

DOCKET NUMBER 2009-0590-AGR

APPLICATION BY GERBEN §
LEYENDEKKER / §
LEYENDEKKER DAIRY FOR §
TPDES PERMIT NO. WQ0003259000 §

BEFORE THE
TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY
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EXECUTIVE DIRECTOR'S RESPONSE TO HEARING REQUEST

I. Introduction

The Executive Director (ED) of the Texas Commission on Environmental Quality (TCEQ or Commission) files this Response to Hearing Request on the application by Gerben Leyendekker / Leyendekker Dairy (Applicant) for a major amendment and conversion to Texas Pollutant Discharge Elimination System (TPDES) Permit Number WQ0003259000.

A contested case hearing request was received from the Bosque River Coalition represented by Lloyd Gosselink Rochelle & Townsend, P.C. (Coalition).

Attached for Commission consideration are the following:

- Attachment A - Satellite Map of Area
- Attachment B - Fact Sheet and Executive Director's Preliminary Decision
- Attachment C - Draft Permit
- Attachment D - Executive Director's Response to Public Comments (RTC)
- Attachment E - Compliance History
- Attachment F - Texas Secretary of State, Bosque River Coalition Incorporation Documents

II. Description Of The Facility

The Applicant has applied to the TCEQ for a major amendment and conversion to a TPDES individual permit for a Concentrated Animal Feeding Operation (CAFO) from its state registration no. WQ0003259000 to authorize the expansion of an existing dairy cattle facility from 700 head to a maximum capacity of 999 head, all milking cows.

The facility is located on the south side of County Road 261 approximately 3 miles east of its intersection with Farm-to-Market Road 219 in Erath County, Texas. The facility is located in the drainage area of the North Bosque River in Segment No. 1226 of the Brazos River Basin.

III. Procedural Background

The application was received on May 1, 2008, and declared administratively complete on June 27, 2008. The Notice of Receipt of Application and Intent to Obtain a Water Quality Permit (NORI) was published in the *Stephenville Empire Tribune* on July 14, 2008. The alternative language NORI was published in the *Tex-Mex Noticias* on July 29, 2008. The ED completed the technical review of the application and prepared a draft permit. The Notice of Application and Preliminary Decision for a Water Quality Permit (NAPD) was published in the *Stephenville Empire Tribune* on October 23, 2008. The alternative language NAPD was published in the *Tex-Mex Noticias* on October 23, 2008 and the public comment period ended on November 24, 2008. The ED filed his Response to Comments on March 18, 2009. This application is subject to the procedural requirements adopted pursuant to House Bill 801 (76th Legislature, 1999).

IV. The Evaluation Process for Hearing Requests

House Bill 801 established statutory procedures for public participation in certain environmental permitting proceedings. For those applications declared administratively complete on or after September 1, 1999, it established new procedures for providing public notice and public comment, and for the commission's consideration of hearing requests. The application was declared administratively complete on September 14, 2006 and therefore is subject to the HB 801 requirements. The Commission implemented HB 801 by adopting procedural rules in Title 30 of the Texas Administrative Code (30 TAC) Chapters 39, 50, and 55.

A. Responses to Requests

"The executive director, the public interest counsel, and the applicant may submit written responses to [hearing] requests" See 30 TAC Section (§) 55.209(d).

According to 30 TAC § 55.209(e), responses to hearing requests must specifically address:

- (1) whether the requestor is an affected person;
- (2) which issues raised in the hearing request are disputed;
- (3) whether the dispute involves questions of fact or of law;
- (4) whether the issues were raised during the public comment period;
- (5) whether the hearing request is based on issues raised solely in a public comment withdrawn by the commenter in writing by filing a withdrawal letter with the chief clerk prior to the filing of the Executive Director's Response to Comment;
- (6) whether the issues are relevant and material to the decision on the application; and
- (7) a maximum expected duration for the contested case hearing.

B. Hearing Request Requirements

In order for the Commission to consider a hearing request, the Commission must first determine whether the request meets certain requirements. As noted in 30 TAC § 55.201(c): "A request for a

contested case hearing by an affected person must be in writing, must be filed with the chief clerk within the time provided . . . and may not be based on an issue that was raised solely in a public comment withdrawn by the commenter in writing by filing a withdrawal letter with the chief clerk prior to the filing of the Executive Director's Response to Comment."

According to 30 TAC § 55.201(d), a hearing request must substantially comply with the following:

- (1) give the name, address, daytime telephone number, and where possible, fax number of the person who files the request. If the request is made by a group or association, the request must identify one person by name, address, daytime telephone number, and where possible, fax number, who shall be responsible for receiving all official communications and documents for the group;
- (2) identify the person's personal justiciable interest affected by the application, including a brief, but specific, written statement explaining in plain language the requestor's location and distance relative to the proposed facility or activity that is the subject of the application and how and why the requestor believes he or she will be adversely affected by the proposed facility or activity in a manner not common to members of the general public;
- (3) request a contested case hearing;
- (4) list all relevant and material disputed issues of fact that were raised during the public comment period and that are the basis of the hearing request. To facilitate the commission's determination of the number and scope of issues to be referred to hearing, the requestor should, to the extent possible, specify any of the executive director's responses to comments that the requestor disputes and the factual basis of the dispute and list any disputed issues of law or policy; and
- (5) provide any other information specified in the public notice of application.

C. Requirement that Requestor be an "Affected Person"

In order to grant a contested case hearing, the Commission must determine that a requestor is an "affected person." The factors to consider in making this determination are found in 30 TAC § 55.203 and are as follows:

- (a) For any application, an affected person is one who has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application. An interest common to members of the general public does not qualify as a personal justiciable interest.
- (b) Governmental entities, including local governments and public agencies with authority under state law over issues raised by the application may be considered affected persons.
- (c) In determining whether a person is an affected person, all factors shall be considered, including, but not limited to, the following:

- (1) whether the interest claimed is one protected by the law under which the application will be considered;
- (2) distance restrictions or other limitations imposed by law on the affected interest;
- (3) whether a reasonable relationship exists between the interest claimed and the activity regulated;
- (4) likely impact of the regulated activity on the health and safety of the person, and on the use of property of the person;
- (5) likely impact of the regulated activity on use of the impacted natural resource by the person; and
- (6) for governmental entities, their statutory authority over or interest in the issues relevant to the application.

D. Additional Requirements if Requestor is a Group or Association

A group or association may request a contested case hearing only if the group or association meets all of the following requirements found in 30 TAC § 55.205(a):

- (1) one or more members of the group or association would otherwise have standing to request a hearing in their own right;
- (2) the interests the group or association seeks to protect are germane to the organization's purpose; and
- (3) neither the claim asserted nor the relief requested requires the participation of the individual members in the case.

E. Referral to the State Office of Administrative Hearings

30 TAC § 50.115(b) details how the Commission refers a matter to the State Office of Administrative Hearings: "When the commission grants a request for a contested case hearing, the commission shall issue an order specifying the number and scope of the issues to be referred to SOAH for a hearing." 30 TAC § 50.115(c) further states: "The commission may not refer an issue to SOAH for a contested case hearing unless the commission determines that the issue: (1) involves a disputed question of fact; (2) was raised during the public comment period; and (3) is relevant and material to the decision on the application."

V. Evaluation of Hearing Requests

A. Whether the Requestors Complied With 30 TAC §§ 55.201(c) and (d).

The Coalition submitted a timely written CCH request that included relevant contact information and raised disputed issues. The ED concludes that the CCH request substantially complies with the requirements of 30 TAC § 55.201.

B. History of the Bosque River Coalition

The ED notes that the City of Waco has previously sought to get affected person status to challenge Bosque dairy applications in various CCH proceedings. On January 30, 2008 in the matter of Jewel Alt and Oene Keuning dba O-Kee Dairy, 2007-1496-AGR (WQ0004108000) and on September 24, 2008 in the matter of Peter Henry Schouten and Nova Darlene Schouten dba P&L Dairy, 2008-0569-AGR (WQ0003675000), the Commission considered whether the City of Waco was an affected person in relation to those particular Bosque Dairies and found that they were not and denied Waco's CCH requests. Waco subsequently appealed the decision of the Commission by filing suit in district court in both of these cases.¹ After a hearing, the trial judge in the first lawsuit regarding O-Kee Dairy issued a ruling on November 24, 2008 upholding the Commission's denial of Waco's CCH request. Waco subsequently filed notice of appeal of the decision on December 3, 2008.

On December 5, 2008, the "Bosque River Alliance" filed organizational documents with the Texas Secretary of State. On December 31, 2008, a Certificate of Correction was filed correcting the organization name to the "Bosque River Coalition." The filing listed three board members; two of those board members are current City of Waco officials: Larry Groth, Waco City Manager, and Wiley Stem, Assistant Waco City Manager. *See Attachment F.*

In this case, public comments were filed by Lloyd Gosselink on behalf of the City of Waco, but for purposes of this CCH request, Lloyd Gosselink filed the request on behalf of the Bosque River Coalition. While not prohibited by the rules from forming an organization to specifically protest TCEQ permits, this organization appears to be a deliberate attempt to circumvent Commission rulings that denied affected person status to the City of Waco in regards to the Bosque dairies.

C. Whether the Coalition Meets the Requirements of an Affected Person

The Coalition states that it is a Texas non-profit corporation represented by Martin Rochelle and Lauren Kalisek of Lloyd Gosselink Rochelle & Townsend, P.C. The Coalition states that it was formed for the purpose of furthering the protection and enhancement of water quality in the Bosque River watershed; an interest germane to the organization's specific purpose. The Coalition states that neither the claim asserted nor the relief requested requires the participation of the named Coalition members in this case.

Additionally, to meet the association requirements in 30 TAC § 55.205(a)(1) the Coalition identified three persons or entities as members that it claimed would be affected by this permit action: Claude Kilpatrick, Torrey Moncrief, and The Ranch at Hico, LLC (The Ranch).

The ED created a GIS map (Attachment A) using the information provided by the Coalition on their map about the location of their members. Attachment A identifies the closest point of the dairy to

¹ *Waco v. TCEQ*, Cause No. D-1-GV-08-000405, regarding the permit application of Jewel Alt and Oene Keuning dba O-Kee Dairy, WQ0004108000 and *Waco v. TCEQ*, Cause No. D-1-GV-08-002822, regarding the permit application of Peter Henry Schouten and Nova Darlene Schouten dba P&L Dairy, WQ0003675000.

the closest point to Gilmore Creek to the nearest part of the identified properties. Therefore, the noted distances are not necessarily reflective of the route a discharge from the facility would take in the event of a discharge.

1. Claude Kilpatrick

The Coalition states that Mr. Kilpatrick owns over 100 acres along Gilmore Creek, approximately two miles from the Applicant and provides a map documenting the location of the property relative to the dairy operation. The Coalition also notes that he uses the property as a ranch and maintains cattle and horses, as well as, his family using the creek for fishing and recreation.

The ED's GIS map locates Mr. Kilpatrick at a minimum distance of 2.71 miles from the closest point of the dairy facility in relation to Gilmore Creek to the closest point from Mr. Kilpatrick's property adjacent to Gilmore Creek. That distance was computed by adding the .27 miles distance from northeastern tip of the dairy facility to Gilmore Creek plus the 2.44 downstream miles to the western boundary of Mr. Kilpatrick's property where it intersects Gilmore Creek. The distance to the RCSs at the dairy is approximately an additional mile from the property boundary used to measure the minimum distance between the dairy and the requestors.

The ED considered the factors at 30 TAC § 55.203 to determine whether Mr. Kilpatrick was an affected person. Mr. Kilpatrick's interest in using the creek at his property is an interest that is protected by the law under which the application is being considered and there is a reasonable relationship between the interest claimed and the activity regulated. However, Mr. Kilpatrick does not have a personal justiciable interest distinguishable from that of the general public that would be affected by this application since the permit does not authorize discharges into water in the state under normal operating conditions.

The dairy will not be authorized to discharge except in the event of a 25-year, 10-day storm event. The new pond sizing required by the draft permit is approximately 60% larger than required by the previous CAFO rules. Previously, retention control structures (RCSs) were designed to contain a 25-year, 24-hour storm event. In rainfall amounts, the increase in this area of the state is from a 7.4 inch rainfall event to a 12.0 inch rainfall. Rainfall events of a 12.0 inch magnitude should be very infrequent and in such an event, a discharge from the RCSs may still not occur.

Additionally, runoff from CAFO land management units (LMUs) where waste is land applied at agronomic rates and using the required management practices meets the definition of agricultural runoff in the Clean Water Act and is exempt from regulation under that legislation. *See* 33 U.S.C. § 1362(14).

Therefore, the activities conducted at the facility are not expected to affect the health and safety of Mr. Kilpatrick due to the distance from the facility to his property. His property is located approximately 2.71 miles downstream from the facility and the RCSs at the facility are located approximately 3 miles from his property. Mr. Kilpatrick does not have a personal justiciable interest that would be affected by this application. His interest is similar to that of the general public.

The ED recommends finding Mr. Kilpatrick would not have standing in his own right as an affected person.

2. Torrey Moncrief

The Coalition states that Mr. Moncrief owns over 400 acres along Gilmore Creek, but gives no further information regarding how operation of the dairy will impact his use of his property. The Coalition states Mr. Moncrief's property is located approximately 1.5 miles from the dairy and provides a map documenting the location of the property relative to the dairy operation.

The ED's GIS map place Mr. Moncrief at minimum 2.06 miles from the closest point of the dairy facility in relation to Gilmore Creek to the closest point from Mr. Moncrief's property adjacent to Gilmore Creek. That distance was computed by adding the .27 miles distance from the northeastern tip of the dairy facility to Gilmore Creek plus the 1.89 downstream miles to the southeastern edge of Mr. Moncrief's property where it intersects Gilmore Creek. The distance to the RCSs at the dairy is approximately an additional mile from the property boundary used to measure the minimum distance between the dairy and the requestors.

The ED considered the factors at 30 TAC § 55.203 to determine whether Mr. Moncrief was an affected person. Mr. Moncrief's interest in using the creek at his property is an interest that is protected by the law under which the application is being considered and there is a reasonable relationship between the interest claimed and the activity regulated. However, Mr. Moncrief does not have a personal justiciable interest distinguishable from that of the general public that would be affected by this application since the permit does not authorize discharges into water in the state under normal operating conditions.

The dairy will not be authorized to discharge except in the event of a 25-year, 10-day storm event. The new pond sizing required by the draft permit is approximately 60% larger than required by the previous CAFO rules. Previously, RCSs were designed to contain a 25-year, 24-hour storm event. In rainfall amounts, the increase in this area of the state is from a 7.4 inch rainfall event to a 12.0 inch rainfall. Rainfall events of a 12.0 inch magnitude should be very infrequent and in such an event, a discharge from the RCSs may still not occur.

Additionally, runoff from CAFO LMUs where waste is land applied at agronomic rates and using the required management practices meets the definition of agricultural runoff in the Clean Water Act and is exempt from regulation under that legislation. *See* 33 U.S.C. § 1362(14).

Therefore, due to the distance of the property downstream, approximately 2.06 miles from the facility, it is unlikely that the dairy would impact the health and safety of Mr. Moncrief. Any claimed health impacts by Moncrief would be similar to that of the general public. The same factors also dictate that the impact of the facility to Mr. Moncrief's use of his property is similar to other members of the general public.

The ED recommends finding Mr. Montcrief would not have standing in his own right as an affected person.

3. The Ranch at Hico, LLC (The Ranch)

The Coalition states that the Ranch owns over 1,500 acres along Gilmore Creek, approximately 1.7 miles from the dairy and provides a map documenting the location of the property relative to the dairy operation. The Coalition states that The Ranch uses the property as a cattle ranch and retreat for religious organizations, including the use of Gilmore Creek and Gilmore Creek Reservoir for boating, fishing, swimming, tubing, and stock watering. The Coalition states that the reservoir has been “negatively impacted by discharges” from the dairy, but provide no details.

The ED’s GIS map place the Ranch at minimum 2.27 miles from the closest point of the dairy facility in relation to Gilmore Creek to the closest point from the Ranch’s property adjacent to Gilmore Creek. That distance was computed by adding the .27 miles distance from northeastern tip of the dairy facility to Gilmore Creek plus 2.05 miles downstream to the western corner of the Ranch’s property where it intersects Gilmore Creek. The distance to the RCSs at the dairy is approximately an additional mile from the property boundary used to measure the minimum distance between the dairy and the requestors.

The ED considered the factors at 30 TAC § 55.203 to determine whether the Ranch was an affected person. The Ranch’s interest in using the creek is an interest that is protected by the law under which the application is being considered and there is a reasonable relationship between the interest claimed and the activity regulated. However, the Ranch does not have a personal justiciable interest distinguishable from that of the general public that would be affected by this application since the permit does not authorize discharges into water in the state under normal operating conditions.

The dairy will not be authorized to discharge except in the event of a 25-year, 10-day storm event. The new pond sizing required by the draft permit is approximately 60% larger than required by the previous CAFO rules. Previously, RCSs were designed to contain a 25-year, 24-hour storm event. In rainfall amounts, the increase in this area of the state is from a 7.4 inch rainfall event to a 12.0 inch rainfall. Rainfall events of a 12.0 inch magnitude should be very infrequent and in such an event, a discharge from the RCSs may still not occur.

Additionally, runoff from CAFO LMUs where waste is land applied at agronomic rates and using the required management practices meets the definition of agricultural runoff in the Clean Water Act and is exempt from regulation under that legislation. *See* 33 U.S.C. § 1362(14).

Therefore, due to the distance of the Ranch’s property downstream, approximately 2.27 miles from the facility, the chance of an impact of the dairy on the health and safety of persons residing at or using the Ranch are similar to that of other members of the general public. The same factors also dictate that the impact of the facility on the use of the Ranch’s property by its residents is similar to other members of the general public.

The ED recommends finding that the Ranch would not have standing in his own right as an affected person.

The ED recommends finding the Coalition does not meet the association requirements of 30 TAC § 55.205(a)(1) because none of the members identified in the hearing request would otherwise have standing to request a hearing in their own right.

D. Whether Issues Raised Are Referable to State Office of Administrative Hearings (SOAH) for a Contested Case Hearing.

The ED also analyzed the issues raised in accordance with the regulatory criteria and provides the following recommendations regarding whether the issues are referable to SOAH.

All of the issues discussed below were raised during the public comment period. None of the issues were withdrawn. All identified issues in the response are considered disputed, unless otherwise noted.

In their CCH request, the Coalition offers characterizations of contested issues and notes the corresponding RTC comment associated with each one. However, the issues as characterized by the Coalition are often overbroad to the extent that they bring in issues not raised during the comment period. In the interest of framing the issues in the way that they were raised during the comment period by the City of Waco, the ED simply refers to the RTC comment numbers noted in the CCH request and frames the issues as raised in the original comment letter. The CCH request by the Coalition states that issues #1-22 and #24-41 are disputed, so the ED addresses each of these issues in his characterization of the issues.

1. Whether the compaction testing specifications are in compliance with the CAFO rule requirements. (RTC #14)

30 TAC § 321.36(e)(3) and Section VII.A.3(b) of the draft permit requires that the RCS be designed and constructed in accordance with the technical standards developed by the National Resources Conservation Service (NRCS), American Society of Agricultural Engineers (ASABE), American Society of Civil Engineers (ASCE), or American Society of Testing Materials (ASTM) in effect at the time of construction. Waco requested additional compaction testing requirements be added to the draft permit. Whether the draft permit complies with the applicable compaction testing standards is an issue of fact. If the draft permit is out of compliance with those standards, it would be relevant and material to a decision on the permit application. The ED recommends referring this issue to SOAH if the CCH request is granted.

2. Whether the draft permit requirements for sampling of wastewater and manure are in compliance with the CAFO rule requirements. (RTC #20)

Whether the draft permit complies with the sampling and monitoring requirements at 30 TAC § 321.36(g)(3) is a question of fact. If the draft permit fails to attain consistency with the CAFO rules

relating to sampling, such information would be relevant and material to a decision on the permit application. The ED recommends referring this issue to SOAH if the CCH request is granted.

3. Whether the Applicant will meet the buffer zone requirements at 30 TAC § 321.38(b) for well #8 with respect to LMU #4. (RTC #25)

As noted in the RTC, the Applicant identified in Figure 1.3 and Figure 5.3 (Rev 02/03/09) that well #8 has a buffer of 150 feet around it. Section VII.A.7(a) of the draft permit also prohibits locating a new RCS, holding pen, or LMU within 500 feet of a public water supply well, 150 feet of a private water supply well, or within 100 feet of a water well used exclusively for agricultural irrigation. However, this is an issue of fact and if the Coalition can show that well #8 will not be buffered so as to meet the rule requirements at 30 TAC § 321.38(b) that information would be relevant and material to a decision on the application. The ED recommends referring this issue to SOAH if the CCH request is granted.

4. Whether the draft permit is consistent with NRCS Code 590 as required by 30 TAC § 321.42(i)(5)(A) with regards to the approximate locations of soil samples and time of year sampling will be conducted. (RTC #30)

This is an issue of fact. If it can be shown that in regards to the approximate locations of soil samples and time of year sampling will be conducted as reflected in the draft permit are not consistent with NRCS Code 590 that information would be relevant and material to a decision on the application. The ED recommends referring this issue to SOAH if the CCH request is granted.

5. Whether the Applicant should be required to produce an RCS Management Plan prior to the permit being issued. (RTC #1 and #2)

As a matter of law, the CAFO rules at 30 TAC § 321.42(g) and the draft permit require that the Applicant implement an RCS management plan and maintain a copy in the pollution prevention plan (PPP). TCEQ rules do not require review of RCS management plans prior to issuing the permit. This requirement to have a RCS management plan is being implemented through issuance of the permit. *See* 30 TAC § 321.42(a). Until the actual expansion and modification of the RCS system is completed and volumes certified, which takes place after the permit is issued, the RCS management plan cannot be completed and implemented. Therefore, the fact that the Applicant has not produced an RCS management plan prior to permit issuance is not relevant and material to a decision on the application. The ED recommends not referring this issue to SOAH if the CCH request is granted.

