fresh Irrigation Water Required: Wastewater shall only be applied to fields within the land application area receiving fresh irrigation water. Fresh irrigation water shall be used as the primary source to meet the water consumptive needs of the crop to support crop production and nutrient removal. Wastewater and stormwater are intended as sources of crop nutrients and shall not be used as a primary source to meet the water consumptive needs of the crop.

F. Wastewater/Irrigation Water Blending: A permittee shall not combine wastewater with irrigation water in an impoundment. ~~or in the fresh irrigation water supply lines.~~ Wastewater may be blended in-line (i.e., fresh irrigation water supply lines) when fresh water irrigation lines are equipped with a reduced pressure principle backflow prevention assembly (RP). Wastewater may also be blended in a mix-tank(s), applied alternately in the same irrigation line which has been physically disconnected from supply wells, or applied in a separate line, as authorized by a discharge permit.

G. Land Application Area – Existing Infrastructure: An applicant or permittee shall submit documentation for the existing infrastructure necessary to transfer, distribute and apply wastewater or stormwater to ~~all~~ fields within the land application area that ~~have previously received~~will receive

wastewater or stormwater to the department with the application for a new, renewed or modified discharge permit. The documentation shall consist of a narrative statement and photographic documentation that confirm the existing land application distribution system including the type(s) and location(s) of the systems, and the method(s) of backflow prevention employed.

H. Land Application Area – New Infrastructure: Before the initial application of wastewater or stormwater to any field within the land application area that has not previously received wastewater or stormwater, an applicant or permittee shall install a land application distribution system to distribute wastewater and stormwater to ~~all~~ those fields. ~~that will be receiving wastewater and stormwater.~~ The land application distribution system shall be utilized to distribute and apply wastewater and stormwater to fields within the land application area to meet the requirements of this section. Before the initial application of wastewater or stormwater to any field within the land application area, an applicant or permittee shall submit documentation confirming installation of the land application distribution system, including the type(s) and location(s) of the system(s), and the method(s) employed for backflow prevention.

I. Flow Metering - Wastewater to Land Application Area: A permittee shall install flow meters to measure the volume of wastewater discharged from the wastewater or combination wastewater/stormwater impoundments to the land application area. The flow meter(s) shall be installed on the discharge line(s) from the wastewater impoundment(s) to the distribution system for the land application area. Meter installation and confirmation of meter installation shall be performed pursuant to Subsection K, L, and N of 20.6.2.3220 NMAC.

J. Flow Metering - Stormwater to Land Application Area: For a dairy facility transferring stormwater from a stormwater impoundment directly to a distribution system for the land application area, a permittee shall install flow meters to measure the volume of stormwater applied directly to the land application area. The flow meter(s) shall be installed on the transfer line(s) from the stormwater impoundment(s) to the distribution system for the land application area. Meter installation and confirmation of meter installation shall be performed pursuant to Subsection K, L, and N of 20.6.2.3220 NMAC.

K. Nutrient Management Plan: Nutrients and other constituents present in wastewater and stormwater shall be applied to irrigated cropland under cultivation in accordance with the requirements of a nutrient management plan (NMP) submitted to the department with the application for a new, renewed, or modified discharge permit. The amount of nitrogen from all combined nitrogen sources, including but not limited to wastewater, stormwater, manure solids, composted material, ~~irritation~~ irrigation water and other additional fertilizer(s), along with residual soil nitrogen and nitrogen credits from leguminous crops, shall be applied to each field within the land application area in accordance with the NMP. The NMP shall be developed through utilization of the natural resources conservation service (NRCS) national comprehensive nutrient management plan development templates as adopted by the New Mexico NRCS ~~New Mexico field office~~ and in accordance with the NRCS ~~nutrient management~~ conservation practice standard for New

Mexico, nutrient management - code 590. ~~The NMP shall contain all components identified in the Natural Resources Conservation Service General Manual Title 190, Part 402, and the Natural Resources Conservation Service Conservation Practice Standard 590 for New Mexico.~~ The NMP shall be developed, signed and dated annually by an individual certified by the American Society of Agronomy as a Certified Crop Advisor (CCA) or Certified Professional Agronomist (CPAg) and by an individual certified by the New Mexico Natural Resources Conservation Service as a Nutrient Management Planner ~~conservation planner comprehensive nutrient management plan~~. Plant material and soil sampling protocols in the NMP shall be, at a minimum, equivalent to the requirements of Subsections I, K, and L of 20.6.2.3225 NMAC. The NMP shall identify the method of crop removal to be employed. The NMP shall be developed for the term of the discharge permit, updated annually, and implemented pursuant to the dairy rules. The permittee shall submit annual updates to the NMP to the department in the monitoring report due by May 1 of each year.