6. Whether the draft permit should be amended to identify slurry storage areas. (RTC #3)

As a matter of law, TCEQ CAFO rules do not require a permit amendment to construct slurry storage areas. Section X.E. of the draft permit requires that any storage of slurry be in the drainage area of the RCSs. The site map identified a manure storage area within the drainage area of RCS #1. This area can be used for storage of slurry. Therefore, whether there are additional slurry storage areas at this time is not relevant and material to a decision on the application. The ED recommends not

referring this issue to SOAH if the CCH request is granted.

7. Whether the draft permit should contain a provision prohibiting discharges from the calf barn located outside the drainage area of the RCS. (RTC #4)

As a matter of law, because the calf barn is located outside the drainage area of the RCS, any discharge from the calf barn would be an unauthorized discharge. Therefore, whether the permit contains a permit provision prohibiting discharges from the calf barn is not material to a decision on the application, since such discharges would be unauthorized in either event. The ED recommends not referring this issue to SOAH.

8. Whether the draft permit should contain a permit provision requiring berms or ditches to route runoff around the manure storage piles. (RCS #5)

When runoff encounters the manure storage piles it will either be diverted around the pile by the height of the pile itself or run over or through the pile. In any case, the runoff will be directed into the RCS and settling basins. Therefore, whether the permit contains provisions to re-route the manure around the manure storage piles is not relevant and material to a decision on the application. The ED recommends not referring this issue to SOAH.

9. Whether the draft permit should require a capacity certification for the settling basin. (RTC #6)

As noted in the RTC, the ED agrees that settling basins are defined as RCSs. However, settling basins are an optional treatment practice to reduce sludge accumulation in the RCS designed to store wastewater. Settling basins are not used to store wastewater, so their capacity may not be used to meet the minimum required volume on page 1 of the draft permit. In other words, the capacity of the settling basin is not relevant for purposes of sizing the RCS so that it meets the 25-year, 10-day design volume. Therefore, whether the draft permit should require a capacity certification for the settling basin is not relevant and material to a decision on the permit application. The ED recommends not referring this issue to SOAH.

10. Whether the design solid removal efficiency assumption for the settling basin meets the requirements in 30 TAC, Chapter 321. (RTC #7)

As a matter of law, 30 TAC § 321.38, Control Facility Design Requirements Applicable to CAFOs, does not require a specific solid removal efficiency assumption to be used in calculating the design specifications of an RCS or settling basin. As noted in the RTC, the Applicant used the Midwest Plan Service Structures and Environmental Handbook to derive the settling basin removal rate. The handbook states that: "Settling basins remove 50%-85% of the solids from lot runoff..." The application is based on 60% removal rate, which falls within the acceptable range in the reference material. If the Applicant has overestimated the solids removal rate, he will have to remove solids more often to meet the requirement in 30 TAC § 321.42(c) to maintain a margin of safety in the RCSs to contain the volume of runoff and direct precipitation from a 25-year, 10-day rainfall event.

The ED recommends not referring this issue to SOAH.

11. Whether the draft permit complies with the regulatory requirements for removal of solids from the settling basin. (RTC #8)

As a matter of law, there is no specific requirement in the CAFO rules regarding how often solids must be removed from a settling basin or RCS. However, 30 TAC § 321.42(c) requires the CAFO operator to maintain a margin of safety in the RCSs to contain the volume of runoff and direct precipitation from a 25-year, 10-day rainfall event. This rule provision must be met, regardless of the requirements in the draft permit. The draft permit requires sludge accumulation to be monitored as needed, but at least annually beginning in year three of the permit. The ED recommends not referring this issue to SOAH.

12. Whether settling basin solids should be defined as sludge and not manure in the draft permit. (RTC #9)

As a matter of law, settling basin solids are not “sludge” since there is no sludge volume allocation. Therefore, settling basin solids are defined as “manure.” The ED recommends not referring this issue to SOAH.

13. Whether capacity certifications should include both as-built RCS capacity and remaining RCS capacity due to sludge accumulation. (RTC #10)

As a matter of law, capacity certifications reflect the total as-built capacity. This maximum volume does not change, unless modifications are made to the RCS. Sludge accumulations, on the other hand, fluctuate, just as the wastewater levels fluctuate. Sludge accumulations are required to be monitored and recorded in the PPP, as necessary, but at minimum, within one year of the new capacity certification for the RCS expansion and then annually thereafter. The ED recommends not referring this issue to SOAH.

14. Whether RCS #1 can currently retain a 25-year, 24-hour precipitation event runoff prior to the enlargement of RCS #1. (RTC #11)

This is a question of fact. However, the current RCSs volumes are not relevant to what is proposed by this permit application and are not required as part of this permitting process. Existing RCS volume requirements are contained in the existing authorization and are enforced under that authorization by TCEQ Field Investigators. If the draft permit is issued, the new 25-year, 10-day volume requirements will become effective and construction is required to meet those new requirements within 180 days. The RCSs must meet the new requirements before the dairy is authorized to exceed 700 head. Therefore, whether RCS #1 can currently retain a 25-year, 24-hour precipitation event runoff prior to the enlargement is not relevant and material to a decision on the application. The ED recommends not referring this issue to SOAH.

15. Whether the liners in the settling basin and RCS are currently properly certified. (RTC #12)

RCS #1 from the previous authorization will become the settling basin and RCS #2 from the previous authorization will become RCS #1. The draft permit requires RCS #1 to be enlarged to contain the required capacities listed on page 1 of the permit. Section VII.A.3(a) of the draft permit also requires documentation of liner and capacity certifications to be completed for the modified RCS prior to use after modification and requires that documentation be maintained in the on-site PPP. Therefore, since the Applicant will be modifying its RCS and re-certifying the liners, whether the current liners are properly certified is not relevant and material to a decision on the application. The ED recommends not referring this issue to SOAH.

16. Whether the draft permit should require a minimum of one floor sample per acre of surface area and a minimum of one sidewall sample per each two acres of surface area in order to certify the hydraulic conductivity of the liner. (RTC #13)

TCEQ rules at 30 TAC § 321.36 require a CAFO operator to show that there is no significant hydrologic connection between the contained wastewater and water in the state or have liner consistent with the requirements of this section. Documentation of lack of hydrologic connection or a proper liner must be certified by a licensed Texas professional engineer or licensed Texas professional geoscientist and maintained in the PPP on site. The rules do not provide for any specific number of liner samples that are required for certification. Section VII.A.2.(g)(3)(ii) of the draft permit requires that for each RCS, a minimum of one undisturbed sample must be collected per plan surface acre at the spillway elevation. This sampling provision already goes beyond the CAFO rules. The ED recommends not referring this issue to SOAH.

17. Whether the conditions for granting extensions to the RCS compliance schedule should be included in the draft permit. (RTC #15)

As noted in the RTC, conditions that may delay construction of a RCS are numerous and highly variable. The extension request must provide an explanation of the conditions that prevented construction during the specified timeframe. As an issue of fact, it makes no sense to attempt to identify all the specific reasons why the RCS compliance schedule could be delayed. As a matter of law, there are no provisions in the CAFO rules that would require pre-identification of potential issues that would delay the RCS compliance schedule. The ED recommends not referring this issue to SOAH.

18. Whether the descriptions of the structural controls in the permit application and draft permit are in compliance with the CAFO rules in 30 TAC Chapter 321. (RTC #16)

As a matter of law, the CAFO rules do not include any requirement that the description of the structural controls in the permit application and draft permit be any more detailed than what was provided by the Applicant. A Runoff Control Map was submitted that clearly identifies the control features directing run-off. This map shows a thick dashed line identified as the ditch, berm, and

underground pipes. The permit requires the Applicant to conduct weekly inspections on all control facilities, including the RCS, storm water diversion devices, runoff diversion structures, control devices for management of potential pollutant sources, and devices channeling contaminated storm water to the RCS; and to annually conduct a complete site inspection of the production area. Additionally, the permit requires the Applicant to have a licensed Texas professional engineer complete a site evaluation of the structural controls every five years. The ED recommends not referring this issue to SOAH.

19. Whether the Applicant is required to demonstrate the adequacy of its dewatering capability prior to permit issuance. (RTC #17)

As a matter of law, TCEQ rules do not require ED review or approval of the equipment an applicant will use to dewater the RCS. The ED recommends not referring this issue to SOAH.

20. Whether 30 TAC §§ 321.46(c)(2) and (e)(2) require the annual facility inspection report or five year evaluation to be sent to TCEQ. (RTC #18)

This is a question of law that questions the interpretation of the rules and thus, is not an issue that is appropriate for SOAH hearing. The ED recommends not referring this issue to SOAH.

21. Whether the draft permit should require that an engineer certify to the adequacy of structural controls in the five year evaluation. (RTC #19 partial)

As a matter of law, 30 TAC § 321.46(c)(1) already requires that once every five years, a CAFO operator who uses an RCS must have a licensed Texas professional engineer review the existing engineering documentation, complete a site evaluation of the structural controls, review existing liner documentation, and “complete and certify a report of their findings.” The ED recommends not referring this issue to SOAH.

22. Whether the Applicant should be required to provide a current certification of existing structural controls before the draft permit is issued. (RTC #19 partial)

As a matter of law, there are no CAFO rule requirements that require certification of existing structural controls prior to issuance of the permit. The draft permit, if issued, will implement the additional structural controls required by the rules and the draft permit. The ED recommends not referring this issue to SOAH.

23. Whether the draft permit accounts for the management of phosphorus production in compliance with the CAFO rules. (RTC #21)

The projection that 999 cows will generate 389 lbs. of phosphorus per day was not disputed by the original commenter. The calculation is based on a book value for phosphorus production by dairy cows developed by the American Society of Agricultural and Biological Engineers. As an issue of fact, as long as the phosphorus being land applied or hauled-out is accounted for as required under

TCEQ rules, an accounting to reflect what remains in the CAFO production area is not necessary.

Additionally, the number is a design value used to help calculate the required RCS volume. It is not an actual number, which will vary based on a variety of factors e.g. size and type of cow. Therefore, an accounting of this hypothetical phosphorus is not relevant and material to a decision on the application. The ED recommends not referring this issue to SOAH.

24. Whether the draft permit is consistent with the North Bosque TMDL because it does not require up to 50% of the waste generated by the CAFO be managed outside of the North Bosque watershed. (RTC #22)

As noted in the RTC, the North Bosque TMDL has a *goal* of a 50% reduction in instream loading. The TMDL and TMDL I-Plan address growth of CAFOs through BMPs designed to decrease loading. Neither the TCEQ rules nor the TMDL I-Plan requires a 50% haul-out of collectible manure or management outside the North Bosque watershed. The ED recommends not referring this issue to SOAH.

25. Whether the draft permit should limit LMUs to forty acres in size. (RTC #24)

As a matter of law, the CAFO rules do not specify or limit the size of a LMU. Also, the CAFO rules in 30 TAC Chapter 321 do not require that the soil sampling area define the size of an LMU. The ED recommends not referring this issue to SOAH.

26. Whether the stream bed transecting the CAFO will be buffered to meet the vegetative buffer requirement in 30 TAC § 321.40(h). (RTC #26)

In response to this comment in the RTC, the ED added Special Provision X.P. – Grassed Waterways (mis-identified as Special Provision X.Q. in the RTC) to the draft permit to address this grassed waterway. Since the Coalition did not identify the issue still in dispute after the ED added Special Provision X.P., the ED does not consider this a disputed issue absent additional information from the Coalition on the specifics of the dispute. The ED recommends not referring this issue to SOAH.

27. Whether the site map showing the boundaries of LMU #2 is correct. (RTC #27)

As noted in the RTC, the Applicant submitted a revised nutrient management plan (NMP) with the correct acreage for LMU #2 (35 acres) and all the affected maps submitted with the permit application were also revised to show the proper acreage. Page 1 of the permit was revised to show that LMU #2 is a total of 35 acres and Attachment B was updated to reflect this change. Since the Coalition did not identify what remains disputed about the boundaries of LMU after these corrections, the ED does not consider this a disputed issue, absent additional information from the Coalition. The ED recommends not referring this issue to SOAH.

28. Whether the acreage of LMU #1A is properly represented in the permit application and draft permit. (RTC #28)

In its comment letter, Waco asserted that LMU #1A was 16 acres in size, but was represented as 25 acres in the permit application. As noted in the RTC, the ED verified that LMU #1A was approximately 25 acres during technical review of the permit application. The Applicant has since revised the Proposed Site & Land Management Unit map to identify all portions of LMU #1A on that map. Since the Coalition did not identify what contested issue remains after the acreage was verified and the LMU map was updated, the ED does not consider this a disputed issue, absent additional information from the Coalition regarding whether they still dispute the size of LMU #1A. The ED recommends not referring this issue to SOAH.

29. Whether the Applicant should be required to submit to TCEQ the actual annual yields of harvested crops for both LMUs and third party fields to demonstrate that reasonable crop yields are being used. (RTC #29)

As a matter of law, record keeping requirements at 30 TAC § 321.46(d)(8)(F) state the actual yield of each harvested crop for LMUs must be recorded on a monthly basis. The information is available to the ED during field investigations. The CAFO rules do not require that this information be submitted to TCEQ. Additionally, there are no rules requiring CAFO operators to track yields on third party fields. 30 TAC § 321.42(j) requires CAFO operators to submit records to the appropriate region office on a quarterly basis that contain the name, locations, and amounts of litter or wastewater transferred to operators of third party fields. The ED recommends not referring this issue to SOAH.

30. Whether the NRCS Practice Code 590 methodology used to calculate the agronomic rates in the NMP is flawed. (RTC #31)

NMPs are developed in accordance with NRCS Practice Standard Code 590. NMPs evaluate nutrients in the soil as part of the Phosphorus Risk Index. The allowable application rate, as determined by the NMP, takes both risk factors and soil phosphorus levels into account. Whether the NRCS methodology is flawed and the CAFO rules changed so that consistency with NRCS Code 590 is not required is a question of law. The ED recommends not referring this issue to SOAH.

31. Whether the Applicant be prohibited from applying supplemental inorganic phosphorus to LMU #1, #3, and #4. (RTC #32)

Appropriate utilization of the nutrients is tied to the BMPs used and is not based on nutrient source. These BMPs include, but are not limited to, land application at agronomic rates and hydrologic needs of the crop in accordance with an NMP, adherence to buffers between land application areas and water in the state; and the prohibition of discharges from land application areas. Whether the nutrients required by the crop are supplied from organic or inorganic sources is irrelevant so long as the Applicant adheres to the required BMPs. Therefore, whether the Applicant is applying from organic or inorganic sources is not relevant and material to a decision on the application. The ED recommends not referring this issue to SOAH.

32. Whether the draft permit should prohibit waste application on non-cultivated fields. (RTC #33 partial)

As a matter of law, the CAFO rules do not prohibit land application of waste on non-cultivated fields. Whether a field is cultivated or non-cultivated will impact the uptake of nutrients and the amount of nutrients that can be applied (less cultivation, less land application), but there is no justification in the CAFO rules for an outright ban to this practice. The ED recommends not referring this issue to SOAH.

33. Whether the draft permit should require adherence to NRCS Code 590 on third party fields if it is more restrictive. (RTC #33)

As a matter of law, the CAFO rules do not require that land application on third party fields be consistent with the NRCS Practice Code 590. However, the limitations placed in the draft permit assure that application on third party fields will take into account the potential for phosphorus build-up to occur. Land application on third party fields may not exceed a maximum of 200 ppm of phosphorus. When a third party fields tests 200 ppm or higher for phosphorus, all land application on that field must cease. The ED recommends not referring this issue to SOAH.

34. Whether TCEQ should require NMPs for third party fields. (RTC #33 partial)

As a matter of law, the CAFO rules do not require NMPs for third party fields. The application limitations on third party fields are based on soil test phosphorus levels instead of the Phosphorus Risk Index. The restrictions are more conservative than the rules require. Similar to an NMP, as soil phosphorus levels increase on third party fields, the Applicant will have to reduce waste application rates in order to continue land applying on those fields and to prevent those fields from exceeding 200 ppm of phosphorus. The ED recommends not referring this issue to SOAH.

35. Whether the draft permit should prohibit land application on third party fields unless the wastewater is transported from the CAFO by truck. (RTC #34)

As a matter of law, there are no CAFO rule requirements regarding how wastewater is transported from the CAFO to any third party fields. Neither do the CAFO rules require a review or approval of the mode of conveyance an applicant will use to transport wastewater to third party fields. The ED recommends not referring this issue to SOAH.

36. Whether the draft permit is in violation of 30 TAC § 321.42(j) by allowing sludge application on third party fields. (RTC #35)

As raised by Waco in their comment letter, this is an issue of law. Waco noted that 30 TAC § 321.42(j) allows only manure, litter, and wastewater to be applied to third-party fields, and not sludge and disputes the ED's interpretation of this rule provision. The ED interprets 30 TAC § 321.42(j) as inclusive of sludge. 30 TAC § 321.32(49) defines sludge as solid, semi-solid, or slurry waste generated during the treatment of or storage of any wastewater. The term includes materials

resulting from treatment, coagulation, or sedimentation of waste in a RCS. 30 TAC § 321.32(56) defines waste as manure (feces and urine), litter, bedding, or feedwaste from animal feeding operations. Therefore, sludge is a product of the treatment, coagulation, or sedimentation of its parent materials, waste, and wastewater. More simply, it is modified manure and wastewater. The draft permit incorporates this rationale by explicitly including the term sludge when appropriate. The ED recommends not referring this issue to SOAH.

37. Whether the draft permit should require the NMP to address the five year permit term as opposed to just the first year. (RTC #36)

30 TAC § 321.36(d)(2) and Section VII.A.8(a) of the permit require the operator to create and maintain a site-specific NMP along with documentation regarding implementation of the plan. 30 TAC §§ 321.36(e) and (g) and Section VII.A.8(c)(1) through (5) of the permit require annual sampling and the NMP must be updated to modify application amounts based on soil testing and wastewater testing. A five-year NMP would be impracticable because the NMP is likely to change yearly due to changing climatic and operational conditions; and soil sampling results. Therefore, the data contained in the NMP for years 2-5 would not be relevant and material to the ED's decision on the application. The ED recommends not referring this issue to SOAH.

38. Whether the historical waste application fields should be identified in the application or the permit. (RTC #37)

As noted in the RTC, Section VII.A.9(b)(2) of the draft permit requires the Applicant to have soil samples collected annually for each current and historical LMU. This provision tracks the requirement in 30 TAC § 321.42(k) that historical waste application fields must be sampled every year, regardless of whether the Applicant eliminates them from the permit.

Special Provision X.N. requires the Applicant to maintain a map in the PPP that identifies the location of all historical LMUs and reads as follows: "A LMU map showing historical LMUs shall be maintained in the PPP." As raised during the comment period, Waco asked the ED to go beyond these requirements already included in the CAFO rules and draft permit and also require historical LMUs to be identified in the application or the permit. As a matter of law, this issue is not appropriate for adjudication at SOAH because the draft permit requirements already meet the applica. The ED recommends not referring this issue to SOAH.

39. Whether the description of the vegetative buffers in the draft permit are in compliance with 30 TAC Chapter 321. (RTC #38)

As raised during the comment period, this is an issue of law. TCEQ rules define the width of vegetative buffers, but not the composition. As explained in the RTC, vegetative buffers are commonly understood to mean vegetation that reduces shock due to contact. NRCS Practice Code 393 refers to Practice Code 391, *Riparian Forest Buffer*. Riparian forest buffers are areas predominantly in trees or shrubs located adjacent to an up-gradient from watercourses or water bodies. One of the purposes of a riparian forest buffer is to reduce excess amounts of sediments,

organic material, nutrients, and pesticides in surface runoff. This purpose is the same as that performed by vegetative filter strips according to NRCS Practice Code 393. The ED recommends not referring this issue to SOAH.

40. Whether the draft permit meets the requirements in 30 TAC Chapter 321 for controlling runoff potentially caused by bacteria and pathogens. (RTC #39)

As noted in the RTC, 40 CFR § 122.44(k)(3) allows states to use BMPs to control or abate discharges “when numeric effluent limitations are infeasible.” This also applies to bacteria. In the case of North Bosque dairies, they are only authorized to discharge from an RCS in the event of a chronic or catastrophic rainfall event that exceeds the 25-year, 10-day storm event. The BMPs in place to limit the amount of nutrients applied to the LMUs also limit the amount of bacteria that can be applied. Therefore, bacteria applied to LMUs are limited by the BMPs that limit nutrient application. Additionally, as long as land application follows the BMPs and NMP application rates, runoff from LMUs are considered non-point source discharges that are not regulated under the draft permit.

As a matter of law, there are no further requirements to impose additional BMPs not already in place or that would be required if the draft permit is issued, to specifically address bacteria separately from nutrients. The ED recommends not referring this issue to SOAH.

41. Whether the draft permit should include additional reporting requirements for third party fields than what is required in 30 TAC § 321.42(j). (RTC #40)

As raised during the comment period, this is an issue of law. 30 TAC § 321.42(j) and Section VII.A.8(e)(5)(iv) of the draft permit contain the requirements for land application on third party fields in the North Bosque River watershed. It requires that records be maintained that contain the name, locations, and amounts of manure, litter, or wastewater transferred to operators of third party fields and requires that information be submitted to the appropriate TCEQ region office on a quarterly basis. *See* 30 TAC § 321.42(j)(4). Soil sample testing on third party fields must be included in the annual report due February 15th and submitted to TCEQ. *See* 30 TAC §§ 321.46(e)(1) and 321.42(j)(3).

30 TAC § 321.42(j)(1) requires a written contract between the CAFO dairy operator and the operator of a third party field; and any such contracts should be maintained in their PPP. 30 TAC § 321.46(d) specifies the requirements for recordkeeping at the CAFO. Records must be kept on site for a minimum of five years from the date the record was created and they must be submitted to TCEQ within five days of a request by the ED.

Additional reporting requirements for third party fields beyond what is already provided in the draft permit is an attempt to change the rules through the CCH process and as such, is not an appropriate issue to refer to SOAH. The ED recommends not referring this issue to SOAH.

42. Whether the draft permit should prohibit drainage or discharges of wastewater or manure from third party fields. (RTC #41 partial)

As raised by Waco during the comment period, this is a question of law. Runoff from third party fields where waste is applied at agronomic rates is allowed under the Clean Water Act. Runoff from third party fields where waste is not applied at agronomic rates or applied using proper operational controls is already prohibited. In those instances, runoff would be an unauthorized discharge and subject to TCEQ enforcement action. The ED recommends not referring this issue to SOAH.

43. Whether the Applicant should be prohibited from using any third party fields in the event of any rule or permit violation in the use of a third party field. (RTC #41 partial)

As raised by Waco during the comment period, this is a question of law. There is no basis in the CAFO rules for including a blanket prohibition against delivery of all waste to all third party fields based on a single violation on a single third party field. However, such land application when soil phosphorus is in excess of 200 ppm or land application in excess of the agronomic rate or established application rate would be a violation of the CAFO rules and subject the operator to enforcement action by TCEQ. The ED recommends not referring this issue to SOAH.

In the event the Commission refers this case to SOAH, the ED recommends referring issues #1 - #4.

VI. Duration of the Contested Case Hearing

Should there be a contested case hearing on this permit application, the ED recommends that the duration for a hearing on this matter be for a period of nine months from the preliminary hearing to the presentation of a proposal for decision before the commission.

VII. Executive Director's Recommendation

The ED recommends the following actions by the Commission:

1. Find that the Coalition does not have standing as an affected person because none of the members identified: Claude Kilpatrick, Torrey Moncrief, or the Ranch at Hico, LLC, are affected persons with standing to contest the permit in their own right.
2. If the Commission finds that the Coalition is an affected person, refer issues #1- #4 to SOAH for a proceeding of nine months duration with the time period beginning with the preliminary hearing and concluding with presentation of a proposal for decision before the Commission.

Respectfully submitted,

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

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Robert Martinez, Director
Environmental Law Division

By *Robert D. Brush*
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ATTORNEYS FOR
THE EXECUTIVE DIRECTOR

CHIEF CLERKS OFFICE

2009 JUL 14 PM 4: 21

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

CERTIFICATE OF SERVICE

I hereby certify that on July 14, 2009 the original and seven true and correct copies of the "Executive Director's Response to Hearing Request" relating to the application of Gerben Leyendekker / Leyendekker Dairy (Applicant) for a major amendment and conversion to Texas Pollutant Discharge Elimination System (TPDES) Permit Number WQ0003259000 were filed with the Chief Clerk of the TCEQ and a copy was served to all persons listed on the attached mailing list via hand delivery, facsimile transmission, inter-agency mail, or by deposit in the U.S. Mail.

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

2009 JUL 14 PM 4:21

CHIEF CLERKS OFFICE



Robert D. Brush, Staff Attorney
Environmental Law Division
State Bar No. 00788772

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FOR PERMIT NO. WQ0003259000
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2009 JUL 14 PM 4: 21
CHIEF CLERK'S OFFICE
TEXAS COMMISSION
ON ENVIRONMENTAL
QUALITY

Gerben Leyendekker / Leyendekker Dairy
WQ0003259000
Map Requested by TCEQ Office of Legal Services
for Commissioners Agenda



Texas Commission on Environmental Quality
 GIS Team (Mail Code 197)
 P.O. Box 13087
 Austin, Texas 78711-3087

May 5, 2009

0 0.1 0.2 0.4 0.6 0.8 Miles
 Projection: Texas Statewide Mapping System
 (TSMSS)
 Scale 1:43,368

Legend
 Creek

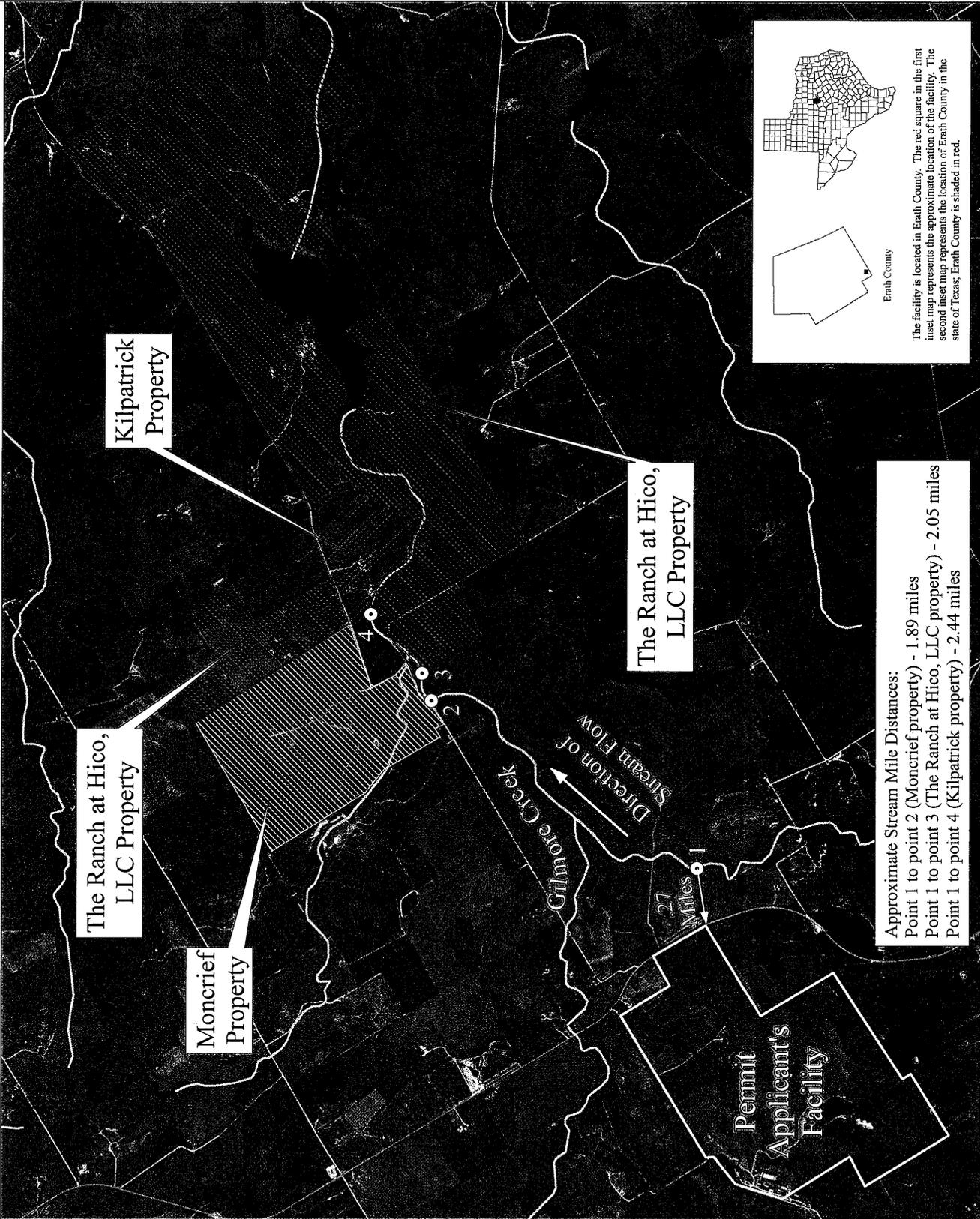
Source: The location of the facility was provided by the TCEQ Office of Legal Services (OLS). OLS obtained the site location information and the requestor information from the applicant. The counties are U.S. Census Bureau 1992 TIGER/Line Data (1:100,000). The background of this map is a source photograph from the 2004 U.S. Department of Agriculture Imagery Program. The imagery is one-meter Color-Infrared (CIR). The image classification number is TX43_1-1.

This map depicts the following:
 (1) The approximate location of the facility. This is labeled "Permit Applicant's Facility".
 (2) Downstream properties. These are labeled with the names of the property owners.



This map was generated by the Information Resources Division of the Texas Commission on Environmental Quality. This map was not generated by a licensed surveyor, and is intended for illustrative purposes only. No claims are made to the accuracy or completeness of the data or to its suitability for a particular use. For more information concerning this map, contact the Information Resource Division at (512) 239-0800.

McDonough, CRF-09050404



Erath County

The facility is located in Erath County. The red square in the first inset map represents the approximate location of the facility. The second inset map represents the location of Erath County in the state of Texas; Erath County is shaded in red.

Kilpatrick Property

The Ranch at Hico, LLC Property

Moncrief Property

The Ranch at Hico, LLC Property

Approximate Stream Mile Distances:
 Point 1 to point 2 (Moncrief property) - 1.89 miles
 Point 1 to point 3 (The Ranch at Hico, LLC property) - 2.05 miles
 Point 1 to point 4 (Kilpatrick property) - 2.44 miles

Gilmore Creek
 Direction of Stream Flow

Permit Applicant's Facility

2.7 Miles

4

3

2

1

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Permit No.: WQ0003259000

Owner: Gerben Leyendekker

Regulated Activity: Concentrated Animal Feeding Operation; dairy cattle

Type of Application: Major Amendment

Request: Water Quality Authorization

Authority: Federal Clean Water Act - Section 402; Texas Water Code §26.027; 30 Texas Administrative Code (TAC) Chapters 39, 305, and 321 Subchapter B; and Commission Policies and Environmental Protection Agency Guidelines

I. EXECUTIVE DIRECTOR'S RECOMMENDATION

The Executive Director has made a preliminary decision that this proposed permit, if issued, meets all statutory and regulatory requirements. The proposed permit shall be issued for a five year term in accordance with 30 Texas Administrative Code Chapter 305.

II. REASON FOR PROPOSED PROJECT

The applicant has applied to the Texas Commission on Environmental Quality (TCEQ) for a Major Amendment of State Registration No. WQ0003259000 for a Concentrated Animal Feeding Operation (CAFO) to authorize the permittee to expand an existing dairy facility from 700 head to a maximum of 999 head, of which 999 head are milking cows. The authorization type is being converted from a Registration to an Individual Permit, as required by 30 Texas Administrative Code Chapter 321, Subchapter B.

III. PROJECT DESCRIPTION AND LOCATION

Maximum Capacity: 999 total head of which 999 head are milking.

Land Management Units (LMUs) (acres): LMU #1-57, LMU #1A-25, LMU #2-35, LMU #3-33, LMU #4-109, LMU #5-87.

Location: The facility is located on the south side of County Road 261 approximately 3 miles east of its intersection with Farm-to-Market Road 219 in Erath County, Texas. Latitude: 31° 57' 18"N Longitude: 98° 11' 27"W.

Fact Sheet and Executive Director's Preliminary Decision
 Gerben Leyendekker, Permit No. WQ0003259000

Drainage Basin: The facility is located in the drainage area of the North Bosque River in Segment No. 1226 of the Brazos River Basin.

The table below indicates the volume allocations for the Retention Control Structure (RCS):

Volume Allocations for RCS (Acre-feet)							
RCS #	Design Rainfall Event Runoff	Process Generated Wastewater	Minimum Treatment Volume	Sludge Accumulation	Water Balance	Required Capacity without Freeboard	Actual Capacity without Freeboard
1	30.25	1.74	0.00	4.14	5.31	41.43	15.67

Former RCS #1 will be converted into a settling basin and the former RCS #2 will become RCS #1.

The volume allocations are determined using Natural Resource Conservation Service standards, American Society of Agricultural and Biological Engineers standards, and/or site specific data submitted in the permit application.

The Design Rainfall Event is the volume of runoff from the 25-year, 10-day storm event. The RCS is required to include adequate capacity to contain this amount of runoff as a margin of safety to protect against discharges during rainfall events that may exceed the average monthly values used to design the RCS, but do not constitute chronic or catastrophic rainfall. This volume allocation accommodates runoff from open lot surfaces, all areas between the open lots and the RCS, runoff from roofed areas that contribute to the RCS and direct rainfall on the surface of the RCS. Runoff curve numbers used to calculate the runoff volume from the open lot surfaces are reflective of the characteristics of open lot surfaces and range between 90 and 95. Runoff curve numbers used to compute the runoff from areas between the open lots and the RCS are reflective of the land use and condition of the areas between the open lots and the RCS. A curve number of 100 is used for the RCS surface and all roofed areas.

Process Generated Wastewater is the volume of wet manure and wastewater generated by the facility that is flushed or otherwise directed to the RCS. Wastewater includes all water used directly or indirectly by the facility that comes in contact with manure or other waste. The RCS must contain the process generated wastewater from a 21 day period or greater. RCS #1 is designed to contain 30 days of process generated wastewater for this permit.

This facility is not required to maintain a treatment volume in the RCS because it meets the requirements of a permit by rule under 30 TAC, §106.161.

Sludge accumulation volumes are required in the RCS which receives runoff from open lots, flushwater from freestall barns and flushwater from the milking parlor. The sludge accumulation volume for flushwater entering the RCS is calculated using the following equation: Adjusted Live Animal Weight (LAW) multiplied by a sludge accumulation rate of 0.25 cu-ft/lb of LAW, then multiplied by the design sludge accumulation period. The sludge accumulation volume allocated for runoff from open lots is calculated using USDA Agricultural Field Waste handbook, Kansas, Part 651.1083, which uses the following equation: $(\%SC) \times (MAR) \times (DA) \times (SP)$, where %SC = percent solids content of runoff, MAR = mean annual runoff (in inches), DA = contributing drainage area (in acres), and SP = sediment storage period (in years). A minimum of one year of sludge storage is required in the RCS. Design sludge volumes in this permit reflect a two (2) year sludge accumulation period.

The RCS volume designated as Water Balance is the capacity needed in addition to the Process Generated Wastewater volume to provide adequate operating capacity so that the operating volume does not encroach into the design storm volume. The water balance is an analysis of the inflow into the RCS, all outflows from the RCS and the consumptive use requirements of the crops on the land areas being irrigated. The water balance is developed on a monthly basis. It estimates all inflows into the RCS including process generated wastewater and runoff from open lots, areas between open lots and the RCS, roofed areas and direct rainfall onto the RCS surface. Consumptive use potential for the areas to be irrigated is developed based on the potential evapo-transpiration of the crops and the effective average monthly rainfall on the area to be irrigated. Runoff curve numbers used for the water balance are adjusted from 1 day to 30 day curve numbers to more accurately reflect monthly values. Evaporation from the RCS surface is computed on a monthly basis. Monthly withdrawals from the RCS are developed based on the total inflow to the RCS minus evaporation from the RCS surface and limited by the monthly crop consumptive use potential.

IV. SUMMARY OF CHANGES FROM EXISTING AUTHORIZATION

The proposed permit includes revisions to 30 Texas Administrative Code Chapter 321, Subchapter B. The authorization type is being converted from a Registration to an Individual Permit, as required by 30 Texas Administrative Code Chapter 321, Subchapter B. The permittee is requesting to increase from 700 head to 999 head, of which 999 head are milking cows. The proposed permit requires an increase in RCS capacity from 15.67 acre-feet to 41.43 acre-feet to accommodate the required margin of safety. Furthermore, land application of wastewater, sludge, and manure must be in accordance with a nitrogen and phosphorus based nutrient management plan in accordance with United States Department of Agriculture/Natural Resource Conservation Service (NRCS) Practice Standard Code 590. For additional changes from the existing authorization, see Attachment 1.

V. WATER QUALITY PROTECTION

Although the proposed permit is allowing an increase from 700 head to 999 head, this proposed permit includes many requirements not required by the existing authorization. As a result, this proposed permit is more stringent. The new requirements can be categorized based on their intended goal: reduce the potential for discharges, minimize the nutrient loading to land and surface water, and increase the oversight of operational activities by the TCEQ.

The following requirements are designed to reduce the potential for discharges:

1. The design rainfall event, at which time the CAFO is authorized to discharge, has been increased from a 25-year, 24-hour rainfall event (7.3 inches) to a 25-year, 10-day rainfall event (12.0 inches). This is approximately a 60% increase to the design rainfall event which will result in an approximate 60% increase to the required design storm event storage capacity. The additional storage capacity creates a portion of the structure above the maximum operating capacity that will remain dry, except during chronic or catastrophic rainfall events. The increased storage capacity is expected to reduce the potential for discharge from the RCS.
2. A RCS management plan is required to be implemented. This plan must establish expected end of the month water storage volumes for the RCS. These maximum levels are based on the design assumptions used to determine the required size of the RCS. This plan assures the permittee will maintain wastewater volumes within the designed operating capacity of the structures, except during chronic or catastrophic rainfall events. The permittee must document and provide an explanation for all occasions where the water level exceeds the expected end of the month storage volumes. By maintaining the wastewater level at or below the expected monthly volume, the RCS will be less likely to encroach into the volume reserved for the design rainfall event and/or discharge during smaller rainfall events. This has resulted in an increased operating volume in the RCS. An operating volume of 7.05 acre-feet (process generated wastewater volume plus the water balance volume) exceeds calculations of the maximum 30-day inflow (runoff plus process generated wastewater minus evaporation).
3. The wastewater level in the RCS must be recorded daily. This requirement will assist the permittee in the implementation of the RCS management plan and will provide a visual indication of compliance.
4. The pond marker must have one foot increments. This requirement identifies the level of wastewater storage to assist the permittee in the implementation of the RCS management plan. It also acts as an enforcement tool for TCEQ to determine compliance with the RCS management plan.
5. The amount of sludge in the RCS must be maintained at or below the design sludge volume. Previously, sludge accumulation was not regulated in RCSs

without treatment capacity. Excessive sludge accumulation can reduce the available wastewater storage volume. This more stringent requirement ensures that sufficient storage capacity is available for containment of the design wastewater volume and design rainfall event in the RCS. Proper sludge management will reduce overflows associated with insufficient wastewater storage capacity. This permit requires that sludge accumulations in the RCS be measured at least annually beginning one year after issuance of the permit. The proposed sludge volume allocation for RCS #1 is 4.14 acre feet which is designed for a two (2) year accumulation.

6. Land application is prohibited between the hours of 12 a.m. and 4 a.m. This provision reduces the potential of irrigation related discharges associated with equipment malfunctions.

The following requirements are designed to help minimize the nutrient loading to land and the potential for nutrient loading to surface water:

1. The land application of commercial fertilizer, wastewater, sludge, and manure must be in accordance with a Nutrient Management Plan (developed by a certified nutrient management specialist, based on United States Department of Agriculture/Natural Resource Conservation Service (NRCS) Practice Standard 590) which provides the permittee the necessary information to properly manage the amount, form, placement and timing for the application of nutrients to the LMUs. The proposed permit requires a nutrient management plan to be implemented upon issuance of this permit. This plan involves a site specific evaluation of the land management unit to include soils, crops, nutrient needs and includes the phosphorus index tool. The phosphorus index is a site specific evaluation of the risk potential for phosphorus movement into watercourses. The risk potential is determined by site characteristics such as soil phosphorus level, proposed phosphorus application rate, application method and timing, proximity of the nearest field edge to a named stream or lake, runoff class, and soil erosion potential. The application rates are adjusted according to the risk potential; the higher the risk potential, the lower the application rate. In determining the application rate, the nutrient management plan also considers the nitrogen and phosphorus inputs from the organic wastes, the soil content of these plant nutrients and the phosphorus loading potential into watercourses for each LMU. Once the nutrients are in balance, there is minimal potential to have excess nutrients available to leave the site and affect water quality. This proposed permit requires all excess manure, sludge and wastewater that cannot be land applied in accordance with the nutrient management plan to be removed (exported) from the facility (see item #3 below for additional discussion on manure and sludge management).

This plan determines the application rate based on nitrogen and phosphorus, whereas the previous land application rates were based on the nitrogen

requirement of the crop. Implementation of a NMP will ensure that nitrogen will not be land applied beyond the amount needed to achieve the stated target crop yields and that phosphorus loss in surface runoff will be minimized and will not exceed the limits defined by the NRCS Practice Standard 590. Further, implementation of the NMP will define the amount of excess waste to be exported thus lowering the potential for land applied nutrients to enter surface waters. Record keeping and reporting requirements, such as the amount of manure produced, amount of wastewater, sludge, and manure land applied, soil sampling and analyses, and the amount of wastewater, sludge, and/or manure removed from the facility, can be used to verify compliance with the nutrient management plan.

2. In addition to the requirements for implementation of a nutrient management plan, the permittee must continue to operate under a Comprehensive Nutrient Management Plan (CNMP) certified by the Texas State Soil and Water Conservation Board. The CNMP must be developed by a qualified individual(s) in accordance with Texas State Soil and Water Conservation Board regulations. 30 TAC §321.42(s) required all dairy CAFOs, located in a major sole source impairment zone, to implement a CNMP by December 31, 2006. The CNMP is a whole farm plan that addresses nutrient management from the origin in the feed rations to final disposition. The CNMP considers all nutrient inputs, onsite use and treatment, outputs, and losses. Inputs include animal feed, purchased animals, and commercial fertilizer. Outputs include animals sold, harvested crops removed from the facility, and manure removed from the facility. Losses include volatilization, stormwater runoff, and leaching.
3. All generated manure, sludge or wastewater in excess of the amount allowed by the nutrient management plan must be delivered to a composting facility authorized by the Executive Director, delivered to a permitted landfill, beneficially used by land application to land located outside of the major sole source impairment zone, or provided to operators of third-party fields for beneficial use subject to specified land application requirements and testing. By requiring specific outlets for excess manure, sludge and wastewater, the permit limits unregulated use of manure, sludge and wastewater within the watershed. Exported use requires additional record-keeping to document how manure, sludge and wastewater are used and provides a mechanism to track each permittee's contribution toward the 50% voluntary removal goal in the Bosque River Total Maximum Daily Load (TMDL).
4. Additional conservation practices have been imposed on LMUs adjacent to water in the state. These conservation practices include a 100 foot vegetative buffer, filter strips, vegetative barrier, and/or contour buffer strips. Site specific conditions and NRCS practice standards specify which conservation practices, in addition to the required 100 foot vegetative buffer, must be implemented. The conservation practices reduce erosion, suspended solids and nutrients in runoff

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from LMUs. This will improve the quality of stormwater runoff prior to entering water in the state.

In the table below, the Additional Buffer Setback length was determined by using the NRCS Conservation Practice Code 393, Filter Strip. The practice code uses a combination of hydrologic soil groups and field slope percentages to calculate an appropriate filter strip length.

LMU #	Vegetative Buffer Setback (feet)	Additional Buffer Setback NRCS Code 393 Filter Strip flow length (feet)
1	Not Applicable	
1A	100	33
2	100	33
3	100	33-42
4	100	33
5	100	33

- The table below illustrates numbers from the NMP dated February 04, 2009 in the application to compare the maximum application rate versus the planned application rate. The plan is based on a goal of maintaining soil test Phosphorus (P) levels below 200 ppm, which results in a planned application amount, for all LMUs collectively, that is less than the maximum allowed under the East Texas Phosphorus Index. NMPs are routinely updated and the values shown below are subject to change.