L. Crop Removal – Mechanical or Grazing: A permittee shall remove crops from fields within the land application area by mechanical harvest unless an alternative proposal for the use of grazing is submitted with the application for a new, renewed, or modified discharge permit. If grazing is the method proposed for crop removal, the nutrient management plan (NMP) prepared pursuant to Subsection K of this section shall include a proposal for the use of grazing for crop removal by means of an actively managed rotational grazing system which promotes uniform grazing and waste distribution throughout the field(s) (and pastures within the field). Proposals shall quantify the degree of nitrogen removal expected to be achieved by grazing, and shall provide scientific documentation supporting the estimated nitrogen removal and justification for the selection of input parameters used in calculations or computer modeling. The NMP proposing grazing for crop removal shall be implemented in its entirety. Annual updates to the NMP shall include updates to the grazing plan as well as report actual weight gains, actual nitrogen uptake of the crop, and estimated crop and nutrient removal from the previous season. An NMP which proposes grazing for crop removal shall also include, at a minimum, the following elements:

(1) the length of the grazing season;

(2) the size and number of animals to be grazed;

(3) the estimated weight gain of animals to be grazed, or estimated intake for maintenance or milk production;

(4) the calculations to determine stocking rates, ~~and~~ total acreage needed and residency period;

(5) the plant species used to establish pastures and the pasture renovation practices to be employed;

(6) the yield of plant species grown in each pasture and the forage supplied on a monthly basis; and

(7) the grazing management system employed and a map indicating key features of the system including water tanks, fencing, and pasture layout with numbering system and acreage of each

pasture.

M. Crop Removal - Changes to Method(s): If a permittee proposes to change the method(s) (i.e., mechanical versus grazing) of crop removal on any field within the land application area authorized by the discharge permit, the permittee shall apply to modify the discharge permit. The permittee shall submit an application which includes the proposed change(s) pursuant to Subsection K and L of this section. The permittee shall not implement the changes unless the department issues a modified permit approving the changes.

N. Irrigation Ditches – Inspection and Maintenance: Irrigation ditches used to land apply wastewater or stormwater at a dairy facility shall be concrete-lined with sealed expansion joints. The permittee shall visually inspect the ditch system on a monthly basis to ensure proper maintenance. Any damage to a lined ditch shall be repaired immediately. A log shall be kept on-site documenting the inspection findings and repairs made, and the log shall be made available to the department upon request.

O. Backflow Prevention: A permittee shall protect all water wells used within the land application distribution system from contamination by wastewater or stormwater backflow by installing and maintaining backflow prevention methods or devices. Backflow prevention shall be achieved by a total disconnect (physical air gap separation of at least two times the pipe diameter or complete piping separation when wastewater is being pumped) or by the installation of a reduced pressure principal backflow prevention assembly (RP) between the fresh irrigation water supply and wastewater and stormwater delivery systems.

(1) A permittee for a new dairy facility shall install backflow prevention methods or devices and submit written confirmation of installation to the department before discharging at the dairy facility.

(2) A permittee for an existing dairy facility that lacks backflow protection as required by this subsection shall install backflow prevention methods or devices within 90 days of the effective date of the discharge permit. The permittee shall submit written confirmation of installation to the department within 180 days of the effective date of the discharge permit.

P. Backflow Prevention By Reduced Pressure Principle Backflow Prevention Assembly – Inspection and Maintenance: A permittee shall have each reduced pressure principle backflow prevention assembly (RP) inspected and tested by a certified backflow prevention assembly tester at the time of installation, repair, or relocation, and at least on an annual schedule thereafter. The backflow prevention assembly tester shall have successfully completed a 40-hour backflow prevention course based on the University of Southern California's backflow prevention standards and test procedures, and obtained certification demonstrating completion. A malfunctioning RP device shall be repaired or replaced within 30 days of discovery, and use of all supply lines associated with the RP device shall cease until repair or replacement has been completed. Copies of the inspection and maintenance records and test results for each RP device associated with the backflow prevention program shall be submitted to the department annually in the monitoring reports due by May 1.

~~P~~Q. **Supply Well Protection:** With the exception of monitoring wells, all wells located within the land application area of ~~on~~ a dairy facility shall have a surface pad constructed in accordance with the recommendations of Subsection G of 19.27.4.29 NMAC and a permanent well cap or cover pursuant to Subsection I of 19.27.4.29 NMAC.

20.6.2.3223 GROUND WATER MONITORING REQUIREMENTS FOR ALL DAIRY FACILITIES:

D. Monitoring Wells – Construction and Completion: A permittee shall construct monitoring wells pursuant to Part 19.27.4 NMAC and the following requirements.

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

(2) The well driller shall employ drilling methods that allow for accurate determinations of water table locations. All drill bits, drill rods, and down-hole tools shall be thoroughly cleaned immediately before drilling. The bore hole diameter shall allow a minimum annular space of two inches between the outer circumference of the well materials (casing or screen) and the bore hole wall to allow for the emplacement of sand and sealant.