LMU #	Soil Test P (ppm)	Max Annual P ₂ O ₅ (lbs/ac)	Proposed Annual P ₂ O ₅ (lbs/ac)	% of Max Allowable
1	48	153	32	21%
1A	48	230	92	20%
2	57	125	90	36%
3	9	230	92	20%
4	39	126	28	22%
5	16	230	96.5	21%

The following requirements allow for increased oversight of operational activities by the TCEQ:

1. The permittee must provide a report to the TCEQ to substantiate a chronic rainfall discharge. After review of the report, if required by the Executive Director, the permittee must have an engineering evaluation by a licensed Texas professional engineer developed and submitted to the Executive Director. The report and engineering evaluation may be used to verify that the facility was maintained and operated according to the permit conditions. Information reviewed may include rainfall records at the CAFO, the RCS wastewater levels preceding the discharge, irrigation records, and the current sludge volume. This requirement allows for closer scrutiny by TCEQ for discharges resulting from chronic conditions and provides documentation for enforcement of unauthorized discharges. The current authorization does not require chronic discharge documentation or an engineering evaluation.
2. The TCEQ regional office must be notified ten (10) days prior to annual soil sample collection activities. This allows the TCEQ to observe sample collection and/or obtain split samples for duplicate analysis to help assure that data collected are credible to support application rates in the nutrient management plan. The current authorization does not require notification of soil sample collection activities.
3. Annual soil samples must be collected by one of the following persons: the NRCS; a certified nutrient management specialist; the Texas State Soil and Water Conservation Board; the Texas Cooperative Extension; or an agronomist or soil scientist on full-time staff at an accredited university located in the State of Texas. This ensures that samples are collected by individuals who are knowledgeable about soil sampling techniques and sample preservation. The current authorization does not specify who must collect the annual soil samples.
4. Some of the land application records maintained by the permittee must be submitted to the TCEQ annually. These records include: date of wastewater, sludge, and manure application to each LMU; location of the specific LMU and the volume applied during each application event; acreage of each individual crop on which wastewater, sludge, and manure is applied; basis for and the total amount of nitrogen and phosphorus applied per acre to each LMU, including sources of nutrients and amount of nutrients on a dry weight basis other than wastewater, sludge, and manure; weather conditions, such as temperature, precipitation, and cloud cover, during the land application and twenty-four (24) hours before and after the land application; and annual nutrient analysis for at least one (1) representative sample of each type of waste to be applied (wastewater, sludge (if applicable), or manure) for total nitrogen, total phosphorus, and total potassium. This will assist the TCEQ in monitoring compliance with land application requirements of the permit.

Although the proposed permit authorizes an expansion from 700 head to 999 head, the conditions being proposed in this permit are anticipated to significantly reduce pollutants entering receiving waters. These reductions are from limiting the potential for RCS overflows and better managing land application of nutrients to LMUs. Regardless of the number of head, this permit requires all exported manure, sludge and wastewater that cannot be land applied in accordance with the nutrient management plan to be exported from the facility (i.e. composting, landfill, outside of the watershed, or third-party fields). The wastewater generated by the facility is retained and managed in a RCS that must be designed to exceed the federal sizing requirement. The RCS is required to be designed with a margin of safety, which requires a larger portion of the RCS to remain dry (i.e. the distance between the normal wastewater operating level and the spillway). This permit requires the RCS to accommodate rainfall and runoff from a 25-year, 10-day rainfall event rather than the 25-year, 24-hour rainfall event specified in Federal regulations. This results in approximately a 60% increase in the required storage capacity and is intended to reduce the potential for discharges from the RCS. The normal wastewater operating level is required to be closely monitored and maintained by implementation of the RCS management plan and increased recordkeeping by the permittee. The dry storage area is available to capture rainfall from extended periods of wet weather without overflow. In the unlikely event of an overflow, the permittee must provide records to the TCEQ to prove that the overflow was unavoidable. If the overflow is determined to be unauthorized, this documentation provides TCEQ additional tools to initiate enforcement proceedings. These permit requirements, best management practices, and increased management and TCEQ oversight will protect water quality, when properly implemented.

VI. 303(d) LISTING and TOTAL MAXIMUM DAILY LOAD (TMDL)

The facility for this permit action is located within the watershed of the North Bosque River in Segment No. 1226 of the Brazos River Basin. The designated uses and dissolved oxygen criterion as stated in Appendix A of the Texas Surface Water Quality Standards (30 Texas Administrative Code §307.10) for Segment No. 1226 are contact recreation, public water supply, high aquatic life use, and 5.0 mg/L dissolved oxygen.

Segment No. 1226 is currently listed on the State's inventory of impaired and threatened waters (the 2008 Clean Water Act Section 303(d) list) for bacteria. The North Bosque River (Segments 1226 and 1255) was included in the 1998 Texas Clean Water Act 303(d) List and deemed impaired under narrative water quality standards related to nutrients and aquatic plant growth.

Segment No. 1226 is included in the agency's document *Two Total Maximum Daily Loads for Phosphorus in the North Bosque River*, adopted by the Commission on February 9, 2001 and approved by EPA on December 13, 2001. *An Implementation Plan for Soluble Reactive Phosphorus in the North Bosque River Watershed* (TMDL Implementation Plan) was approved by the Commission on December 13, 2002 and approved by the Texas State Soil and Water Conservation Board on January 16, 2003.

The TMDL for the North Bosque River, Segments 1226 and 1255, identified the amount of phosphorus introduced into these segments, i.e. the load. Phosphorus load from two categories of sources was modeled to calculate the expected reductions in phosphorus load to meet instream water quality standards. Point sources included wastewater treatment plants; non-point sources included all other sources, such as CAFOs. The TMDL called for an average 50% reduction in the average concentration of soluble reactive phosphorus across river index stations and was to be achieved by a 50% reduction in soluble reactive phosphorus loadings from both point sources and non-point sources. The TMDL was developed assuming implementation of specific best management practices. This set of best management practices represents one way to achieve the water quality targets in stream and the overall reduction goal of the TMDL.

The TMDL was approved with the understanding that an adaptive management approach was an appropriate means to manage phosphorus load to the stream. The TMDL Implementation Plan emphasized this approach to achieve the phosphorus reductions targeted in the TMDL. Adaptive management envisions adjustment of management practices over time as necessary to reach this target. The TMDL anticipated that, to control loading to the stream, dairy CAFO permittees would implement those best management practices which best addressed site-specific conditions. Accordingly, the TMDL is not directly tied to the number of animal units permitted in the watershed; it is instead tied to the amount of nutrients that may be land applied consistent with management practices that ensure appropriate agricultural utilization of nutrients.

The provisions of this permit seek to reduce the amount of phosphorus (and other pollutants) discharged to water in the state from the CAFO. Primary management strategies for dairies, both voluntary and regulatory, were identified in the TMDL Implementation Plan which included: requiring phosphorus-based application rates when applying manure, wastewater, or sludge to LMUs; voluntarily implementing efforts to reduce the amount of phosphorus in dairy cow diets; and removing significant quantities of dairy-generated manure from the watershed for the production of compost, beneficial use on crops, or disposal. The permit application includes a nutrient management plan, which allocates the amount of nutrients to each LMU based on target agronomic crop yields. The proposed permit requires a nutrient management plan to be implemented upon issuance of the permit and also specifies how the excess manure will be managed. The voluntary phosphorus diet reductions may be implemented through consultations between a nutritionist and the permittee. Any such dietary phosphorus reductions will result in reduced phosphorus concentrations in manure. These strategies are facets of CNMPs; CNMPs are required for all dairy CAFOs in the major sole-source impairment zone.

The CNMP must consider manure phosphorus content, the LMU area available for land application based on phosphorus-rate application, and the amount of exported manure that would remain. It must also account for all pathways of manure use or disposal, which would include removal to compost facilities, transport to another watershed for land application, or land application at onsite LMUs. The proposed permit requires the

permittee to continue implementation of a CNMP.

These nutrient management plans determine the nutrient application rate based on nitrogen and phosphorus, whereas the current authorization allows land application rates based on the nitrogen requirement of the crop. The implementation of these enhanced nutrient management plans and best management practices for phosphorus reduction within the watershed is expected to result in phosphorus load reduction consistent with the TMDL Implementation Plan.

Continuing education requirements in the proposed permit mandate that the operator be trained on management practices that are also consistent with the TMDL Implementation Plan regarding feed management and waste management practices.

The TMDL Implementation Plan also includes a recommendation that the CAFO rule making consider more stringent requirements for RCSs, in order to reduce the potential for overflows from RCSs. In response, several permit provisions have been proposed that are consistent with the TMDL Implementation Plan, which include:

1. RCS must be designed to contain the volume associated with a 25 year/10 day rainfall event,
2. installation of a permanent marker, graduated in one-foot increments beginning from the bottom of the RCS to the top of the embankment or spillway,
3. a RCS management plan detailing procedures for proper operation and management of wastewater levels based on design and assumptions of monthly expected operating levels,
4. daily monitoring records of wastewater levels,
5. notification of discharges within one hour,
6. discharge sample analyses to be submitted to the TCEQ, and
7. a report of discharges to be submitted to the TCEQ regional office, documenting that overflows from cumulative rainfall events were beyond the permittee's control.

In addition, the September 15, 2003 White Paper, *Standards for Waste Retention Facilities in the North Bosque River Watershed*, contains a statement indicating that "...some of the technical professionals working on this committee are convinced that a significant part of the dairy source loading is being from retention facilities." Although not directly quantifiable, it is expected that a significant phosphorus load reduction will occur as a result of these enhanced design standards. Not only will the increased capacity requirements result in load reductions, but the additional operation, maintenance, recordkeeping and reporting requirements will aid in achieving the water quality target for the North Bosque River.

The TMDL Implementation Plan includes a recommendation that the CAFO rule making consider whether additional limitations or requirements are needed for runoff control and

whether additional irrigation management is needed to prevent excessive runoff. In response, the proposed permit includes the requirement for a CNMP (mentioned above), and a 100-foot wide vegetative buffer plus an additional site specific filter strip width between every application area and a water in the state. The proposed permit also specifies that automatic irrigation shutdown requirements may be imposed and prohibits nighttime land application from midnight to 4:00 a.m.

The RCS storage capacity requirements, nutrient management practices, increased TCEQ oversight of operational activities, and requirements of the TMDL Implementation Plan, which are incorporated into the draft permit, are designed to reduce the potential for this CAFO to contribute to further impairment from bacteria and nutrients such as total phosphorus. Furthermore, it is anticipated the implementation of the primary management strategies and permit provisions identified above will result in phosphorus load reduction in the watershed and achieve the reductions targeted in the TMDL. Attachment 2 outlines the proposed permit provisions discussed above and provides the purpose of each provision. The permit provisions are consistent with the approved TMDL that establishes measures for reductions in loadings of phosphorus (and consequently other potential pollutants) to the North Bosque River Watershed. Therefore, this permit is consistent with the requirements of the antidegradation implementation procedures in 30 Texas Administrative Code Section 307.5 (c)(2)(G) of the Texas Surface Water Quality Standards.

VII. DRAFT PERMIT RATIONALE

A. PERMIT CONDITIONS AND EFFLUENT LIMITATIONS

The following items were considered in developing the proposed draft permit:

1. The application received on May 1, 2008 and subsequent revisions
2. TCEQ Registration No. WQ0003259000 issued July 17, 2001
3. Interoffice Memorandum from the Water Quality Assessment Team, Water Quality Assessment Section, Water Quality Division, dated August 29, 2008
4. Interoffice Memorandum from the Water Quality Standards Team, Water Quality Assessment Section, Water Quality Division, dated July 31, 2008
5. TCEQ rules
6. Bosque River TMDL Implementation Plan
7. NRCS Animal Waste Management Field Handbook, Nutrient Management Practice Standard Code 590, the Field Office Technical Guidance for Texas, and ASABE Standards
8. Environmental Protection Agency rules

Wastewater, sludge, and manure may only be discharged from a LMU or a properly designed, constructed, operated and maintained RCS into water in the state from this CAFO if any of the following conditions are met:

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1. discharge resulting from a catastrophic condition other than a rainfall event that the permittee cannot reasonably prevent or control;
2. a discharge resulting from a catastrophic rainfall event from the RCS;
3. a discharge resulting from a chronic rainfall event from the RCS; or
4. a discharge resulting from a chronic rainfall event from a LMU that occurs because the permittee takes measures to de-water the RCS in accordance with the individual permit, relating to imminent overflow.

For a discharge resulting from a chronic rainfall event, the permittee shall submit a report to the appropriate TCEQ regional office that includes the CAFO records that substantiates that the overflow was a result of cumulative rainfall that exceeded the design rainfall event, without the opportunity for dewatering, and was beyond the control of the permittee. After review of the report, if required by the Executive Director, the permittee shall have an engineering evaluation by a licensed Texas professional engineer developed and submitted to the Executive Director.

All waste including any manure, bedding or feedwaste from the CAFO and any water contaminated by waste contact must be stored or utilized to comply with the permit and TCEQ Rules. The proposed permit satisfies the Environmental Protection Agency effluent limitation guidelines in 40 Code of Federal Regulations, Parts 412 and 122.

40 Code of Federal Regulations §122.44 specifies that any requirements, in addition to or more stringent than promulgated effluent limitation guidelines, must be applied when they are necessary to achieve state water quality standards. Water quality based effluent limitations must be established when TCEQ determines there is a reasonable potential to cause or to contribute to an in-stream excursion above the allowable ambient concentration of a state numeric criterion. For CAFO discharges the TCEQ must consider:

1. existing controls on point and non-point sources of pollution;
2. variability of the pollutant in the effluent; and
3. dilution of the effluent in the receiving water.

In proposing this permit, the TCEQ addresses considerations 2. and 3. since continuous discharges are prohibited and effluent discharges are authorized only during catastrophic conditions or a chronic or catastrophic rainfall event from a RCS properly designed, constructed, operated and maintained. The effluent pollutant levels are variable and effluent is usually not discharged. Additionally, during these climatic events, water bodies receiving a contribution of CAFO

wastewater should be significantly diluted by other rainfall runoff.

Consideration 1. requires permit controls on CAFO discharges which will result in the numeric criteria of the water quality standards being met, thus ensuring that applicable uses of water in the state are attained. The principal pollutants of concern include organic matter causing biochemical oxygen demand, the discharge of ammonia-nitrogen, phosphorus and fecal coliform bacteria. This permit requires discharges to be monitored for the pollutants of concern. Existing technology does not allow for practicable or economically achievable numeric effluent limitations at this time. The Environmental Protection Agency has not promulgated effluent guidelines or numeric effluent limitations that would allow regular discharges of CAFO process wastewater or process-generated wastewater. The proposed permit addresses potential pollutant impacts through requirements including numerous narrative (non-numeric) controls on CAFO process wastewater and non-point sources of pollutant discharges associated with CAFOs. Setting specific water quality-based effluent limitations in this permit is not feasible (see 40 Code of Federal Regulations §122.44 (k)(3)). Instead, the proposed permit provides general and site specific provisions which are expected to result in compliance with water quality criteria and protection of attainable water quality as follows:

1. The approved recharge feature certification submitted in the permit application must be updated and maintained in the onsite pollution prevention plan. The recharge feature certification describes the location of the CAFO relative to certain natural and artificial features that could result in adverse ground water impacts. Groundwater has the potential to resurface as surface water. Therefore, preventing impacts to groundwater also provides protection to surface water.

The table below shows potential soil limitations identified in the recharge feature evaluation and the proposed management practices to address those limitations.

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Soil Series and Map ID	Potential Limitations	Best Management Practices
Bolar-Denton: Bdc Denton: DeB Slidell: HoB	Percolates slowly Slow water movement	Land application not to exceed agronomic rates and soil infiltration rates. No land application to inundated soils
Bunyan: Bu Frio: Fr	Flooding	No land application to inundated soils
Duffau: DuC2 Duffau: DuD3	Too steep for surface application	Land application not to exceed agronomic rates and soil infiltration rates. No land application to inundated soils
Nimrod: NdC	Filtering capacity seepage	Land application not to exceed agronomic rates and soil infiltration rates. No land application to inundated soils
Purves-Dugout: Pd	Droughty large stones	Land application not to exceed agronomic rates and soil infiltration rates. No land application to inundated soils
Purves-Dugout: Pd Denton: DeB	Depth to bedrock	Land application not to exceed agronomic rates and soil infiltration rates. No land application to inundated soils Maintain clay liners in RCS

Nimrod fine sand, 0 to 5 percent slopes, have been identified by the NRCS as highly erodible land (HEL). If erosion is detected, the LMUs will be protected with conservation farming practices within the standards of NRCS.

The table below lists all wells on the facility, their status, and what measure will be taken to protect groundwater. A Well Buffer Exception request for Well #1, #2, #3 and #4 was submitted to and approved by the TCEQ Water Quality Assessment Team.

Well Number	Status	BMPs
1	Producing	A steel sleeve located on a concrete slab, & the ground & slab sloping away from the well head
2	Producing	A steel sleeve located on a concrete slab, & the ground & slab sloping away from the well head
3	Producing	Concrete surface slab and building
4	Producing	Concrete surface slab and located up-gradient of manure source
5	Producing	Maintain 150 ft buffer
6	Producing	Maintain 150 ft buffer
7	Producing	Maintain 150 ft buffer
8	Producing	Maintain 150 ft buffer
9	Producing	Maintain 150 ft buffer

2. The RCS must be adequately lined and certified by a professional engineer; alternatively, certification must document a lack of hydrologic connection between wastewater in the RCS and groundwater. Groundwater has the potential to resurface as surface water. Therefore, preventing impacts to groundwater also provides protection to surface water. A liner certification, certified by a professional engineer, for the existing RCS was submitted with the application. The table below lists the information for the existing RCS.

RCS #	Liner Certification Date
1	April 07, 2001
Settling Basin	May 08, 1990

3. RCS design criteria must include volumes for the design rainfall event, sludge, and process generated wastewater. These design criteria must be supplemented with a water balance analysis that demonstrates that wastewater can be sufficiently stored and irrigated and that consumption of the wastewater will not induce runoff or create tailwater. The application includes design calculations, certified by a professional engineer, which determine the design criteria for each RCS. The permittee must increase the volume of RCS #1 to meet the design criteria.
4. Modified RCSs must maintain two vertical feet of material equivalent to construction materials between the top of the embankment and the structure's spillway to protect from overtopping the structure. RCSs without spillways must have a minimum of two vertical feet between the top of the embankment and the required storage capacity.
5. Recordkeeping and reporting requirements are designed to help ensure that the permittee complies with the permit provisions. Some of these requirements include daily records of RCS wastewater levels and measurable rainfall; weekly records of manure, wastewater, and sludge removed from the facility, inspections of control facilities and land application equipment; and monthly records of wastewater, sludge, and manure land applied. The permittee is required to submit an annual report to the TCEQ which includes a subset of the permit recordkeeping requirements.
6. Discharge of wastewater from irrigation is prohibited, except a discharge resulting from irrigation events associated with imminent overflow conditions. Precipitation-related runoff from LMUs is allowed by the

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- permit, when land application practices are consistent with a nutrient management plan or nutrient utilization plan.
7. Solid waste management provisions specify requirements which minimize adverse water quality impacts.
 8. The entry of uncontaminated stormwater runoff into the RCS must be minimized. The site includes berms to direct contaminated runoff into the RCS as well as prevent uncontaminated stormwater runoff from entering the RCS.
 9. The permittee shall take all steps necessary to prevent any adverse effect to human health or safety, or the environment.
 10. The permittee shall provide the following notifications:
 - (a) Any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ, orally or by facsimile transmission within twenty-four (24) hours and in writing within five (5) days of becoming aware of the noncompliance.
 - (b) Discharges resulting from a chronic or catastrophic rainfall event or catastrophic conditions must be reported orally within one hour of the discovery of the discharge and in writing within fourteen (14) working days.

Where a specific chemical pollutant does not have a water quality criterion and that pollutant is present in CAFO effluent at a concentration that has the reasonable potential to cause, or contribute to, an excursion above a narrative criterion in the state water quality standards, TCEQ must establish effluent limits, except as provided by 40 Code of Federal Regulations Section 122.44(k).

Nutrient pollutants of concern have narrative criteria and are discharged in CAFO wastewater. As described above, effluent limitations are not feasible at this time. Nutrient management has been addressed through the imposition of a three tiered approach, based on the soil phosphorus concentration.

For LMUs with a soil phosphorus concentration of less than 200 ppm in Zone 1 (0-6 inches if incorporated, 0-2 or 2-6 inch if not incorporated) depth, a certified nutrient management plan is required. This plan is based on the NRCS Practice Standard Code 590. It uses site specific criteria to determine the phosphorus application rate based on the crop requirement. It addresses the amount, source, placement, form, and timing of the application of all nutrients and soil

amendments to meet crop needs. As previously discussed in Section V of this Fact Sheet, the nutrient application rate is based on the most limiting nutrient with phosphorus inputs not to exceed ceiling levels as described in the nutrient management plan, thus there is minimal potential to have excess nutrients available to leave the site and affect water quality.

As required by Texas Water Code §26.504, for LMUs with a soil phosphorus concentration of 200 - 500 ppm in Zone 1 (0-6 inches if incorporated, 0-2 or 2-6 inch if not incorporated) depth, the permittee must submit a nutrient utilization plan based on crop removal. At the discretion of the certified nutrient management specialist, the nutrient utilization plan may also include a phosphorus reduction component. This nutrient utilization plan must be submitted to the TCEQ for review and approval. The nutrient utilization plan is a revised nutrient management plan developed utilizing the same NRCS 590 Practice Standard tool to evaluate the site specific elements in the LMU such as slope and distance to water courses, the rates, methods, schedules of wastewater, sludge, and manure application, and best management practices including physical structures and conservation practices utilized by the CAFO to assure the beneficial use of wastewater, sludge, and manure is conducted in a manner that prevents phosphorus impacts to water quality. A crop removal application rate is the amount of nutrients contained in and removed by the proposed crop.