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

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

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

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

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

(8) A 20-foot section (maximum) of continuous well screen shall be installed across the water table. Screen shall consist of continuous-slot, machine slotted, or other manufactured Schedule 40 (or heavier) PVC or stainless steel. Screens created by cutting slots into solid casing with saws or other tools shall not be used. The screen material selected for use shall be compatible with the anticipated

chemistry of the ground water and appropriate for the contaminants of interest at the dairy facility. The screen slot size shall be selected to retain 90 percent of the filter pack.

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

(b) Requests for a 30-foot section of continuous well screen shall be submitted to the department in the application for a new, renewed or modified discharge permit.

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

(10) The bottom of the screen shall be installed no more than 15 feet below the water table, or no more than 25 feet below the water table when additional screen length is authorized by a discharge permit. The top of the well screen shall be positioned not less than five feet above the water table. The well screen slots shall be appropriately sized for the formation materials.

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

(12) A filter pack shall be installed around the screen by filling the annular space from the bottom of the screen to two feet above the top of the screen with clean silica sand. The filter pack shall be properly sized to exclude the entrance of fine sand, silt, and clay from the formation into the monitoring well. For wells deeper than 30 feet, the sand shall be emplaced by a tremmie pipe. The well shall be surged or bailed to settle the filter pack and additional sand added, if necessary, before the bentonite seal is emplaced.

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

(14) The annular space above the bentonite seal shall be sealed with ~~a bentonite-cement grout (five lbs. of powdered bentonite, 94 lbs. of Portland cement, and six and a half to eight and a half gallons of clean water), neat~~ cement grout ~~(94 lbs. of Portland cement and five to six gallons of clean water),~~ or bentonite-based sealing material ~~grout (20 percent solids, created by mixing 50 lbs. of bentonite grout with 24 gallons of clean water)~~acceptable to the state engineer in accordance with Part 19.27.4 NMAC. ~~Emplacement of the annular space seal shall be performed by using a tremmie pipe (flow by~~

~~gravity or pumping through the pipe).~~ A tremmie pipe shall be used to emplace the annular space seal (flow by gravity or pumping through the pipe) if the total depth of the well is greater than 20 feet from the land surface. Annular space seals shall extend from the top of the bentonite seal to the ground surface (for wells completed above grade) or to a level three to six inches below the top of casing (for wells completed below grade).

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

M. Monitoring Well Inspection: The department may perform downhole inspections of all monitoring wells. At least 60 days before the inspection, the department shall provide written notice to the permittee by certified mail stating the inspection date and identifying the monitoring wells to be inspected; the 60 day notification period shall start upon the date of postal notice. At least 48 hours before the department's inspection, the permittee shall remove all existing dedicated pumps to allow adequate settling time of sediment agitated from pump removal. If a permittee decides to install a dedicated pump in a monitoring well, the permittee shall notify the department so that the department may have the opportunity to perform a downhole well inspection before pump installation. Alternatively, a permittee may employ a third party to perform downhole monitoring well inspections, provided the department is given at least 60 days written notice by certified mail so that a department representative may be on-site to observe the inspection.

(1) The third party shall make a video recording of the monitoring well inspection using a downhole camera and perform the inspection in accordance with the following requirements.

(a) Depth-to-most-shallow ground water shall be obtained from the well using an electronic water level indicator pursuant to Subsection F of 20.6.2.3223 NMAC, prior to inspection with a downhole camera. Care shall be taken when obtaining this measurement so as to not disturb sediments in the well.

(b) If ground water sample collection is planned during the inspection event, the downhole camera shall be used to inspect a monitoring well prior to sampling the well.

(c) Prior to well inspection with a downhole camera, at the top of the well casing, the totalizing reading on the downhole camera shall be zeroed, or a value other than zero shall be recorded as an initial reading.

(d) All measurements and totalizing readings (with the exception of depth-to-most-shallow ground water obtained pursuant to Subsection F of 20.6.2.3223 NMAC) shall be obtained to the nearest 0.1 feet. Downhole cameras that utilize a measurement system other than 0.1-foot increments are authorized for use; however the permittee shall report the direct measurement/reading obtained and the calculated conversion in 0.1 feet on the written log.

(e) All measurements and totalizing readings shall be obtained at the top of the well casing.

(f) The downhole camera shall be lowered into the monitoring well at a consistent speed that allows for clear video capture and does not disturb sediments in the well.

(g) Lowering of the downhole camera shall be paused long enough to clearly identify totalizing readings at the following points: depth-to-most-shallow ground water; depth of the top of the screened interval; depth of the bottom of screened interval; and the bottom of the well.

(2) The permittee shall submit written and video monitoring well camera logs for every monitoring well viewed with a downhole camera, along with a copy of an up-to-date facility map showing the location and identification of each monitoring well. The permittee shall submit the logs to the department within 60 days following the date of the well inspection.

(a) The written monitoring well camera log shall include the following general information: name of the dairy facility; discharge permit number; permittee's name; monitoring well identification; date and time of the monitoring well camera inspection; location of the monitoring well relative to a source or facility landmark; camera manufacturer and model; names of camera operator and any technical assistants; diameter of the casing (in inches); and a description of the physical condition of the well's concrete pad, shroud, casing and screened interval. The written log shall include measurements of distance from top of the well casing to the surface of the concrete pad; height from ground surface to the top of the concrete pad; and depth-to-most-shallow ground water measured using an electronic water level indicator pursuant to Subsection F of 20.6.2.3223 NMAC. The written log shall also include totalizing readings obtained from the downhole camera including the initial reading at the top of the well casing; depth-to-most-shallow ground water using the borehole camera; depth of the top of the screened interval; depth of the bottom of screened interval; and the bottom of the well (total depth). The length of the screened interval shall be calculated by subtracting the depth of the top of the screened interval from the depth of the bottom of screened interval and recorded on the log.

(b) The video monitoring well camera log shall display the name of the dairy facility; discharge permit number; permittee's name; monitoring well identification; date and time of the monitoring well camera inspection; and the totalizing readings required by Subparagraph (g) of Paragraph (1) of this subsection. The permittee shall submit the video to the department in MPEG (Motion Picture Experts Group) video format on a compact disc (CD) or digital versatile disc (DVD).

20.6.2.3224 MONITORING REQUIREMENTS FOR ALL DAIRY FACILITIES:

C. Wastewater Volume Measurement and Reporting: A permittee shall measure the ~~daily~~ volume of all wastewater discharged to the wastewater impoundment(s) using flow meters. Meter readings shall be recorded at intervals not to exceed seven days. The average daily discharge volume for each recording interval shall be calculated by dividing the difference between the meter readings by the number of days between meter readings. The permittee shall provide~~include daily~~ the meter readings including the date, time and units of each measurement, and calculations for the average daily volumes of wastewater discharged to the wastewater impoundments, reported in gallons per day, in the quarterly monitoring reports submitted to the department.

20.6.2.3226 ADDITIONAL MONITORING REQUIREMENTS FOR DAIRY FACILITIES DISCHARGING TO AN EVAPORATIVE WASTEWATER DISPOSAL SYSTEM: Wastewater to be Evaporated – Sampling and Reporting: A permittee shall collect a composite wastewater sample on a ~~quarterly~~ semi-annual (once every 6 months) basis from each wastewater or combination wastewater/stormwater impoundment used for disposal by evaporation. The composite sample from each impoundment shall consist of a minimum of six sub-samples collected around the entire perimeter of each impoundment and thoroughly mixed. Samples shall be analyzed for nitrate as nitrogen, total Kjeldahl nitrogen, chloride, ~~sulfate~~ total sulfur and total dissolved solids pursuant to Subsection B of 20.6.2.3224 NMAC. A permittee shall submit the analytical results to the department in the ~~quarterly~~ monitoring reports due by May 1 and November 1.

20.6.2.3227 CONTINGENCY REQUIREMENTS FOR ALL DAIRY FACILITIES:

A. Exceedance of Ground Water Standards – All Monitoring Wells Except Impoundment Monitoring Wells ~~Any Monitoring Well~~: If the constituent concentration in a ground water sample and in any subsequent ground water sample collected from the same monitoring well intended to monitor a contamination source ~~indicate a water contaminant concentration that both~~ other than an impoundment exceeds one or more of the ground water standards of Section 20.6.2.3103 NMAC and exceeds the concentration of such ~~contaminant(s)~~ constituent(s) in a ground water sample collected from the upgradient monitoring well, then the permittee shall take the following actions. For the purpose of this subsection, ground water samples obtained from the source monitoring well and the upgradient monitoring well that are used for comparison of constituent concentrations shall be collected within two days of each other. In the event ground water quality data for the upgradient monitoring well are not submitted by the permittee, the ground water standards of Section 20.6.2.3103 NMAC shall be the applicable standard used to determine if the requirements of this subsection must be met.

~~(1) For a monitoring well associated with an impoundment: Within 90 days of the subsequent sample analysis date, the permittee shall submit and initiate implementation of a corrective action plan pursuant to Subsection B of this section.~~

(~~2~~1) ~~For a monitoring well not associated with an impoundment:~~ A corrective action plan shall be submitted ~~W~~within ~~90~~ 120 days of the subsequent sample analysis date unless a petition for variance is filed in accordance with paragraph (2) of this subsection. ~~, the permittee may investigate potential sources of contamination that may have caused a standard(s) to be exceeded and shall submit a corrective action plan to the department.~~ The corrective action plan shall describe ~~the results of the investigation of potential sources of the exceedance, describe~~ any repairs made to address the cause of the exceedance, and propose source control measures and a schedule for implementation~~through completion of source control measures~~. The implementation schedule shall include a schedule of all proposed corrective action activities and the date that corrective action will be completed. The department shall approve or disapprove the corrective action plan within 30 days of receipt. Within 30 days of ~~department approval~~ the date of postal notice of the department's approval of the corrective action plan, the permittee shall initiate implementation of the ~~corrective action~~ plan. If the department does not approve the corrective action plan, the department shall notify the permittee of the deficiencies by certified mail. The permittee shall submit a revised corrective action plan to the department within 30 days of the date of postal notice of the notice of deficiency. The department shall approve or disapprove the corrective action plan within 30 days of receipt. If the department does not approve the revised corrective action plan, or if the permittee fails to submit a revised plan as required by this subsection, the department may pursue enforcement actions authorized by Section 74-6-10 NMSA 1978.