As required by Texas Water Code §26.504, for LMUs with a soil phosphorus concentration of greater than 500 ppm in Zone 1 (0-6 inches if incorporated, 0-2 or 2-6 inch if not incorporated) depth, the nutrient utilization plan must be based on crop removal and include a phosphorus reduction component. A phosphorus reduction component is a management practice, incorporated into the nutrient utilization plan, that is designed to further reduce the soil phosphorus concentration by means such as phosphorus mining, moldboard plowing, or other practices utilized by the permittee. This revised nutrient utilization plan must also be submitted to the TCEQ for review and approval. Permittees required to operate under a nutrient utilization plan with a phosphorus reduction component must show a reduction in the soil phosphorus concentration within twelve (12) months or may be subject to enforcement actions.

After a nutrient utilization plan is implemented, the permittee shall land apply in accordance with the nutrient utilization plan until the soil phosphorus is reduced below 200 ppm. Each of these plans must be developed and certified by a nutrient management specialist. This three tiered approach, when implemented, should minimize the potential for nutrients to accumulate in the soil and reduce nutrient concentrations in LMUs. Failure to operate in accordance with a nutrient management plan or nutrient utilization plan may constitute a violation of state law and this permit and may subject the permittee to enforcement action.

B. TECHNOLOGY-BASED REQUIREMENTS

Technology-based effluent limitations are considered in the proposed individual permit. Effluent limitations are based on "best conventional pollutant control technology", and "best available technology economically achievable", a standard which individually represents the best performing existing technology in an industrial category or subcategory. "Best available technology economically achievable" and "best conventional pollutant control technology" effluent limitations may never be less stringent than corresponding effluent limitations based on "best practicable control technology", a standard applicable to similar discharges before March 31, 1989 under Clean Water Act §301(b)(1)(A).

Frequently, the Environmental Protection Agency adopts nationally applicable guidelines identifying the "best practicable control technology", "best conventional pollutant control technology", and "best available technology economically achievable" standards to which specific industrial categories and subcategories are subject. When such guidelines are published, the Clean Water Act, §402(a)(1) requires that appropriate "best conventional pollutant control technology" and "best available technology economically achievable" effluent limitations be included in permitting actions on the basis of the permitting authority's best professional judgment.

The Environmental Protection Agency standard for CAFOs, as contained in 40 Code of Federal Regulations Parts 122 and 412, is no discharge of waste or wastewater from animal feeding operations into water of the United States, except when chronic or catastrophic rainfall or catastrophic conditions cause an overflow. All waste including any manure, litter, bedding or feedwaste from animal feeding operations and any water contaminated by waste contact must be stored or utilized to comply with this individual permit, which requires applicable technology control.

The conditions of the proposed permit have been developed to comply with the technology-based standards of 40 Code of Federal Regulations Part 412. The proposed permit includes provisions and performance standards based on NRCS technical standards rather than numeric limitations, to address the collection, storage, treatment and land application of manure, sludge, or wastewater and to limit pollutants in discharges. This permit exceeds these standards by requiring the 25-year/10-day design storm event storage volume.

C. WATER QUALITY-BASED REQUIREMENTS

The proposed permit would authorize the land application of wastewater, sludge, and manure, and would only allow a discharge to surface water when chronic or catastrophic rainfall or catastrophic conditions result in an overflow of a properly

designed, operated and maintained RCS. No water quality impacts are expected to occur from land application based upon properly prepared and implemented nutrient management practices.

Instead of numeric water quality based effluent limitations, this permit establishes management practices to restrict discharges to occur only during defined chronic or catastrophic rainfall events or catastrophic conditions. Discharges occurring during these conditions would be highly intermittent in nature and should be significantly diluted by rainfall runoff.

D. MONITORING REQUIREMENTS

Monitoring requirements were established based on TCEQ rules, and 40 Code of Federal Regulations Part 412. For any discharges, grab samples must be collected and analyzed for Biochemical Oxygen Demand, Total and Fecal Coliform, Total Dissolved Solids, Total Suspended Solids, Nitrate, Total Phosphorus, Ammonia Nitrogen and pesticides (if suspected). Soil samples must be taken annually from LMUs and analyzed for Nitrate, Phosphorus, Potassium, Sodium, Magnesium, Calcium, Soluble salts/electrical conductivity, and pH. Discharges and soil analyses are reported to TCEQ.

E. REQUIREMENTS FOR BENEFICIAL USE OF MANURE, SLUDGE, AND WASTEWATER

The proposed permit contains requirements related to the collection, handling, storage and beneficial use of manure, wastewater, and sludge. These requirements were established based on TCEQ rules, Environmental Protection Agency guidance, NRCS Field Operations Technical Guidance and the Animal Waste Management Field Handbook; recommendations from the TCEQ's Water Quality Assessment Team, and best professional judgment.

40 Code of Federal Regulations §122.42(e)(1) specifies that a nutrient management plan must be developed and implemented by February 27, 2009. The elements of a nutrient management plan as listed in 40 Code of Federal Regulations §122.42(e)(1) have been incorporated into this permit. This permit requires a nutrient management plan and each of the required elements to be implemented upon issuance of this permit. In relation to these items, the proposed permit is more stringent than federal requirements.

This permit also requires the continued implementation of a CNMP which was required as of December 31, 2006. The CNMP must consider manure, wastewater, and sludge handling and storage, land treatment practices, nutrient management, documentation of implementation and management activities associated with the CNMP, feed management (voluntary), and alternative uses for

manure. This requirement is not required by federal rule and is, consequently, more stringent than federal requirements.

The proposed permit authorizes the use of third-party fields, i.e. land not owned, operated, controlled, rented, or leased by the CAFO owner or operator that have been identified in the PPP. The permittee must have a contract with the operator of the third-party fields. The written contract must require all transferred manure, wastewater, and sludge to be beneficially applied to third-party fields in accordance with the applicable requirements in 30 Texas Administrative Code §321.36 and §321.40 at an agronomic rate based on soil test phosphorus in Zone 1 (0-6 inches if incorporated, 0-2 or 2-6 inch if not incorporated) depth. A certified nutrient management specialist must annually collect soil samples from each third-party field used and have the samples analyzed in accordance with the requirements for permitted LMUs. The permittee is prohibited from delivering manure, wastewater, and sludge to an operator of a third-party field once the soil test phosphorus analysis shows a level equal to or greater than 200 ppm in Zone 1 (0-6 inches if incorporated, 0-2 or 2-6 inch if not incorporated) depth or after becoming aware that the third-party operator is not following the specified requirements and the contract. The permittee will be subject to enforcement action for violations of the land application requirements on any third-party field. The third-party fields must be identified in the pollution prevention plan. The permittee must submit a quarterly report with the name, locations, and amounts of manure, wastewater, and sludge transferred to operators of third-party fields.

VIII. THREATENED OR ENDANGERED SPECIES

The discharge from this permit action is not expected to have an effect on any federal endangered or threatened aquatic or aquatic dependent species or proposed species or their critical habitat. This determination is based on the United States Fish and Wildlife Service's (USFWS) Biological Opinion on the State of Texas authorization of the Texas Pollutant Discharge Elimination System (TPDES) dated September 14, 1998 and the October 21, 1998 update. To make this determination for TPDES permits, TCEQ and Environmental Protection Agency only considered aquatic or aquatic dependent species occurring in watersheds of critical concern or high priority as listed in Appendix A of the USFWS Biological Opinion. This determination is subject to reevaluation due to subsequent updates or amendments to the Biological Opinion. The permit does not require Environmental Protection Agency review with respect to the presence of endangered or threatened species.

IX. PROCEDURES FOR FINAL DECISION

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant instructing the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the

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applicant to place a copy of the application in a public place for review and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application, and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

Once a draft permit is completed, it is sent, along with the Executive Director's preliminary decision, as contained in the fact sheet, to the Chief Clerk. At that time, Notice of Application and Preliminary Decision will be mailed to the people identified on the Office of the Chief Clerk mailing list and published in the newspaper. This notice sets a deadline for making public comments. The applicant must place a copy of the Executive Director's preliminary decision and draft permit in the public place with the application.

Any interested person may request a public meeting on the application. A public meeting is intended for the taking of public comment, and is not a contested case proceeding.

After the public comment deadline, the Executive Director prepares a response to all significant public comments on the application or the draft permit raised during the public comment period. The Chief Clerk then mails the Executive Director's Response to Comments and Final Decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that a person may request a contested case hearing or file a request for reconsideration of the Executive Director's decision within thirty (30) days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within thirty (30) days after the Executive Director's Response to Comments and Final Decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the Executive Director calls a public meeting or the Commission grants a contested case hearing as described above, the Commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the Commission will consider all public comments in making its decision and shall either adopt the Executive Director's response to public comments or prepare its own response.

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For additional information about this application, contact Joy Tegbe at (512)239-1318.



Joy Tegbe
CAFO Permits Team
Water Quality Assessment Section
Water Quality Division



Date

Attachment 1

	Existing Authorization #WQ0003259000 issued July 17, 2001	Proposed permit
Head Count	700	999
RCS Required Capacity (acre-feet)	22.00	41.43
RCS Actual Capacity (acre-feet)	15.67	Permit requires RCS enlargement to meet required capacity
Additional capacity (acre-feet)	6.33	Permit requires RCS enlargement to meet required capacity
PE certification of RCS design volumes	not required	required
Design rainfall criteria	25 year/24 hour rainfall event	25 year/10 day rainfall event
RCS management plan	not required	required
RCS depth marker	25 year/24 hour designation	25 year/10 day designation; and 1 foot graduations to bottom of pond
Management of sludge volume in RCS	not required in RCSs without treatment capacity	Clean out required when sludge volume meets or exceeds the sludge volume designed for the RCS. Sludge volume accumulations measured as needed first two years, then annually beginning in year 3 of the permit.
RCS discharge monitoring	monitored for fecal coliform, 5-day biochemical oxygen demand, total suspended solids, ammonia nitrogen, and any pesticide which the operator	monitored for all previous parameters plus total coliform, total dissolved solids, nitrate, and total phosphorus

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	has reason to believe could be in the discharge	
Chronic discharge determination	not required	required
Land application of sludge	based on nitrogen requirement of the crop	only in accordance with a phosphorus based nutrient management plan that accounts for elevated nutrient concentrations
Land application of manure and wastewater	based on nitrogen requirement of crop unless soil phosphorus levels exceed 200 ppm	in accordance with a phosphorus based nutrient management plan, unless soil phosphorus levels exceed 200 ppm
Phosphorus index risk assessment	not required	required
Additional manure removed from the facility	unlimited options for final disposition	compost facility, landfill or beneficially land applied outside the watershed, or beneficially land applied to third-party fields
Buffer distances between land application and surface water	100 ft	100 ft plus additional NRCS conservation practices
Nighttime land application	allowed	prohibited between 12 am and 4 am
Soil sampling notification	no notice required	regional office notification prior to sampling
Soil sampling	permittee collects annually	CNMS collects annually

Attachment 2

Permit Provision	Purpose
25 year/24 hour rainfall event to 25 year/10 day rainfall event	<ul style="list-style-type: none"> • 60% increase to the storage capacity reserved for chronic rainfall • an additional portion of the structure will remain dry, except during chronic or catastrophic rainfall events • will reduce potential for overflow
RCS management plan	<ul style="list-style-type: none"> • predicts expected end of the month water storage volumes for the RCS • requires permittee to manage water level accordingly • requires permittee to maintain minimum wastewater volume • will reduce potential for overflow
Monitor and record RCS wastewater level daily	<ul style="list-style-type: none"> • provides visual indication of compliance
One foot increments on pond marker	<ul style="list-style-type: none"> • identifies the level of wastewater storage to assist the permittee in the implementation of RCS management plan • enforcement tool
Maintain RCS sludge volume at or below designed sludge volume	<ul style="list-style-type: none"> • requires sludge removal to maintain the required wastewater storage capacity • will reduce overflows associated with insufficient wastewater storage capacity
Land application prohibited 12 am to 4 am	<ul style="list-style-type: none"> • reduces the potential of irrigation related discharges associated with equipment malfunctions
Nutrient Management Plan (based on crop requirement rate)	<ul style="list-style-type: none"> • 40 % reduction in land application rate by going from N rate to P rate • establishes the annual application rate based on annual soil analyses, phosphorus index, and management practices used at the facility • based on NRCS Practice Standard 590
Nutrient Utilization Plan (based on crop removal rate)	<ul style="list-style-type: none"> • stabilizes and/or reduces phosphorus on high phosphorus LMUs by establishing the annual application rate based on the amount of nutrients

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	removed by the previous year's harvest based on NRCS Practice Standard 590
CNMP	<ul style="list-style-type: none"> • whole farm mass balance of nutrients which considers all inputs, onsite use and treatment, outputs, and losses. • Inputs include animal feed, purchased animals, fertilizer • Outputs include animals sold, harvested crops removed from facility, and manure removed from the facility • Losses include volatilization, runoff, and leaching
Excess manure must go to compost, landfill, outside of watershed, or third-party fields	<ul style="list-style-type: none"> • limits unregulated use of manure within the watershed • offsite use incurs additional record-keeping to document how excess manure is used. • provides mechanism to track 50% voluntary removal goal in TMDL
Chronic discharge determination	<ul style="list-style-type: none"> • discharges resulting from chronic conditions are more closely scrutinized by TCEQ Regional Office • validates chronic conditions claim • provides documentation to TCEQ for enforcement of unauthorized discharge
Soil sampling notification	<ul style="list-style-type: none"> • allows the TCEQ to observe sample collection and/or obtain split samples for duplicate analysis • assures data collected is credible to support application rates in nutrient management plan
Soil sampling by technical service provider	<ul style="list-style-type: none"> • ensures that samples are collected by unbiased individuals who are knowledgeable about soil sampling techniques and sample preservation
Conservation Practices for LMUs adjacent to water of the state (100 foot vegetative buffer, filter strips, vegetative barrier, contour buffer strips)	<ul style="list-style-type: none"> • reduce erosion, suspended solids, pathogens, and nutrients in runoff from LMUs. • site specific conditions and NRCS practice standards specifies which Conservation Practices must be implemented



TPDES Permit No. WQ0003259000
This Permit supersedes and replaces
Registration No. WQ0003259000 issued on
July 17, 2001.
[For TCEQ use only EPA ID No. TX0129291]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P.O. Box 13087
Austin, Texas 78711-3087

TPDES PERMIT FOR CONCENTRATED ANIMAL FEEDING OPERATIONS

under provisions of
Section 402 of the Clean Water Act
Chapter 26 of the Texas Water Code

I. Permittee:

- A. Owner Gerben Leyendekker
- B. Business Name Leyendekker Dairy
- C. Owner Address 2335 County Road 261
Dublin, Texas, 76446

II. Type of Permit: Major Amendment / Water Quality

III. Nature of Business Producing Waste: Concentrated Animal Feeding Operation (CAFO);
dairy cattle; SIC No. 2410

IV. General Description and Location of Waste Disposal System:

Maximum Capacity: 999 total head, of which 999 are milking

Site Plan: See Attachment A.

Retention Control Structure (RCS) total required capacities without freeboard (acre-feet):
RCS #1- 41.43.

Land Management Units (LMUs) (acres): LMU #1-57, LMU #1A-25, LMU #2-35,
LMU #3-33, LMU #4-109, LMU #5-87. See Attachment B for locations.

Location: The facility is located on the south side of County Road 261 approximately 3
miles east of its intersection with Farm-to-Market Road 219, in Erath County, Texas.

Latitude: 31° 57' 18"N Longitude: 98° 11' 27"W. See Attachment C.

Drainage Basin: The facility is located in the drainage area of the North Bosque River in
Segment No. 1226 of the Brazos River Basin.

This Permit contained herein shall expire at midnight, five years after the date of Commission approval.

ISSUED DATE:

For the Commission

- V. Definitions. All definitions in Chapter 26 of the Texas Water Code, 30 Texas Administrative Code (TAC) Chapters 305 and 321, Subchapter B shall apply to this permit and are incorporated by reference.
- VI. Permit Applicability and Coverage
- A. Discharge Authorization. No discharge is authorized by this permit except as allowed by the provisions in this permit and 40 Code of Federal Regulations Chapter 412, which is adopted by reference in 30 TAC Chapter 305.541.
- B. Application Applicability. The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.
- C. Air Quality Authorization. This facility meets the requirements of a permit by rule under 30 TAC §106.161 for air quality authorization.
- VII. Pollution Prevention Plan (PPP) Requirements
- A. Technical Requirements
1. PPP General Requirements
- (a) The permittee shall update and implement a PPP for this facility upon issuance of this permit. The PPP shall:
- (1) be prepared in accordance with good engineering practices;
 - (2) include measures necessary to limit the discharge of pollutants to surface water in the state;
 - (3) describe and ensure the implementation of practices which are to be used to assure compliance with the limitations and conditions of this permit;
 - (4) include all information listed in Section VII.A.;
 - (5) identify specific individual(s) who is/are responsible for development, implementation, operation, maintenance, inspections, recordkeeping, and revision of the PPP. The activities and responsibilities of the pollution prevention personnel shall address all aspects of the facility's PPP;
 - (6) be signed by the permittee or other signatory authority in accordance with 30 TAC §305.44 (relating to Signatories to Applications); and
 - (7) be retained on site.
- (b) The permittee shall amend the PPP:
- (1) before any change in the number or configuration of LMUs;
 - (2) before any increase in the maximum number of animals;
 - (3) before operation of any new control facilities;
 - (4) before any change that has a significant effect on the potential for the discharge of pollutants to water in the state;
 - (5) if the PPP is not effective in achieving the general objectives of

- controlling discharges of pollutants from the production area or LMUs; or
- (6) within 90 days following written notification from the executive director that the plan does not meet one or more of the minimum requirements of this permit.
- (c) Maps. The permittee shall maintain the following maps as part of the PPP.
- (1) Site Map. The permittee shall update the site map as needed to reflect the layout of the facility. The map shall include, at a minimum, the following information: facility boundaries; pens; barns; berms; open lots; manure storage areas; RCS or other control facilities; LMUs; water wells, abandoned and in use, which are on-site or within 500 feet of the facility boundary; and all springs, lakes, or ponds located on-site or within one mile of the facility boundary.
 - (2) Land Application Map. Natural Resource Conservation Service (NRCS) soil survey maps of all LMUs shall depict:
 - (i) the boundary of each LMU and acreage;
 - (ii) all buffer zones required by this permit; and
 - (iii) the unit name and symbol of all soils in the LMU.
- (d) Potential Pollutant Sources/Site Evaluation.
- (1) Potential Pollutant Sources. The PPP shall include a description of potential pollutant sources and indicate all measures that will be used to prevent contamination from the pollutant sources. Potential pollutant sources include any activity or material that may reasonably be expected to add pollutants to surface water in the state from the facility.
 - (2) Soil Erosion. The PPP shall identify areas that, due to topography, activities, or other factors, have a high potential for significant soil erosion. If these areas have the potential to contribute pollutants to surface water in the state, the PPP shall identify measures used to limit erosion and pollutant runoff.
 - (3) Control Facilities. The PPP shall include the location and a description of control facilities. The control facilities shall be appropriate for the identified sources of pollutants at the CAFO.
 - (4) Recharge Feature Certification. The recharge feature certification submitted in the permit application shall be implemented, updated by the permittee as often as necessary, and maintained in the PPP.
 - (5) 100-year Floodplain. All control facilities, including holding pens and RCS, shall be located outside of the 100-year floodplain or protected from inundation and damage that may occur during the flood.
- (e) Spill Prevention and Recovery. The permittee shall take appropriate measures necessary to prevent spills and to clean up spills of any toxic pollutant. Where potential spills can occur, materials, handling procedures and storage shall be specified. The permittee shall identify the procedures for

cleaning up spills and shall make available the necessary equipment to personnel to implement a clean up. The permittee shall store, use, and dispose of all herbicides and pesticides in accordance with label instructions. There shall be no disposal of herbicides, pesticides, solvents or heavy metals, or of spills or residues from storage or application equipment or containers into the RCS. Incidental amounts of such substances entering a RCS as a result of stormwater transport of properly applied chemicals is not a violation of this permit.

2. Discharge Restrictions and Monitoring Requirements.
- (a) Discharge Restrictions. Wastewater may be discharged to waters in the state from a properly designed, constructed, operated and maintained RCS whenever chronic or catastrophic rainfall events, or catastrophic conditions cause an overflow. There shall be no effluent limitations on discharges from RCS which meet the above criteria.
- (b) Monitoring Requirements. The permittee shall sample and analyze all discharges from the RCS for the following parameters:

Parameter	Sample Type	Sample Frequency
BOD ₅	Grab	1/day ¹
Total Coliform	Grab	1/day ¹
Fecal Coliform	Grab	1/day ¹
Total Dissolved Solids (TDS)	Grab	1/day ¹
Total Suspended Solids (TSS)	Grab	1/day ¹
Nitrate (N)	Grab	1/day ¹
Total Phosphorus	Grab	1/day ¹
Ammonia Nitrogen	Grab	1/day ¹
Pesticides ²	Grab	1/day ¹

¹ Sample shall be taken within the first thirty (30) minutes following the initial discharge and then once per day while discharging.

² Any pesticide which the permittee has reason to believe could be present in the wastewater.

- (c) If the permittee is unable to collect samples due to climatic conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.), the permittee shall document why discharge samples could not be collected. Once dangerous conditions have passed, the permittee shall conduct the required sampling.

3. RCS Design and Construction

(a) RCS Certifications

- (1) The permittee shall ensure that the design and completed construction of modified RCS (See Special Provision X.A.) is certified by a licensed Texas Professional Engineer prior to use. The certification shall be signed and sealed in accordance with the Texas State Board of Professional Engineers requirements.
- (2) Documentation of liner and capacity certifications must be completed for the RCS prior to use and kept on-site in the PPP. Once construction is complete, new capacity and liner certifications for RCS #1 will be provided. The table below shows current liner and capacity certifications provided in the permit application.