(~~3~~2) The permittee may investigate potential sources of contamination that may have caused a standard(s) to be exceeded. If such an investigation indicates that the source of the contamination is not the source intended to be monitored by the well, the permittee may petition within 120 days of the

subsequent sample analysis date for a variance from the requirements of this section in accordance with 20.6.2.1210 NMAC. It is the permittee's burden to prove any claim that the source of the contamination is not the source intended to be monitored by the well. If the petition is denied the permitee shall submit a corrective action plan meeting the requirements of paragraph (1) of this subsection within 60 days of the denial.

(3) ~~If ground water monitoring shows that one or more standards of Section 20.6.2.3103 NMAC continue to be exceeded at least 180 days after the subsequent sample analysis date, t~~The permittee may be ~~shall~~ required to submit an abatement plan proposal pursuant to Section 20.6.2.4106 NMAC within 60 ~~240~~ days of written notice from the department ~~the subsequent sample analysis date~~. Abatement shall be performed pursuant to Sections 20.6.2.4101, 20.6.2.4103, 20.6.2.4104, and 20.6.2.4106 through 20.6.2.4115 NMAC.

B. Exceedance of Ground Water Standards – Impoundment Monitoring Well: If the constituent concentration in a ground water sample and in any subsequent ground water sample collected from a monitoring well intended to monitor an impoundment(s) exceeds one or more of the ground water standards of Section 20.6.2.3103 NMAC and exceeds the concentration of such constituent(s) in a ground water sample collected from the upgradient monitoring well, then the permittee shall enact one of the following measures. For the purpose of this subsection, ground water samples obtained from the impoundment monitoring well and the upgradient monitoring well that are used for comparison of constituent concentrations shall be collected within two days of each other. In the event ground water quality data for the upgradient monitoring well are not submitted by the permittee, the ground water standard(s) of Section 20.6.2.3103 shall be the applicable standard(s) used to determine if the requirements of this subsection must be met.

(1) **Pre-Dairy Rule Liner Not Composed of 40/30-mil HDPE (minimum) or Equivalent:** For impoundments utilizing a primary liner installed prior to the effective date of the dairy rules and composed of a material that is not, at a minimum, 40-mil unreinforced HDPE, 30-mil reinforced HDPE, (or other material having equivalent characteristics with regard to permeability, resistance to degradation by ultraviolet light, compatibility with the liquids anticipated to be collected in the impoundment, tensile strength, and tear and puncture resistance), the following actions shall be taken.

(a) A corrective action plan shall be submitted within ~~90~~ 120 days of the subsequent sample analysis date unless a petition for variance is filed in accordance with subparagraph (c) of this paragraph ~~and shall include the following items~~. The corrective action plan shall describe any repairs or changes in practices made to address the cause of the exceedance, and propose source control measures and a schedule for implementation. The implementation schedule shall include a schedule of all proposed corrective action activities and the date that corrective action will be completed. The department shall approve or disapprove the corrective action plan within 30 days of receipt. If the corrective action plan proposes actions to correct deficiencies with the liner, the proposed actions shall include the following items.

(i) A proposal for reconstruction and relining of an existing impoundment, or construction and lining of a new impoundment. Reconstruction or new construction shall be completed pursuant to Section 20.6.2.3217 NMAC within one year of the subsequent sample analysis date. In the event a new impoundment is constructed, the existing impoundment shall be permanently closed pursuant to Section 20.6.2.3230 NMAC.

(ii) Reconstruction or construction plans and specifications for the impoundment shall be completed pursuant to Section 20.6.2.3217 NMAC.