RCS #	Liner Certification Date	Existing Capacity Certification	
		Date	Volume (acre-feet)
1	April 07, 2001	March 2008	15.67
Settling Basin	May 08, 1990	Not Applicable	

- (b) Design and Construction Standards. The permittee shall ensure that the RCS is designed and constructed in accordance with the technical standards developed by the NRCS, American Society of Agricultural Engineers, American Society of Civil Engineers, or American Society of Testing Materials that are in effect at the time of construction. Where site-specific variations are warranted, a licensed Texas Professional Engineer must document these variations and their appropriateness to the design.
- (c) RCS Drainage Area
 - (1) The permittee shall describe in the PPP and implement measures that will be used to minimize entry of uncontaminated stormwater into the RCS.
 - (2) The permittee shall maintain the drainage area to minimize ponding or puddling of water outside the RCS.
- (d) RCS Sizing.
 - (1) The design plan must include documentation describing the sources of information, assumptions and calculations used in determining the appropriate volume capacity and structural features of the RCS, including embankment and liners.
 - (2) Design Rainfall Event. The RCS authorized under this permit shall be designed and constructed to meet or exceed the margin of safety, equivalent to the volume of runoff and direct precipitation from the 25 year/10 day rainfall event. The design rainfall event for this CAFO is 12.0 inches.

- (3) Any RCS capacity that is greater than the minimum capacity required by this permit may be allocated to additional sludge storage volume, which will increase the design sludge cleanout interval for the RCS. The new sludge cleanout interval will be identified in the RCS management plan maintained in the PPP, the stage storage tables will accurately reflect the new volumes, and the pond markers will visually identify the new volume levels.
- (e) Irrigation Equipment Design. The permittee shall ensure that the irrigation system design is capable of removing wastewater from the RCS on a regular schedule. Equipment capable of dewatering the RCS shall be available and operational whenever needed to restore the operating capacity required by the RCS management plan.
- (f) Embankment Design and Construction. The RCS has a depth of water impounded against the embankment at the spillway elevation of three feet or more, therefore it is considered to be designed with an embankment. The PPP shall include a description of the design specifications for the RCS embankments. The following design specifications are required for the modified portions of the existing RCS.
 - (1) Soil Requirements. Soils used in the embankment shall be free of foreign material such as rocks larger than 4 inches, trash, brush, and fallen trees.
 - (2) Embankment Lifts. The embankment shall be constructed in lifts or layers no more than eight (8) inches compacted to six (6) inches thick at a minimum compaction effort of 95 percent (%) Standard Proctor Density (ASTM D698) at -1% to +3% of optimum moisture content.
 - (3) Stabilize Embankment Walls. All embankment walls shall be stabilized to prevent erosion or deterioration.
 - (4) Compaction Testing. Embankment construction must be accompanied by certified compaction tests including in place density and moisture in accordance with ASTM D 1556, D 2167 or D 2937 for density and D 2216, D 4643, D 4944 or D 4959 for moisture, or D 6938-07 for moisture and density. Compaction tests will provide support for the liner certification performed by a licensed Texas professional engineer as meeting a permeability no greater than 1×10^{-7} centimeters per second (cm/sec) over a thickness of 18 inches or its equivalency in other materials.
 - (5) Spillway or Equivalent Protection. The modified RCS, which is constructed with embankments, shall be constructed with a spillway or other outflow device properly sized according to NRCS design and specifications to protect the integrity of the embankment.
 - (6) Embankment Protection. The modified RCS must have a minimum of two (2) vertical feet of materials equivalent to those used at the time of design and construction between the top of the embankment

- and the structure's spillway.
- (g) RCS Liner Requirements. For all new construction and for all structural modifications of the existing RCSs, the RCS must have a liner consistent with one of the following:
- (1) In-situ Material. In-situ material is undisturbed, in-place, native soil material. In-situ materials must at least meet the minimum criteria for hydraulic conductivity and thickness and specific discharge as described in Section VII.A.3(g)(2) of this permit. Samples shall be collected and analyzed in accordance with Section VII.A.3(g)(3) of this permit. Additionally, each sample shall be analyzed for the percent passing a 200-mesh sieve, the liquid limit value, and the plasticity index value. Each sample must meet the following requirements: at least 30% of the material must pass through a 200-mesh sieve, the liquid limit must be equal to or greater than 30%, and the plastic index must be equal to or greater than 15. This documentation must be certified by a licensed Texas professional engineer or licensed Texas professional geoscientist.
 - (2) Constructed or Installed Liner.
 - (i) Constructed or installed liners must be designed by a licensed Texas professional engineer. The liner must be constructed in accordance with the design and certified as such by a licensed Texas professional engineer. Compaction tests and post construction sampling and analyses, conducted in accordance with Sections VII.A.3(f)(4) and VII.A.3(g)(3) of this permit, will provide support for the liner certification.
 - (ii) Liners shall be designed and constructed to have hydraulic conductivities no greater than 1×10^{-7} centimeters per second (cm/sec), with a thickness of 18 inches or its equivalency in other materials, and not to exceed a specific discharge through the liner of 1.1×10^{-6} cm/sec with a water level at spillway depth.
 - (iii) Constructed or installed liners must be designed and constructed to meet the soil requirements, lift requirements, and compaction testing requirements as listed in Section VII.A.3(f)(1), (2), and (4) of this permit.
 - (3) Liner Sampling and Analyses.
 - (i) The licensed Texas professional engineer or licensed Texas professional geoscientist shall use best professional practices to ensure that corings or other liner samples will be appropriately plugged with material that also meets liner requirements of this subsection.
 - (ii) Samples shall be collected in accordance with ASTM D 1587 or other method approved by the executive director. For the

- (ii) Samples shall be collected in accordance with ASTM D 1587 or other method approved by the executive director. For the RCSs, a minimum of one undisturbed sample shall be collected per plan surface acre at the spillway elevation. For the purpose of determining the number of samples to collect, surface acres shall be rounded up to the next whole acre. Distribution of the samples shall be representative of liner characteristics, and proportional to the surface area of the sidewalls and floor. Documentation shall be provided identifying the sample locations with respect to the RCSs liner.
 - (iii) Undisturbed samples shall be analyzed for hydraulic conductivity in accordance with ASTM D 5084 or other method approved by the executive director.
 - (5) Leak Detection System. If notified by the executive director that significant potential exists for the adverse impact of water in the state or drinking water from leakage of the RCSs, the permittee shall install a leak detection system or monitoring well(s) in accordance with that notice. Documentation of compliance with the notification must be kept with the PPP, as well as copies of all sampling data.
- 4. Special Considerations for Existing RCSs. An existing RCS that has been properly maintained without any modifications and has no apparent structural problems or leakage is considered to be properly designed with respect to the embankment design and construction and liner requirements of this permit, provided that any required documentation was completed in accordance with the requirements at the time of construction. If no documentation exists, the RCS must be certified by a licensed professional Texas engineer as providing protection equivalent to the requirements of this permit.
- 5. Operation and Maintenance of RCS
 - (a) RCS Operation and Maintenance
 - (1) The permittee must operate and maintain a margin of safety in the RCS to contain the volume of runoff and direct precipitation from the 25 year/10 day rainfall event.
 - (2) The permittee shall implement an RCS management plan incorporating the margin of safety developed by a licensed Texas professional engineer (See Special Provision X.A.3). The management plan shall become a component of the PPP, shall be developed for the RCS, and must describe or include:
 - (i) RCS management controls appropriate for the CAFO and the methods and procedures for implementing such controls;
 - (ii) the methods and procedures for proper operation and maintenance of the RCS consistent with the system design;
 - (iii) the appropriateness and priorities of any controls reflecting

- the identified sources of pollutants at the facility;
 - (iv) a stage/storage table for the RCS with minimum depth increments of one-foot, including the storage volume provided at each depth;
 - (v) a second table or sketch that includes increments of water level ranges for volumes of total design storage, including the storage volume provided at each specified depth (or water level) and the type of storage designated by that depth; and
 - (vi) the planned end of month storage volume anticipated for the RCS for each month of the year and the corresponding operating depth expected at the end of each month of the year, based on the design assumptions.
- (3) The wastewater level in the RCS shall be maintained at or below the maximum operating level expected during that month, according to the design of the RCS. When rainfall volumes exceed average rainfall data used in design calculations planned end of month storage volumes may encroach into the design storm event storage provided that documentation is available to support that the design parameters have been exceeded and that the RCS is otherwise being managed according to the RCS Management Plan criteria. In circumstances where the RCS has a water level exceeding the expected end of the month depth, the permittee shall document in the PPP why the level of water in the structure is not at or below the expected depth. Also, if the water level in the RCS encroaches into the storage volume reserved for the design rainfall event, the permittee must document, in the PPP, the conditions that resulted in this occurrence. As soon as irrigation is feasible and not prohibited by Section VII.A.8.(f) and (g), the permittee shall irrigate until the RCS water level is at or below the maximum operating level expected during that month.
- (4) Imminent Overflow. If the RCS is in danger of imminent overflow from chronic or catastrophic rainfall or catastrophic conditions, the permittee shall take reasonable steps to irrigate wastewaters to LMUs only to the extent necessary to prevent overflow from the RCS. If irrigation results in a discharge from the LMU, the permittee shall collect samples from the drainage pathway at the point of the discharge from the edge of the LMU where the discharge occurs, analyze the samples for the parameters listed in Section VII. A.2.(b), and provide the appropriate notifications as required by Section VIII.B of this permit and 30 TAC §321.44.
- (5) Permanent Pond Marker. The permittee shall install and maintain a permanent pond marker (measuring device) in the RCS, visible from the top of the levee to show the following:
 - (i) the volume for the design rainfall event;

- (ii) one-foot increments beginning from the bottom of the RCS to the top of the embankment or spillway; and
 - (iii) design volume levels for maximum sludge accumulation and operating volume (calculated process generated wastewater plus rainfall runoff minus evaporation) must be identifiable on the marker.
- (6) Rain Gauge. A rain gauge capable of measuring the design rainfall event shall be kept on site and properly maintained.
- (7) Sludge Removal. The permittee shall monitor sludge accumulation and depth, based upon the design sludge storage volume in the RCS. (See Special Provision X.E for additional requirements related to sludge monitoring.) Sludge shall be removed from the RCS in accordance with the design schedule for cleanout in the RCS Management Plan to prevent the accumulation of sludge from exceeding the designed sludge volume of the structure. Removal of sludge shall be conducted during favorable wind conditions that carry odors away from nearby receptors. Sludge may only be beneficially utilized by land application to a LMU if in accordance with a nutrient management plan or disposed of in accordance with Section VII.A.8(e) of this permit.
- (8) Liner Protection and Maintenance. The permittee shall maintain the liner to inhibit infiltration of wastewater. Liners must be protected from animals by fences or other protective devices. No tree shall be allowed to grow such that the root zone would intrude or compromise the structure of the liner or embankment. Any mechanical or structural damage to the liner shall be evaluated by a licensed Texas professional engineer within thirty (30) days of the damage.
- (9) Closure Requirements. A closure plan must be developed when the RCS will no longer be used and/or when the CAFO ceases or plans to cease operation. The closure plan shall be submitted to the appropriate regional office and the CAFO Permits Team of the Water Quality Division in Austin (MC-150) within ninety (90) days of when operation of the CAFO or the RCS terminates. The closure plan for the RCS must, at a minimum, be developed using standards contained in the NRCS Practice Standard Code 360 (Closures of Waste Impoundments), as amended, and using the guidelines contained in the Texas AgriLife Extension/ NRCS publication #B-6122 (Closure of Lagoons and Earthen Manure Storage Structures), as amended. The permittee shall maintain or renew its existing authorization and maintain compliance with the requirements of this permit until the facility has been closed.
6. General Operating Requirements
- (a) Flush/Scrape Systems. Flush/scrape systems shall be flushed/scraped in

- accordance with design criteria in the application.
- (b) Pen Maintenance. The permittee shall maintain earthen pens to ensure good drainage, minimize ponding, and minimize the entrance of uncontaminated storm water to the RCS.
 - (c) Carcass Disposal. Carcasses shall be collected within twenty four (24) hours of death and properly disposed of within three days of death in accordance with Texas Water Code, Chapter 26; Texas Health and Safety Code, Chapter 361; and 30 TAC Chapter 335 (relating to Industrial Solid Waste and Municipal Hazardous Waste) unless otherwise provided for by the commission. Animals must not be disposed of in any liquid manure or process wastewater system. Disposal of diseased animals shall also be conducted in a manner that prevents a public health hazard in accordance with Texas Agriculture Code, §161.004, and 4 TAC §31.3 and §58.31(b). The collection area for carcasses shall be addressed in the potential pollutant sources section of the PPP with management practices to prevent contamination of surface or groundwater; control access; and minimize odor.
 - (d) Manure and Sludge Storage
 - (1) Manure and sludge storage capacity requirements shall be based on manure and sludge production, land availability, and the NRCS Field Office Technical Guide (Part 651, Chapter 10) or equivalent standards. [See Special Provision X.G. for the storage requirements applicable to slurry collected from freestall barns.]
 - (2) When manure is stockpiled, it shall be stored in a well-drained area, and the top and sides of stockpiles shall be adequately sloped to ensure proper drainage and prevent ponding of water. Runoff from manure or sludge storage piles must be retained on site. If the manure or sludge areas are not roofed or covered with impermeable material, protected from external rainfall, or bermed to protect from runoff during the design rainfall event, the manure or sludge areas must be located within the drainage area of a RCS and accounted for in the design calculations of the RCS.
 - (3) Manure or sludge stored for more than thirty (30) days must be stored within the drainage area of the RCS or stored in a manner (i.e. storage shed, bermed area, tarp covered area, etc.) that otherwise prevents contaminated storm water runoff from leaving the storage area. All storage sites and structures located outside the drainage area shall be designated on the site map. Storage for more than thirty (30) days is prohibited in the 100-year floodplain.
 - (4) Temporary storage of manure or sludge shall not exceed thirty (30) days and is allowed only in LMUs or the RCS drainage area. Temporary storage of manure and sludge in the 100-year flood plain, near water courses or near recharge features is prohibited unless protected by berms or other structures to prevent inundation or

damage that may occur.

- (e) Composting. Composting on site is prohibited on this CAFO unless this permit is amended to include composting requirements.

7. Well Protection Requirements.

- (a) The permittee shall not locate or operate a new RCS, holding pen, or LMU within the following buffer zones:
 - (1) public water supply wells - 500 feet;
 - (2) wells used exclusively for private water supply - 150 feet; or
 - (3) wells used exclusively for agriculture irrigation - 100 feet.
- (b) Irrigation of wastewater directly over a well head will require a structure protective of the wellhead that will prevent contact from irrigated wastewater.
- (c) Construction of any new water wells must be done by a licensed water well driller.
- (d) All abandoned and unuseable wells shall be plugged according to 16 TAC §76.702.
- (e) The permittee may continue the operation and use of any existing holding pens and RCS located within the required well buffer zones provided they are in accordance with the facility's approved recharge feature evaluation and certification. Buffer zone variance documentation must be kept on-site and made available to TCEQ personnel upon request. A Well Buffer Exception request for Well #1, #2, #3 and #4 was submitted to and approved by the TCEQ Water Quality Assessment Team.

The table below shows the status of all wells on the facility and the BMPs used to protect them.

Well Number*	Status	BMPs
1	Producing	A steel sleeve located on a concrete slab, and the ground & slab sloping away from the well head
2	Producing	A steel sleeve located on a concrete slab, and the ground & slab sloping away from the well head
3	Producing	Concrete surface slab and building
4	Producing	Concrete surface slab and located up-gradient of manure source
5	Producing	Maintain 150 ft buffer
6	Producing	Maintain 150 ft buffer
7	Producing	Maintain 150 ft buffer
8	Producing	Maintain 150 ft buffer
9	Producing	Maintain 150 ft buffer

*Well Numbers correspond with Attachment D

8. Land Application

- (a) Nutrient Management Plan (NMP) Required. The certified NMP submitted in the permit application shall be implemented upon issuance of this permit. The plan shall be updated as appropriate or at a minimum of annually according to NRCS guidance for Practice Standard 590. The permittee shall make available to the executive director, upon request, a copy of the site specific NMP and documentation of the implementation.
- (b) Comprehensive Nutrient Management Plan (CNMP) required. The permittee must continue to operate under a CNMP certified by the Texas State Soil and Water Conservation Board.
- (c) Critical Phosphorus Level.
 - (1) When results of the annual soil analysis show a phosphorus level in the soil of more than 200 ppm but not more than 500 ppm in Zone 1 (0-6 inch incorporated; 0-2 or 2-6 inch if not incorporated) depth for a particular LMU or if ordered by the commission to do so in order to protect the quality of waters in the state, then the permittee shall:
 - (i) file with the executive director a new or amended nutrient utilization plan (NUP) with a phosphorus reduction

- component based on crop removal that is certified as acceptable by a person described in (3) below; or
- (ii) show that the level is supported by a NUP that is certified as acceptable by a person described in (3) below.
- (2) The permittee shall cease land application of wastewater, sludge, and manure to the affected area until the NUP has been approved by the TCEQ. After a NUP is approved, the permittee shall land apply in accordance with the NUP until soil phosphorus is reduced below the critical phosphorus level of 200 ppm extractable phosphorus. Thereafter, the permittee shall implement the requirements of the nutrient management plan.
- (3) NUP. A NUP is a NMP, based on NRCS Practice Standard Code 590, which utilizes a crop removal application rate. The NUP, based on crop removal, must be developed and certified by one of the following individuals or entities:
- (i) an employee of the NRCS;
 - (ii) a nutrient management specialist certified by the NRCS;
 - (iii) the Texas State Soil and Water Conservation Board;
 - (iv) the Texas AgriLife Extension;
 - (v) an agronomist or soil scientist on full-time staff at an accredited university located in the State of Texas; or
 - (vi) a Certified Professional Agronomist certified by the American Society of Agronomy, a Certified Professional Soil Scientist certified by the Soil Science Society of America, or a licensed Texas professional geoscientist-soil scientist after approval by the executive director based on a determination by the executive director that another person or entity identified in this paragraph cannot develop the plan in a timely manner.
- (4) When results of the annual soil analysis for extractable phosphorus indicate a level greater than 500 ppm in Zone 1 (0-6 inch incorporated; 0-2 or 2-6 inch if not incorporated) depth, the permittee shall file with the executive director a new or amended NUP with a phosphorus reduction component, based on crop removal, that is certified as acceptable by a person described in (3) above. After the new or amended NUP is approved, the permittee shall land apply in accordance with the NUP until soil phosphorus is reduced below 500 ppm extractable phosphorus.
- (5) If the permittee is required to have a NUP with a phosphorus reduction component based on crop removal, and if the results of tests performed on composite soil samples collected 12 months or more after the plan is filed do not show a reduction in phosphorus concentration in Zone 1 (0-6 inch incorporated; 0-2 or 2-6 inch if not incorporated) depth, then the permittee is subject to enforcement

- action at the discretion of the executive director.
- (d) Buffer Requirements. The permittee shall meet the following buffer requirements for each LMU:
- (1) Water in the state. The permittee shall not apply wastewater, sludge, and manure within the buffer distances as noted on Attachment B and Special Provision X.D. Vegetative buffers shall be maintained in accordance with NRCS Field Office Technical Guidance. The permittee shall maintain the filter strip (according to NRCS Code 393) between the vegetative buffer and the land application area. If the land application area is cropland the permittee shall install and maintain contour buffer strips (according to NRCS Code 332) within the land application area in addition to the buffer distances required by this permit.
 - (2) Water wells. The permittee shall comply with the well protection requirements listed in Section VII.A.7.
- (e) Exported wastewater, sludge, and/or manure. Wastewater, sludge, and/or manure removed from the operation shall be disposed of by:
- (1) delivery to a composting facility authorized by the executive director;
 - (2) delivery to a permitted landfill located outside of the major sole source impairment zone;
 - (3) beneficial use by land application to land located outside of the major sole source impairment zone;
 - (4) put to another beneficial use approved by the executive director; or
 - (5) providing wastewater, sludge, and/or manure to operators of third-party fields, i.e. areas of land in the major sole source impairment zone not owned, operated, controlled, rented, or leased by the CAFO owner or operator, that have been identified in the PPP.
 - (i) There must be a written contract between the permittee and the recipient that includes, but is not limited to, the following provisions:
 - (A) All transferred wastewater, sludge, and/or manure shall be beneficially applied to third-party fields identified in the PPP in accordance with the applicable requirements in 30 TAC §321.36 and §321.40 at an agronomic rate based on soil test phosphorus. The requirements for development or implementation of a nutrient management plan or nutrient utilization plan, under 30 TAC §321.40, do not apply to third-party fields.
 - (B) Manure and sludge must be incorporated on cultivated fields within forty-eight (48) hours after land application.
 - (C) Land application rates shall not exceed the crop

nitrogen requirement when soil phosphorus concentration in Zone 1 (0-6 inch incorporated; 0-2 or 2-6 inch not incorporated) depth is less than or equal to 50 ppm phosphorus.

- (D) Land application rates shall not exceed two times the phosphorus crop removal rate, and not to exceed the crop nitrogen requirement, when soil phosphorus concentration in Zone 1 (0-6 inch incorporated; 0-2 or 2-6 inch not incorporated) depth is greater than 50 ppm phosphorus and less than or equal to 150 ppm phosphorus.
- (E) Land application rates shall not exceed one times the phosphorus crop removal rate, and not to exceed the crop nitrogen requirement, when soil phosphorus concentration in Zone 1 (0-6 inch incorporated; 0-2 or 2-6 inch not incorporated) depth is greater than 150 ppm phosphorus and less than 200 ppm phosphorus.
- (F) Before commencing manure, wastewater, and/or sludge application to third-party fields, at least one representative soil sample from each third-party field must be collected by a certified nutrient management specialist and analyzed in accordance with 30 TAC §321.36. Third-party fields which have had wastewater, sludge, and/or manure applied during the preceding year must be sampled annually by a certified nutrient management specialist and the samples analyzed in accordance with 30 TAC §321.36. For third-party fields that have not received wastewater, sludge, and/or manure during the preceding year, initial sampling must be completed before re-starting land application to the third-party field.
- (G) A copy of the annual soil analyses shall be provided to the permittee within sixty (60) days of the date the samples were taken.
- (H) Temporary storage of wastewater, sludge, and/or manure is prohibited on third-party fields.
- (ii) The permittee is prohibited from delivering wastewater, sludge, and/or manure to an operator of a third-party field once the soil test phosphorus analysis shows a level equal to or greater than 200 ppm or after becoming aware that the third-party operator is not following appropriate provisions of 30 TAC §321.36, §321.40 and/or the contract.