(b) Within 30 days of the date of postal notice of the department's approval of the corrective action plan, the permitee shall initiate implementation of the plan. If the department does not approve the corrective action plan, the department shall notify the permittee of the deficiencies by certified mail. The permittee shall submit a revised correction action plan to the department within 30 days of the date of postal notice of the notice of deficiency. The department shall approve or disapprove the revised corrective action plan within 30 days of receipt. If the department does not approve the revised corrective action plan, or if the permittee fails to submit a revised plan as required by this subsection, the department may pursue enforcement actions authorized by Section 74-6-10 NMSA 1978. ~~The permittee shall submit an abatement plan proposal pursuant to Section 20.6.2.4106 NMAC within 90 days of the subsequent sample analysis date. Abatement shall be performed pursuant to Sections 20.6.2.4101, 20.6.2.4103, 20.6.2.4104, and 20.6.2.4106 through 20.6.2.4115 NMAC.~~

(c) The permittee may investigate potential sources of contamination that may have caused a standard(s) to be exceeded. If such an investigation indicates that the source of the contamination is not the impoundment intended to be monitored by the well, the permittee may petition within 120 days of the subsequent sample analysis date for a variance from the requirements of this section in accordance with 20.6.2.1210 NMAC. It is the permittee's burden to prove any claim that the source of the contamination is not the impoundment intended to be monitored by the well. If the variance is denied the permitee shall submit a corrective action plan meeting the requirements of subparagraph (a) of this paragraph within 60 days of the denial.

(d) The permittee may be required to submit an abatement plan proposal pursuant to Section 20.6.2.4106 NMAC within 60 days of written notice from the department. Abatement shall be performed pursuant to Sections 20.6.2.4101, 20.6.2.4103, 20.6.2.4104, and 20.6.2.4106 through 20.6.2.4115 NMAC.

(2) **Dairy Rule Liner or Pre-Dairy Rule Liner Composed of 40/30-mil (minimum) HDPE or Equivalent:** For impoundments utilizing a primary liner installed after the effective date of the dairy rules and composed of a material that is, at a minimum, 60-mil HDPE (or other material having equivalent characteristics with regard to permeability, resistance to degradation by ultraviolet light, compatibility with the liquids anticipated to be collected in the impoundment, tensile strength, and tear and puncture resistance), or impoundments utilizing a primary liner installed prior to the effective date of the dairy rules and composed of a material that is, at a minimum, 40-mil unreinforced HDPE, 30-mil reinforced

HDPE, (or other material having equivalent characteristics with regard to permeability, resistance to degradation by ultraviolet light, compatibility with the liquids anticipated to be collected in the impoundment, tensile strength, and tear and puncture resistance), the following actions shall be taken.

(a) **Initial Liner:** For impoundments where the existing liner is the initial liner installed, the following actions shall be taken.

(i) A corrective action plan shall be submitted within 120~~90~~ days of the subsequent sample analysis date unless a petition for variance is filed in accordance with item (iii) of this subparagraph. The corrective action plan shall describe any repairs or changes in practices made to address the cause of the exceedance, and propose source control measures and a schedule for implementation. The implementation schedule shall include a schedule of all proposed corrective action activities and the date that corrective action will be completed. The department shall approve or disapprove the corrective action plan within 30 days of receipt. If the corrective action plan proposes actions to correct deficiencies with the liner, the proposed actions shall include repair or replacement of the existing liner, or construction and lining of a new impoundment. If ~~include a proposal for the repair of the existing~~ liner ~~pursuant to Section 20.6.2.3217 NMAC, if~~ repair is practicable, ~~R~~repairs shall be made pursuant to Section 20.6.2.3217 NMAC or using a material that is equivalent to the existing liner with respect to material thickness and composition. Repairs shall be completed within 180 days of the subsequent sample analysis date. If repair is not practicable, the corrective action plan shall propose reconstruction and relining of the impoundment pursuant to Section 20.6.2.3217 NMAC or construction and lining of a new impoundment pursuant to Section 20.6.2.3217 NMAC within one year of the subsequent sample analysis date. Reconstruction or construction plans and specifications for the impoundment shall be completed pursuant to Section 20.6.2.3217 NMAC and submitted with the corrective action plan. If a new impoundment is constructed the existing impoundment shall be closed pursuant to Section 20.6.2.3230 NMAC.

~~(ii) In the event a new impoundment is constructed, the existing impoundment shall be closed pursuant to Section 20.6.2.3230 NMAC.~~

(iii) Within 30 days of the date of postal notice of the department's approval of the corrective action plan, the permittee shall initiate implementation of the plan. If the department does not approve the corrective action plan, the department shall notify the permittee of the deficiencies by certified mail. The permittee shall submit a revised corrective action plan to the department within 30 days of the date of postal notice of the notice of deficiency. The department shall approve or disapprove the revised corrective action plan within 30 days of receipt. If the department does not approve the revised corrective action plan, or if the permittee fails to submit a revised plan as required by this subsection, the department may pursue enforcement actions authorized by Section 74-6-10 NMSA 1978. ~~The permittee shall submit an abatement plan proposal pursuant to Section 20.6.2.4106 NMAC within 90 days of the subsequent sample analysis date. Abatement shall be performed pursuant to Sections 20.6.2.4101, 20.6.2.4103, 20.6.2.4104, and 20.6.2.4106 through 20.6.2.4115 NMAC.~~

(iii) The permittee may investigate potential sources of contamination that may have caused a standard(s) to be exceeded. If such an investigation indicates that the source of the contamination is not the impoundment intended to be monitored by the well, the permittee may petition within 120 days of the subsequent sample analysis date for a variance from the requirements of this section in accordance with 20.6.2.1210 NMAC. It is the permittee's burden to prove any claim that the source of the contamination is not the impoundment intended to be monitored by the well. If the variance is denied the permitee shall submit a corrective action plan meeting the requirements of item (i) of this subparagraph within 60 days of the denial.

(iv) The permittee may be required to submit an abatement plan proposal pursuant to Section 20.6.2.4106 NMAC within 60 days of written notification from the department. Abatement shall be performed pursuant to Sections 20.6.2.4101, 20.6.2.4103, 20.6.2.4104, and 20.6.2.4106 through 20.6.2.4115 NMAC.

(b) **Replacement Liner:** If source control measures have been previously implemented such that the existing primary liner replaced a previously installed liner in an impoundment and ground water standard(s) of Section 20.6.2.3103 NMAC continue to be exceeded, such impoundments are authorized to continue to receive wastewater or stormwater pursuant to the following requirements.

(i) The permittee may be required to submit a~~An~~ abatement plan proposal ~~shall be prepared~~ pursuant to Section 20.6.2.4106 NMAC within 60 days of written notice from the department if ~~in the event~~ abatement has not been previously implemented. ~~The abatement plan proposal shall be submitted within 90 days of the subsequent sample analysis date.~~ Abatement shall be performed pursuant to Sections 20.6.2.4101, 20.6.2.4103, 20.6.2.4104, and 20.6.2.4106 through 20.6.2.4115 NMAC.

(ii) ~~Should~~ If the results of abatement activities indicate ~~determine~~ that the replacement liner does ~~is~~ not successfully control~~ling~~ the source of contamination, the department may modify the discharge permit pursuant to Subsection E of 20.6.2.3109 NMAC and include additional conditions pursuant to Subsection H of 20.6.2.3205 NMAC. The additional conditions shall address, but are not limited to, further source control measures. The requirements of 20.6.2.3215 NMAC shall apply to hearing requests on the proposed additional discharge permit conditions.

~~**B. Exceedance of Ground Water Standards - Impoundment Monitoring Well:** If the constituent concentration in a ground water sample and in any subsequent ground water sample collected from a monitoring well intended to monitor an impoundment(s) exceeds one or more of the ground water standards of Section 20.6.2.3103 NMAC and exceeds the concentration of such constituent(s) in a ground water sample collected from the upgradient monitoring well, then within 90 days of the subsequent sample analysis date the permittee shall submit a corrective action plan proposing one or more of the following measures.~~

~~(1) For impoundments with a primary liner composed of material other than that required by Subsection D of 20.6.2.3217 NMAC, the corrective action plan shall include the following.~~

~~(a) A proposal for reconstruction and lining of an existing impoundment, or construction and lining of a new impoundment. Reconstruction or new construction shall be completed pursuant to Section 20.6.2.3217 NMAC within one year of the subsequent sample analysis date. In the event a new impoundment is constructed, the existing impoundment shall be permanently closed pursuant to Section 20.6.2.3230 NMAC.~~

~~(b) Construction plans and specifications for the impoundment shall be completed pursuant to Section 20.6.2.3217 NMAC.~~

~~(2) For impoundments with a primary liner composed of material consistent with that required by Subsection D of 20.6.2.3217 NMAC, the corrective action plan shall include the following:~~

~~(a) A proposal for the repair of the existing liner consistent with Section 20.6.2.3217 NMAC, if repair is practicable. Repairs shall be completed within 180 days of the subsequent sample analysis date. If repair is not practicable, the corrective action plan shall propose to replace the liner pursuant to Section 20.6.2.3217 NMAC or to construct a new lined impoundment pursuant to Section 20.6.2.3217 NMAC within one year of the subsequent sample analysis date. If a new impoundment is constructed, the existing impoundment shall be closed pursuant to Section 20.6.2.3230 NMAC.~~

~~(b) Construction plans and specifications for the proposal shall be completed pursuant to Section 20.6.2.3217 NMAC.~~

C. Monitoring Well Replacement: If information available to the department indicates that a monitoring well(s) required by Section 20.6.2.3223 NMAC is not located hydrologically downgradient of the contamination source it is intended monitor, is not completed pursuant to Section 20.6.2.3223 NMAC or contains insufficient water to effectively monitor ground water quality, a permittee shall install a replacement monitoring well(s). The replacement monitoring well(s) shall be installed within 120 days of the date of postal notice of notification from the department and a survey of the replacement monitoring well(s) shall be performed within 150 days of the date of postal notice of notification from the department. The replacement monitoring well(s) shall be located, installed, completed, surveyed and sampled pursuant to Section 20.6.2.3223 NMAC. The permittee shall develop a monitoring well completion report pursuant to Subsection J of 20.6.2.3223 NMAC and submit it to the department within 180 days of the date of postal notice of notification from the department.