- (iii) The permittee will be subject to enforcement action for violations of the land application requirements on any third-party field under contract.
 - (iv) The permittee shall submit records to the appropriate regional office quarterly that contain the name, locations, and amounts of wastewater, sludge, and/or manure transferred to operators of third-party fields.
 - (f) Irrigation Operating Requirements
 - (1) Minimize Ponding. Irrigation practices shall be managed so as to minimize ponding or puddling of wastewater on the site, prevent tailwater discharges to waters in the state, and prevent the occurrence of nuisance conditions.
 - (2) Discharge Prohibited.
 - (i) The drainage of wastewater, sludge, and manure is prohibited from a LMU, unless authorized under Section VII.A.5(a)(4).
 - (ii) Where wastewater, sludge, and manure is applied in accordance with the nutrient management plan and/or NUP, precipitation-related runoff from LMUs under the control of the permittee is authorized.
 - (iii) If a discharge from the irrigation system is documented as a violation, the permittee may be required by the executive director to install an automatic emergency shut-down or alarm system to notify the permittee of system problems.
 - (3) Backflow Prevention. If the permittee introduces wastewater or chemicals to water well heads for the purpose of irrigation, then backflow prevention devices shall be installed according to 16 TAC Chapter 76 (related to Water Well Drillers and Water Well Pump Installers).
 - (g) Nighttime Application.
 - (1) Land application at night shall only be allowed if there is no occupied residence(s) within one quarter (0.25) of a mile from the outer boundary of the actual area receiving wastewater, sludge, and manure application. In areas with an occupied residence within one quarter (0.25) of a mile from the outer boundary of the actual area receiving wastewater, sludge, and manure application, application shall only be allowed from one (1) hour after sunrise until one (1) hour before sunset, unless the current occupant of such residences have, in writing, agreed to specified nighttime applications.
 - (2) Land application of wastewater, sludge, and manure is prohibited between 12a.m. and 4a.m.
- 9. Sampling and Testing.
 - (a) Manure and Wastewater. The permittee shall collect and analyze at least one representative sample of wastewater and one representative sample of manure

each year for total nitrogen, total phosphorus, and total potassium. The results of these analyses shall be used in determining application rates.

(b) Soils.

- (1) Initial Sampling. Before commencing wastewater, sludge, and manure application to LMUs, the permittee shall have at least one representative soil sample from each of the LMUs collected and analyzed according to the following procedures.
- (2) Annual Sampling. The permittee shall have soil samples collected annually for each current and historical LMU.
- (3) Sampling Procedures. Sampling procedures shall employ accepted techniques of soil science for obtaining representative samples and analytical results, and be consistent with approved methods described in the executive director's guidance entitled "Soil Sampling for Nutrient Utilization Plans (RG-408)."
 - (i) Soil samples must be collected by one of the following persons:
 - (A) the NRCS;
 - (B) a certified nutrient management specialist;
 - (C) the Texas State Soil and Water Conservation Board;
 - (D) the Texas AgriLife Extension; or
 - (E) an agronomist or soil scientist on full-time staff at an accredited university located in the State of Texas.
 - (ii) Samples shall be collected and analyzed within the same forty-five (45) day time frame each year, except when crop rotations or inclement weather require a change in the sampling time. The reason for a change in sampling timeframe shall be documented in the PPP.
 - (iii) Obtain one composite sample for each soil depth zone per uniform soil type (soils with the same characteristics and texture) within each LMU.
 - (iv) Composite samples shall be comprised of 10 - 15 randomly sampled cores obtained from each of the following soil depth zones:
 - (A) Zone 1: 0-6 inches (where the manure, sludge, or slurry, is physically incorporated or injected directly into the soil) or 0-2 inches (where the manure, sludge or slurry is not incorporated into the soil). Wastewater is considered to be incorporated upon land application if it is less than two percent (2%) solids. Slurry from freestall barns is treated like manure for this sampling requirement. If a 0-2 inch sample is required, then an additional sample from the 2-6 inch soil depth zone shall be obtained in accordance with the provisions of this section; and

- (B) Zone 2: 6-24 inches.
- (4) Laboratory Analysis. Samples shall be analyzed by a soil testing laboratory. Physical and chemical parameters and analytical procedures for laboratory analysis of soil samples shall include the following:
- (i) nitrate reported as nitrogen in ppm;
 - (ii) phosphorus (extractable, ppm) using Mehlich III with Inductively Coupled Plasma (ICP);
 - (iii) potassium (extractable, ppm);
 - (iv) sodium (extractable, ppm);
 - (v) magnesium (extractable, ppm);
 - (vi) calcium (extractable, ppm);
 - (vii) soluble salts (ppm) or electrical conductivity (dS/m) - determined from extract of 2:1 (v/v) water/soil mixture; and
 - (viii) soil water pH (soil:water, 1:2 ratio).
10. Preventative Maintenance Program.
- (a) Facility Inspections
- (1) General Requirements
 - (i) Inspections shall include visual inspections and equipment testing to determine conditions that could cause breakdowns or failures resulting in discharge of pollutants to water in the state or the creation of a nuisance condition.
 - (ii) The permittee shall draft a report, to be maintained in the PPP, to document the date of inspections, observations and actions taken in response to deficiencies identified during the inspection. The permittee shall correct all the deficiencies within thirty (30) days or shall document the factors preventing immediate correction.
 - (2) Daily Inspections. The permittee shall conduct daily inspections on all water lines, including drinking water and cooling water lines, which are located within the drainage area of the RCS.
 - (3) Weekly Inspections. The permittee shall conduct weekly inspections on:
 - (i) all control facilities, including RCS, storm water diversion devices, runoff diversion structures, control devices for management of potential pollutant sources, and devices channeling contaminated storm water to RCS; and
 - (ii) equipment used for land application of wastewater, sludge, and manure.
 - (4) Monthly Inspections. The permittee shall conduct monthly inspections on:
 - (i) mortality management systems, including collection areas; and

- (ii) disposal and storage of toxic pollutants, including pesticide containers.
 - (5) Annual Site Inspection.
 - (i) The permittee shall annually conduct a complete site inspection of the production area and LMUs.
 - (ii) The inspection shall verify that:
 - (A) the description of potential pollutant sources is accurate;
 - (B) the site plan/map has been updated or otherwise modified to reflect current conditions;
 - (C) the controls outlined in the PPP to reduce pollutants and avoid nuisance conditions are being implemented and are adequate; and
 - (b) Five Year Evaluation. Once every five years the permittee shall have a licensed Texas professional engineer review the existing engineering documentation, complete a site evaluation of the structural controls, review existing liner and RCS capacity documentation, and complete and certify a report of their findings. The report must be kept in the PPP.
11. Management Documentation. The permittee shall maintain the following records in the PPP:
- (a) a copy of the administratively complete and technically complete individual water quality permit application and the written authorization issued by the commission or executive director;
 - (b) a copy of the approved recharge feature certification and appropriate updates;
 - (c) a copy of the comprehensive nutrient management plan, nutrient management plan, nutrient utilization plan and appropriate updates to these plans, if required;
 - (d) the RCS liner certifications;
 - (e) any written agreement with a landowner which documents the allowance of nighttime application of wastewater, sludge, and manure;
 - (f) documentation of employee and operator training, including verification of the date, time of attendance, and completion of training;
 - (g) the RCS management plan;
 - (h) the capacity of the RCS, as certified by a licensed Texas professional engineer; and
 - (i) a copy of all third-party field contracts.

B. General Requirements

1. The permittee shall not construct any component of the production area in any stream, river, lake, wetland, or playa (except as defined by and in accordance with the Texas Water Code §26.048).
2. Animals confined on the CAFO shall be restricted from coming into direct contact with surface water in the state through the use of fences or other controls.

3. The permittee shall prevent the discharge of pesticide and herbicide contaminated waters into surface water in the state. All wastes from dipping vats, pest and parasite control units, and other facilities used for the application of potentially hazardous or toxic chemicals shall be handled and disposed of in a manner that prevents any significant pollutants from entering water in the state or creating a nuisance condition.
4. The permittee shall operate the CAFO in such a manner as to prevent nuisance conditions of air pollution as mandated by Texas Health and Safety Code, Chapters 341 and 382.
5. The permittee shall take reasonable steps necessary to prevent adverse effects to human health or safety, or to the environment.
6. The permittee shall maintain control of the RCS, required LMUs, and control facilities identified on the site map submitted in the application. In the event the permittee loses control of any of these areas, the permittee shall notify the executive director within five (5) working days.
7. If animals are maintained in pastures, the permittee shall maintain crops, vegetation, forage growth or post harvest residues in those pastures during the normal growing season, excluding the feed and/or water trough areas and open lots designated on the site map.

C. Training

1. Employee Training
 - (a) CAFO employees who are responsible for work activities relating to compliance with provisions of this permit must be regularly trained or informed of any information pertinent to the proper operation and maintenance of the facility and land application of manure, sludge, and wastewater.
 - (b) Employee training shall address all levels of responsibility of the general components and goals of the PPP. Training shall include appropriate topics, such as land application of manure, sludge, and wastewater, proper operation and maintenance of the facility, good housekeeping, material management practices, recordkeeping requirements, and spill response and clean up.
 - (c) The permittee is responsible for determining the appropriate training frequency for different levels of personnel. The PPP shall identify periodic dates for such training.
2. Operator Training. The operator shall attend and complete at least eight (8) hours of continuing education in animal waste management or its equivalent, developed by the executive director and the Texas AgriLife Extension, for each two year period.
3. Verification of the date and time(s) of attendance and completion of required training shall be documented in the PPP.

VIII. Recordkeeping, Reporting, and Notification Requirements

- A. Recordkeeping.** The permittee shall keep records on site for a minimum of five (5) years

from the date the record was created and shall submit them within five (5) days of a written request by the executive director.

1. The permittee shall update records daily to include:
 - (a) all measurable rainfall events; and
 - (b) the wastewater levels in the RCS, as shown on the depth marker. In circumstances where the RCS has a water level exceeding the expected end of the month depth, the permittee shall document in the PPP why the level of water in the structure is not at or below the expected depth.
2. The permittee shall update records weekly to include:
 - (a) records of all wastewater, sludge, and/or manure removed from the CAFO that shows the dates, amount, and recipient. The permittee must make the most recent nutrient analysis available to any hauler; and
 - (b) inspections of control facilities and land application equipment.
3. The permittee shall update records monthly to include:
 - (a) records describing mortality management practices;
 - (b) storage and disposal of chemicals, including pesticide containers; and
 - (c) records of all wastewater, sludge, and manure applied on LMUs. Such records must include the following information:
 - (i) date of wastewater, sludge, and manure application to each LMU;
 - (ii) location of the specific LMU and the volume applied during each application event;
 - (iii) acreage on which wastewater, sludge, and manure is applied;
 - (iv) basis for and the total amount of nitrogen and phosphorus applied per acre to each LMU on a dry basis, including sources of nutrients other than wastewater, sludge, and manure; and
 - (v) weather conditions, such as temperature, precipitation, and cloud cover, during the land application and twenty-four (24) hours before and after the land application.
4. The permittee shall update records annually to include:
 - (a) annual nutrient analysis for at least one representative sample of wastewater and one representative sample of manure for total nitrogen, total phosphorus, and total potassium;
 - (b) any initial and annual soil analysis reports;
 - (c) the annual site inspection report;
 - (d) percent moisture content of the manure, sludge, slurry, and wastewater; and
 - (e) actual annual yield of each harvested crop for each LMU.
5. The Five Year Evaluation report must be updated every five (5) years.
6. The permittee shall keep the following records on-site:
 - (a) a list of any significant spills of potential pollutants at the CAFO that have a significant potential to reach water in the state;
 - (b) documentation of liner maintenance by an NRCS engineer, a licensed Texas professional engineer or a licensed Texas professional geoscientist;
 - (c) RCS design calculations and as built capacity certification;

- (d) embankment certification;
- (e) liner certification;
- (f) a copy of current and amended site plans; and
- (g) copies of all notifications to the executive director, including any made to a regional office.

B. Reporting and Notifications

1. The permittee shall provide written notice to the appropriate TCEQ regional office as soon as the RCS cleaning is scheduled, but not less than ten (10) days before cleaning. The permittee shall also provide written verification of completion to the same regional office within five days after the cleaning has been completed. This paragraph does not apply to the cleaning of solid separators or settling basins that are functioning as solid separators.
2. The permittee shall notify the appropriate TCEQ regional office in writing or by electronic mail with the date, time, and location at least ten (10) working days before collecting soil samples from current and historical LMUs; and third-party fields.
3. Discharge notification. If for any reason there is a discharge of manure, sludge or wastewater into water in the state, the permittee shall notify the appropriate TCEQ regional office orally within one (1) hour of discovery; unless it is not reasonably possible to do so in which event the discharge shall be reported as soon as reasonably possible, but in no event later than twenty-four (24) hours from when the discharge occurred. The permittee shall also submit written notice, within fourteen (14) working days of the discharge to the Office of Compliance and Enforcement, Enforcement Division (MC 224). In addition, the permittee shall document the following information, keep the information on site, and submit the information to the appropriate regional office within fourteen (14) working days of becoming aware of such discharge. The written notification must include:
 - (a) A description and cause of the discharge, including a description of the flow path to the receiving water body and an estimation of the volume discharged;
 - (b) The period of discharge, including exact dates and times, and, if not corrected, the anticipated time the discharge is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the discharge;
 - (c) If caused by a precipitation event(s), the date(s) of the event(s) and the rainfall amount(s) recorded from an on-site rain gauge; and
 - (d) Discharge monitoring analyses required by this permit.
4. In the event of a discharge of manure, sludge, or wastewater from the RCS or a LMU during a chronic or catastrophic rainfall event or resulting from catastrophic conditions, the permittee shall orally notify the appropriate TCEQ regional office within one (1) hour of the discovery of the discharge. The permittee shall send written notification to the appropriate regional office within fourteen (14) working days.
5. Chronic Rainfall Discharge. In the event of a discharge of manure, sludge or

wastewater from the RCS or a LMU due to chronic rainfall, the permittee shall submit a report to the appropriate TCEQ regional office showing the CAFO records that substantiates that the overflow was a result of cumulative rainfall that exceeded the design rainfall event without the opportunity for dewatering, and was beyond the control of the permittee. After review of the report, if required by the executive director, the permittee shall have an engineering evaluation by a licensed Texas professional engineer developed and submitted to the executive director. This requirement is in addition to the discharge notification requirement in this permit.

6. Impacts to Human Health or Safety, or the Environment. The permittee shall provide the following noncompliance notifications:
 - (a) Any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally, e-mail, or electronic facsimile transmission (FAX) to the TCEQ regional office within twenty four (24) hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the TCEQ regional office and the Enforcement Division (MC 224) within five (5) days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times. If the noncompliance has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance and to mitigate its adverse effects.
 - (b) In the event the permittee discharges manure, sludge, or wastewater other than as authorized in the permit, the permittee shall give twenty four (24) hour oral, email, or fax notice and five (5) day written notice to TCEQ as required by paragraph (a) above.
7. The permittee shall submit an annual report to the appropriate regional office and the Enforcement Division (MC 224) by February 15 of each year for the reporting period of January 1 to December 31 of the previous year. The report shall be submitted on forms prescribed by the executive director to include, but not limited to:
 - (a) number and type of animals, whether in open confinement or housed under roof;
 - (b) estimated total manure, sludge, and wastewater generated during the reporting period;
 - (c) total wastewater, sludge, and manure land applied during the last twelve (12) months on-site at the CAFO facility;
 - (d) total wastewater, sludge, and/or manure transferred to other persons during the reporting period;
 - (e) total number of acres for land application under the control of the permittee and all third-party acreage;
 - (f) summary of discharges of manure, sludge, or wastewater from the production

- area that occurred during the reporting period including dates, times, and approximate volume;
- (g) a statement indicating that the NMP/NUP, under which the CAFO is operating, was developed and approved by a certified nutrient management specialist;
 - (h) a copy of the initial soil analysis for each new LMU, regardless of whether manure, wastewater, or sludge has been applied;
 - (i) soil monitoring reports of all soil samples collected in accordance with the requirements of this permit;
 - (j) groundwater monitoring reports (if applicable); and
 - (k) any other information requested by the executive director.
8. The permittee shall furnish to the appropriate regional office, the Enforcement Division (MC 224), and the Water Quality Assessment Team (MC 150) soil testing analysis of all soil samples within sixty (60) days of the date the samples were taken in accordance with the requirements of this permit.

IX. Standard Permit Conditions

- A. The permittee has a duty to comply with all permit conditions. Failure to comply with any permit condition is a violation of the permit and statutes under which it was issued and is grounds for enforcement action, for permit amendment, revocation or suspension, or for denial of a permit renewal application or an application for a permit for another facility.
- B. The permittee must apply for an amendment or renewal before the expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. Authorization to continue such activity terminates upon the effective denial of said permit.
- C. It is not a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the permit conditions.
- D. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation which has a reasonable likelihood of adversely affecting human health or the environment.
- E. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) installed or used by the permittee to achieve compliance with the permit conditions. Proper operation and maintenance also includes adequate laboratory and process controls, and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the permit conditions.
- F. The permittee shall furnish any information, at the request of the Executive Director, that is necessary to determine whether cause exists for revoking, suspending, or terminating authorization under this permit. The requested information must be provided within a reasonable time frame and in no case later than 30 days from the date of the request.
- G. The permittee shall give notice to the Executive Director before physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements.
- H. Authorization from the commission is required before beginning any change in the permitted facility or activity that would result in noncompliance with other permit requirements.
- I. Inspection and entry shall be allowed under Texas Water Code, Chapters 26-28, Health and Safety Code, §§361.032-361.033 and §361.037, and 40 Code of Federal Regulations (CFR) §122.41(I). The statement in Texas Water Code, §26.014 that the commission entry of a facility shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection is not grounds for denial or restriction of entry to any part of the facility, but merely describes the commission's duty to observe appropriate rules and regulations during inspection.

- J. Standard monitoring requirements
1. Samples required by this permit shall be collected and measurements shall be taken at times and in a manner so as to be representative of the monitored discharge or activity. Samples shall be delivered to the laboratory immediately upon collection, in accordance with any applicable analytical method and required maximum holding time. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§319.11 - 319.12. Measurements, tests and calculations shall be accurately accomplished in a representative manner.
 2. Records of monitoring activities must include:
 - (a) the date, time, and place of sample or measurement;
 - (b) the identity of any individual who collected the sample or made the measurement;
 - (c) the chain-of-custody procedures used to maintained sample integrity from sample collection to laboratory delivery;
 - (d) the date and time of laboratory analysis;
 - (e) the identity of the individual and laboratory who performed the analysis;
 - (f) the technique or method of analysis; and
 - (g) the results of the analysis or measurement and quality assurance/quality control records.
 3. The permittee shall ensure that properly trained and authorized personnel monitor and sample the soil or wastewater related to any permitted activity.
- K. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly shall be reported to the executive director as promptly as possible.
- L. A permit may be transferred only according to the provisions of 30 TAC §305.64 (relating to Transfer of Permits) and 30 TAC §305.97 (relating to Action on Application for Transfer).
- M. PPPs, reports, and other information requested or required by the Executive Director shall be signed in accordance with the requirements of 30 TAC §305.128 (relating to Signatories to Reports).
- N. A permit may be amended, suspended and re-issued, or revoked for cause. The filing of a request by the permittee for a permit amendment, suspension and re-issuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- O. A permit does not convey any property rights of any sort or any exclusive privilege.
- P. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date.
- Q. If the permittee becomes aware that he/she failed to submit any relevant facts in a permit application, or submitted incorrect information in an application, or in any report to the executive director, the permittee shall promptly submit such facts or information.
- R. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code, §§26.136, 26.212, and 26.213, for violations including but not limited to the following:
 1. negligently or knowingly violating Clean Water Act (CWA) §§301, 302, 306, 307, 308, 318, or 405 or any condition or limitation implementing any sections in a permit issued under CWA §402, or any requirement imposed in a pretreatment program approved under CWA §402(a)(3) or §402(b)(8);
 2. falsifying, tampering with, or knowingly rendering inaccurate any monitoring device or method required to be maintained under a permit; or
 3. knowingly making any false statement, representation, or certification in any record or other document submitted or required to be maintained under a permit, including monitoring reports or reports of compliance or noncompliance.
- S. The permittee shall comply with all applicable rules and regulations of the commission, including 30 TAC 321, Subchapter B.
- T. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:
 1. Violation of any terms or conditions of this permit;

- 2. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- 3. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- U. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- V. In accordance with the Texas Water Code § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.
- W. The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
- X. Notice of Bankruptcy.
 - 1. Each permittee shall notify the executive director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
 - (a) the permittee;
 - (b) an entity (as that term is defined in 11 USC, §101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or
 - (c) an affiliate (as that term is defined in 11 USC, §101(2)) of the permittee.
 - 2. This notification must indicate:
 - (a) the name of the permittee;
 - (b) the permit number(s);
 - (c) the bankruptcy court in which the petition for bankruptcy was filed; and
 - (d) the date of filing of the petition.

X. Special Provisions

A. RCS Modifications.

- 1. The permittee shall modify existing RCS #1 to meet the total required capacity as listed on page 1 of this permit. Modifications shall comply with Section VII.A.3 of this permit. The table below indicates the minimum volume allocations for the RCS.

Volume Allocations for RCS (Acre-feet)							
RCS #	Design Rainfall Event Runoff	Process Generated Wastewater	Minimum Treatment Volume	Sludge Accumulation	Water Balance	Required Capacity without Freeboard	Actual Capacity without Freeboard
1	30.25	1.74	0.00	4.14	5.31	41.43	15.67

Former RCS #1 will be converted into a settling basin and the former RCS #2 will become RCS #1.

- 2. **Compliance Schedule.** All RCS modifications required by this permit shall be completed within 180 days after the issuance date of this permit and prior to exceeding 700 head. Upon written request to the TCEQ Regional Office, the Executive Director may grant an extension to the 180 day requirement. However, all modifications must be completed prior to exceeding 700 head.

according to the NRCS practice standards in the referenced code. The map in Attachment B specifically describes the location and distance requirements for all buffers.