D. Exceedances of Permitted Maximum Daily Discharge Volume: If the daily discharge volume reported pursuant to Subsection C of 20.6.2.3224 NMAC exceeds the maximum daily discharge volume authorized by the discharge permit by more than ten percent for any 30 daily measurements within any 90 consecutive days, the permittee shall complete and submit within 60 days of the thirtieth exceedance: a corrective action plan for reducing the discharge volume; or an application for a modified or renewed and modified discharge permit pursuant to Section 20.6.2.3205 NMAC. Within 30 days of department approval, the permittee shall initiate implementation of the corrective action plan.

E. Insufficient Impoundment Capacity: If a survey, capacity calculations, or settled solids thickness measurements, indicate an existing impoundment is not capable of meeting the capacity

requirements required by Subsection D of 20.6.2.3217 NMAC, then within 90 days of the effective date of the discharge permit the permittee shall submit a corrective action plan for department approval. The plan may include, but is not limited to, proposals for constructing an additional impoundment, reducing the ~~maximum daily~~ discharge volume, removing accumulated solids, changing wastewater or stormwater management practices, or installing an advanced treatment system. The corrective action plan shall include a schedule for implementation through completion of corrective actions. The corrective action plan schedule shall propose completion not to exceed one year from the submittal date of the initial corrective action plan. Within 30 days of the date of postal notice of the department's approval of the corrective action plan, the permittee shall initiate implementation of the ~~corrective action~~ plan. Should the corrective action plan include removal of accumulated solids, solids shall be removed from the impoundment in a manner that is protective of the impoundment liner. The plan shall include the method of removal, and locations and methods for storage and disposal of the solids-slurry. If the plan proposes land application of the solids-slurry, the plan must also include the analytical results of total Kjeldahl nitrogen and chloride obtained from a representative sample of the solids-slurry to be applied.

F. Inability to Preserve Required Freeboard: If a minimum of two feet of freeboard cannot be preserved in the wastewater impoundment, the permittee shall submit a corrective action plan to the department for approval. The corrective action plan shall be submitted within 30 days of the date of the initial exceedance of the freeboard requirement. The plan may include, but is not limited to, proposals for constructing an additional impoundment, reducing the maximum daily discharge volume, changing wastewater management practices, or installing an advanced wastewater treatment system. The corrective action plan shall include actions to be immediately implemented to regain and maintain a minimum of two feet of freeboard until permanent corrective actions have been completed. The corrective action plan shall include a schedule for implementation through completion of corrective actions. The corrective action plan schedule shall propose completion not to exceed one year from the submittal date of the initial corrective action plan. Within 30 days of the date of postal notice of the department's approval of the corrective action plan, the permittee shall initiate implementation of the ~~corrective action~~ plan.

G. Impoundment – Structural Integrity Compromised: Within 24 hours of discovery, a permittee shall report to the department, any damage to the berms or the liner of an impoundment or any condition that exists that may compromise the structural integrity of the impoundment. Within 15 days of the reported discovery, the permittee shall submit to the department a corrective action plan describing any actions taken or proposed to be taken to repair the damage or condition. Within 30 days of receipt, the department shall respond to the proposed corrective action plan. Repairs to the impoundment liner or berms shall be completed pursuant to Section 20.6.2.3217 NMAC. The corrective action plan shall include a schedule for implementation through completion of corrective actions. The corrective action plan schedule shall propose completion not to exceed one year from the submittal date of the initial corrective action plan. The schedule of corrective actions shall be commensurate to the magnitude and scope of the

activities to be completed. Within 30 days of the date of postal notice of the department's approval of the corrective action plan, the permittee shall initiate implementation of the ~~corrective action~~ plan.

H. Impoundments Utilizing Primary and Secondary Liners - Primary Liner Leakage: Within 30 days of the date of discovering that the leakage rate of the leak detection system is increasing or that the functioning automated pump system is unable to keep the interstitial space between the liners free of fluids, the permittee shall submit a corrective action plan for department approval. The corrective action plan shall include a schedule for implementation through completion of corrective actions. The corrective action plan schedule shall propose completion not to exceed one year from the submittal date of the initial corrective action plan. 30 days of the date of postal notice of the department's approval of the corrective action plan, the permittee shall initiate implementation of the ~~corrective action~~ plan.

I. Unauthorized Discharge - Reporting and Correction: In the event of a spill or release that is not authorized by the discharge permit, the permittee shall notify the department and take corrective actions pursuant to Section 20.6.2.1203 NMAC. Wastewater or stormwater shall be contained and pumped to a permitted sump, impoundment, or land application area pursuant to the dairy rules. Wastewater or stormwater applied to the land application area shall conform to the requirements of Sections 20.6.2.3221 and 20.6.2.3225 NMAC. The permittee shall repair or replace failed components within 48 hours from the time of failure or as soon as possible.