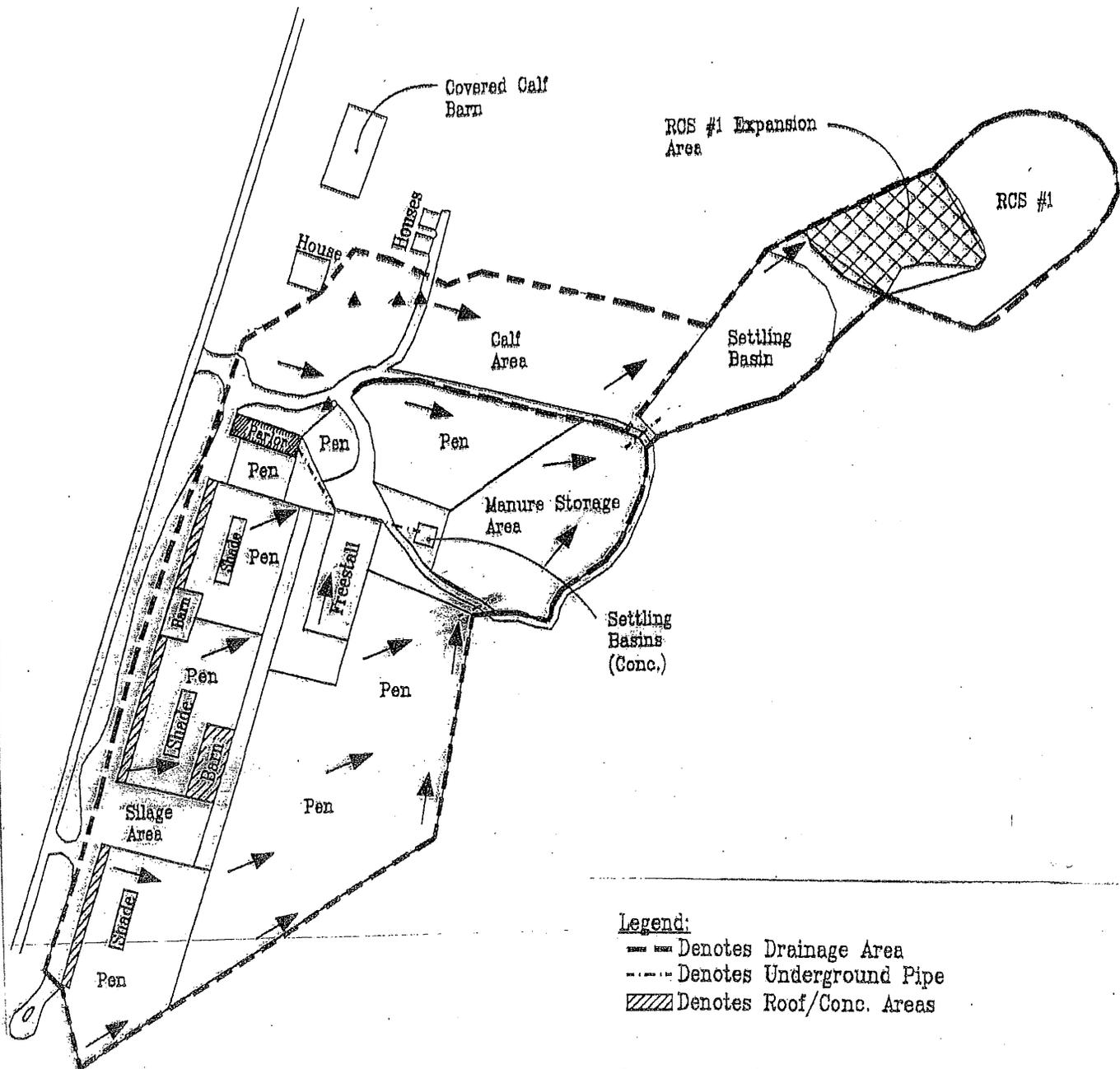
LMU #	Vegetative Buffer Setback (feet)	Additional Buffer Setback NRCS Code 393 Filter Strip flow length (feet)
1	Not Applicable	
1A	100	33
2	100	33
3	100	33-42
4	100	33
5	100	33

- E. The sludge volume in the RCS will be measured and recorded in the PPP as necessary, but at least annually beginning one year after the issuance of the permit.
- F. There will be no grazing of livestock on the LMUs for this CAFO unless the NMP reflects grazing and the grazing practices mentioned in the NRCS Conservation Practice Code 393, Filter Strip, are implemented to protect buffers.
- G. Slurry from freestall barns. (if vacuumed or scraped)
 - 1. For the purpose of this permit, slurry from freestall barns shall be defined as manure.
 - 2. If slurry from freestall barns is land applied, an annual sample must be collected and analyzed in accordance with Section VII.A.9(a), in addition to other manure and wastewater.
 - 3. Slurry removed from freestall barns must be stored within the drainage area of the RCS, and the storage area must be large enough to prevent overflow into settling basins and/or RCS. Any overflow of these storage basins shall be recorded in the PPP and notification shall be provided to the regional office within thirty (30) days. Based on review of the information this permit may be formally amended to require additional controls or other requirements.
- H. Settling basin solids.
 - 1. Settling basin solids shall be defined as manure
 - 2. If settling basin solids are land applied, an annual sample must be collected and analyzed in accordance with Section VII.A.9(a), in addition to other manure and wastewater.
- I. All runoff from silage, commodity, and hay storage outside the RCS drainage area will be contained. Appropriate provisions for that containment will be stated in the PPP upon issuance of the permit. This permit does not authorize any discharge from the silage, commodity, or hay storage areas located outside the drainage area of the RCS.
- J. Flush water from free-stall barns must be recycled water from the RCS.
- K. During the annual site inspection, the permittee will inspect the integrity of the concrete slab and well head of well #1, #2, #3, and #4. Integrity compromises, such as the cement slab cracking or corrosion, sanitary seal deterioration, cracks in the well casing, well house deterioration, erosion or channelization by water around the well house will be

repaired. Fertilizers and pesticides will not be stored in any structure that houses the water wellhead.

- L. Sludge must be analyzed for nutrient content prior to routing offsite for any land application. The analysis for each haul off shall be maintained in the PPP.
- M. Manure and settled solids accumulations in the settling basin must be removed on a regular and consistent basis so as to assure attainment of the 60% designed removal efficiency.
- N. A LMU map showing historical LMUs shall be maintained in the PPP.
- O. The cracks around Well #1 shall be repaired within 180 days of permit issuance. Documentation of the repairs shall be submitted to the Stephenville Region (R- 4) and the CAFO Permit Team (MC-150) for inclusion in the permit file.
- P. Grassed Waterways.
 - 1. The permittee shall design, construct, and maintain grassed waterways around the relocated native stream bed on the south of the settling basin and RCS #1:
 - a. The design and construction shall adhere to the capacity, velocity, width, side slopes, depth, drainage, outlets, vegetative establishment, and plans and specifications requirements as described in NRCS Practice Standard Code 412, as amended.
 - b. The grassed waterways shall be planted and maintained in permanent vegetation, such as bermudagrass. The period for re-establishment of vegetation following maintenance activities is not a violation of this provision.
 - 2. The permittee shall develop and implement an operation and maintenance plan for the grassed waterways in accordance with NRCS Practice Standard Code 412, as amended. The plan shall be kept in the PPP. The operation and maintenance plan shall include the following:
 - a. The permittee shall inspect the grassed waterways weekly and within 24 hours after a one inch or greater rainfall event, in accordance with Section VII.A.10(a) of this permit. The inspection report shall document the presence of bare areas, erosion, ponding or puddling of water, and depressions or reduced vegetation density that may lead to erosion, ponding or puddling.
 - b. In the event that bare areas, erosion, ponding or puddling, depressions, or reduced vegetation density are documented in the inspection report, the permittee shall:
 - i. submit the inspection report to the TCEQ Regional Office within 5 days of the date of inspection, and
 - ii. implement corrective actions within 30 days of the inspection. In the event that corrective actions cannot be implemented within 30 days, the permittee shall document the factors delaying implementation of corrective actions and implement corrective actions as soon as possible.
 - 3. In conjunction with the five year evaluation required by Section VII.A.10(b) of this permit, a licensed Texas professional engineer must review NRCS Practice Standard Code 412, complete a site evaluation of the grassed waterway, and include their findings in the certified report.
 - 4. Channelized flow leaving the grassed waterways is prohibited by this permit.

ATTACHMENT A
SITE MAP

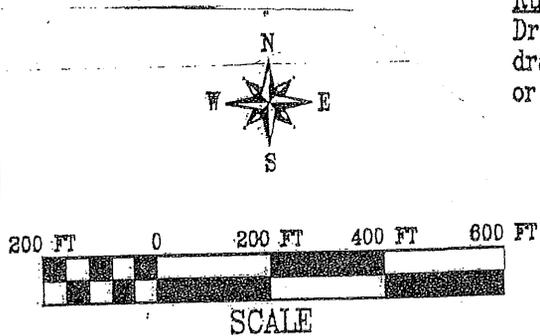


Legend:

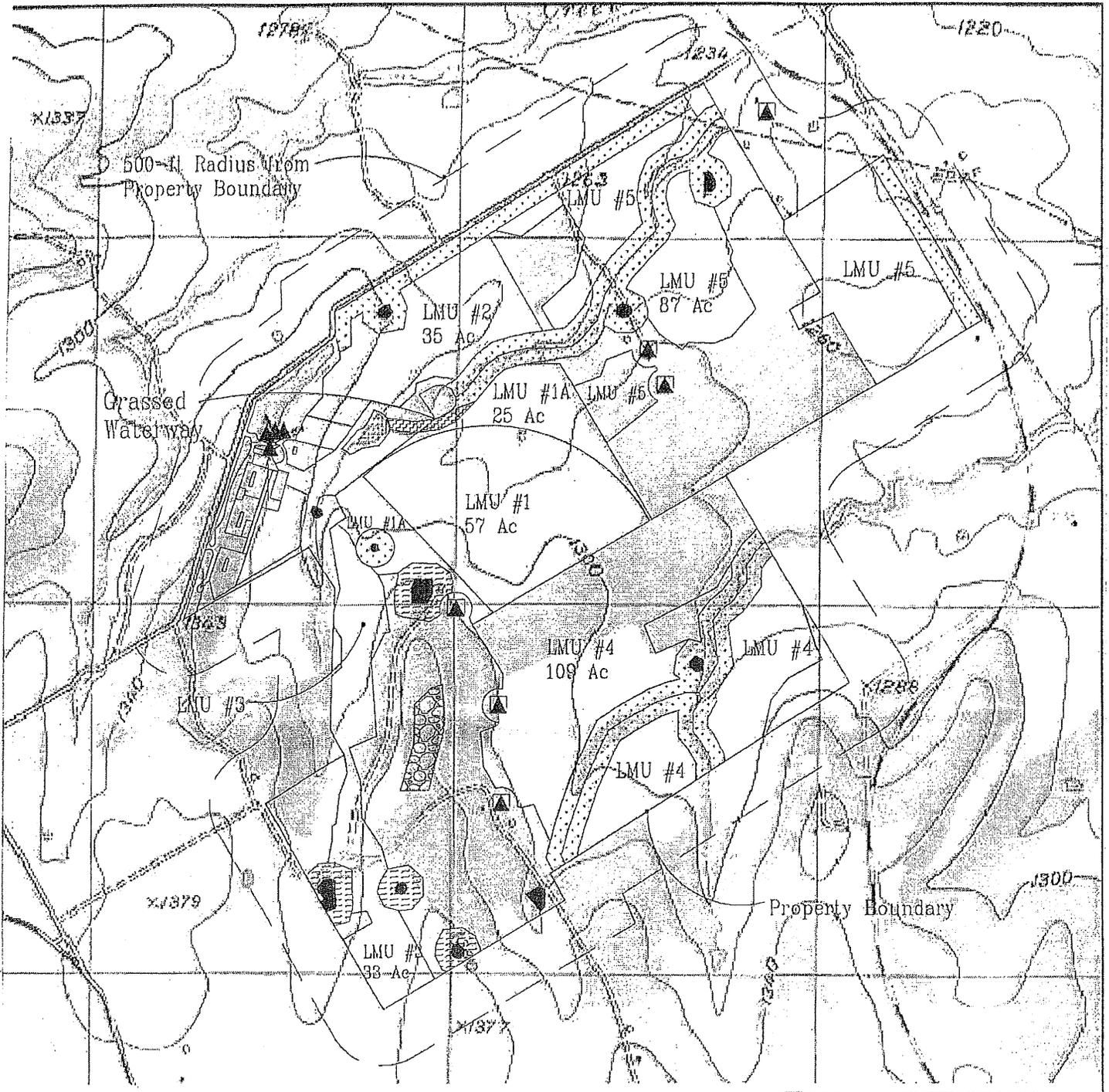
- - - - - Denotes Drainage Area
- . - . - Denotes Underground Pipe
- ▨▨▨▨ Denotes Roof/Conc. Areas

Runoff Control:

Drainage is depicted by arrows shown on maps. The drainage will be directed to the RCS via ditches, berms or underground pipe.

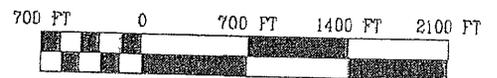


ATTACHMENT B
LAND APPLICATION AREAS



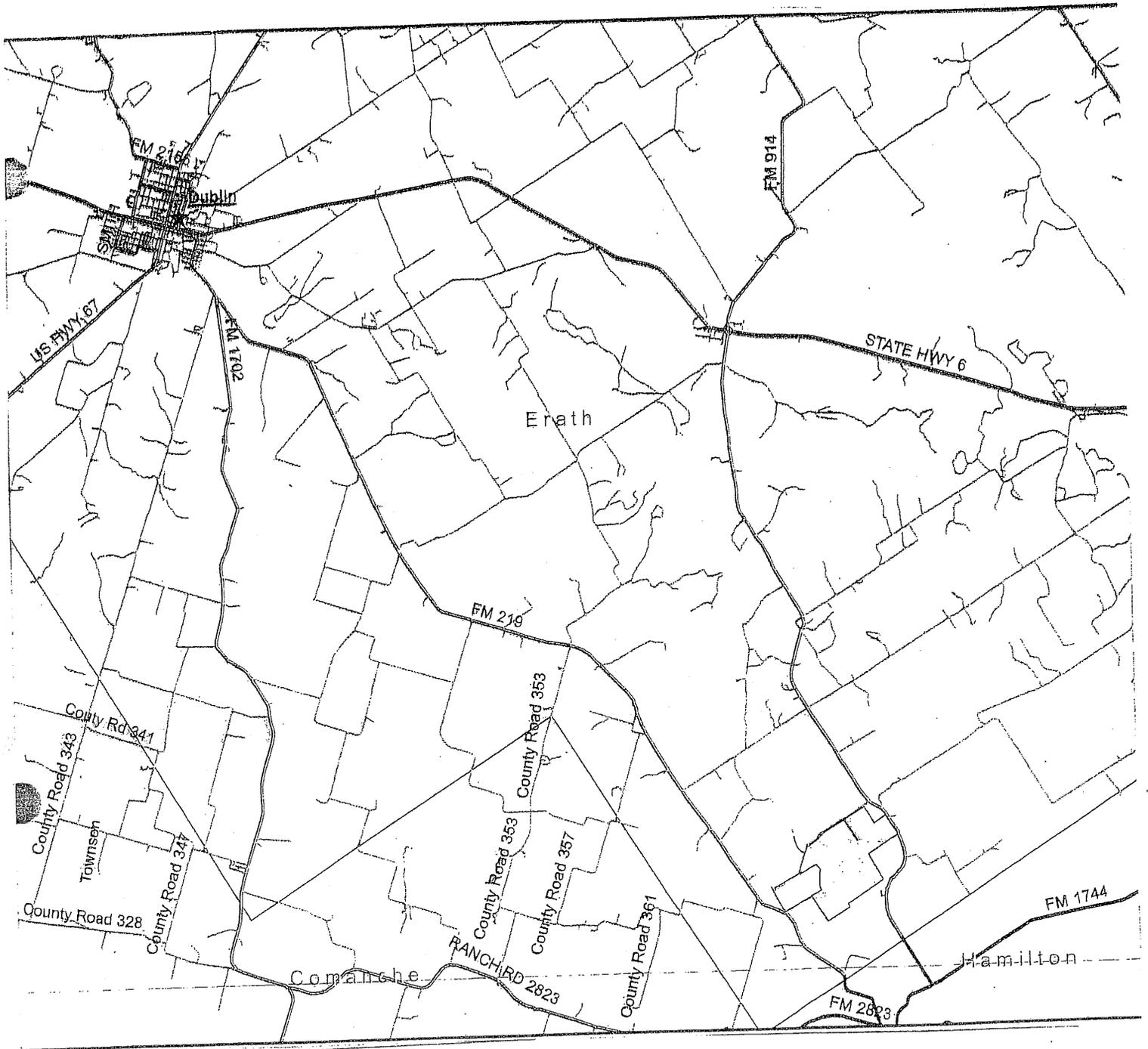
Legend:

- ▲ Denotes Water Well
- ▲ (with buffer) Denotes Water Well with 150-Ft Buffer
- ▨ (dotted) Denotes 133-Ft Buffered Areas
- ▨ (horizontal lines) Denotes 142-Ft Buffered Areas
- ▨ (diagonal lines) Denotes Caliche Pit
- ▨ (cross-hatched) Denotes Grassed Waterway

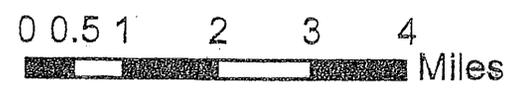
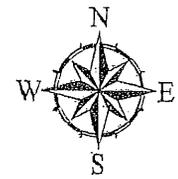


SCALE

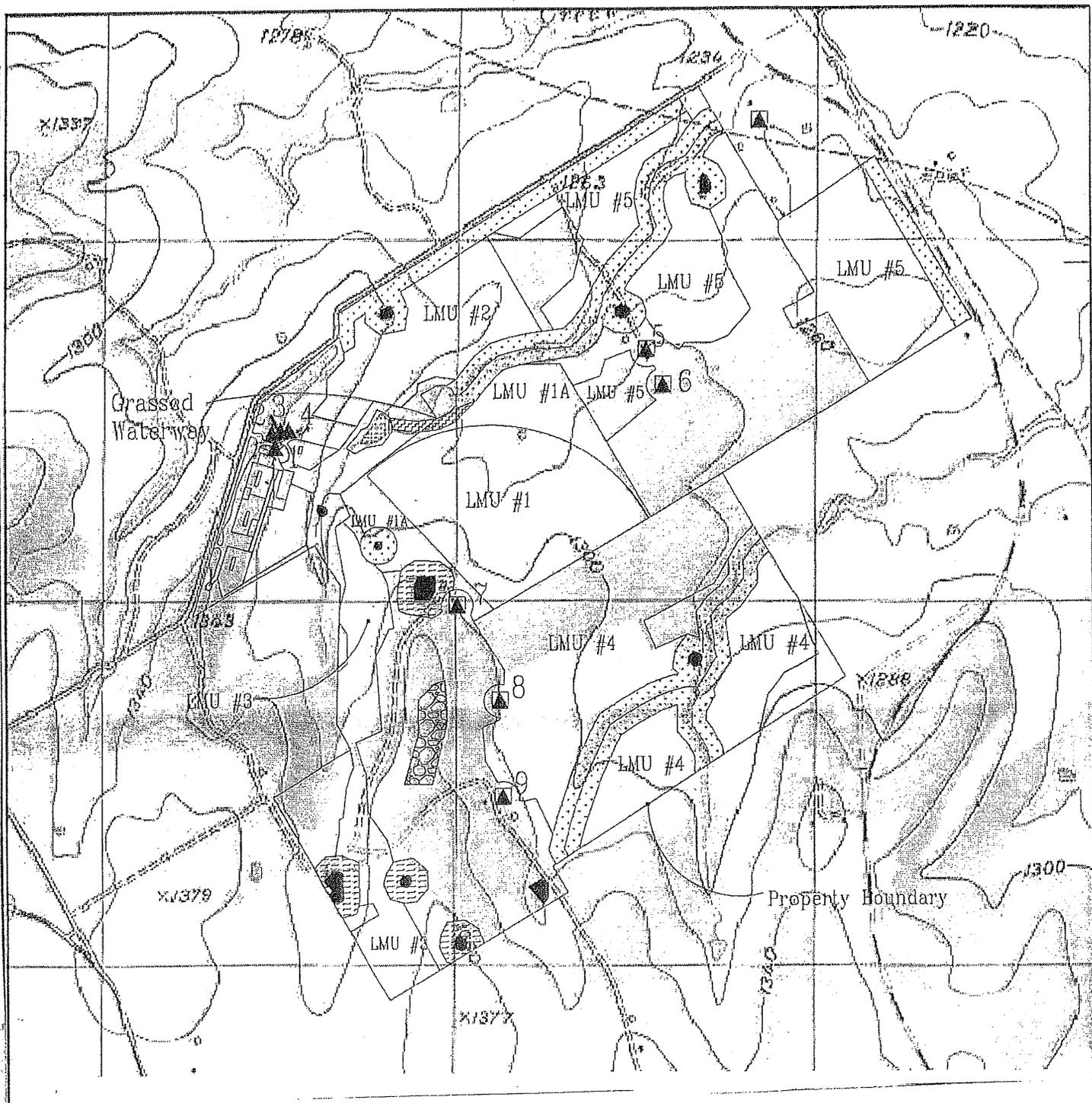
ATTACHMENT C
VICINITY MAP



- Legend
- Major Roads
 - Erath County Roads
 - Leyendekker Dairy



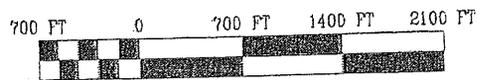
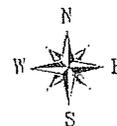
ATTACHMENT D
WELL LOCATION MAP



Legend:

- ▲ Denotes Water Well
- ▣ Denotes Water Well with 150-Ft Buffer
- ▨ Denotes 133-Ft Buffered Areas
- ▧ Denotes 142-Ft Buffered Areas
- ▩ Denotes Caliche Pit
- ▤ Denotes Grassed Waterway

Source: TOPO! Software, National Geographic
Seamless Topographic Maps on CD-ROM, 2001.
Carlton, Tex. Quadrangle, 1976.



SCALE

TCEQ INTERAGENCY TRANSMITTAL MEMO

DATE: March 18, 2009

TO: LaDonna Castañuela
CHIEF CLERK
BUILDING F, MC - 105

FROM: Robert Brush
ENVIRONMENTAL LAW DIVISION
BUILDING A, MC-173

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY
2009 MAR 18 PM 4:09
CHIEF CLERKS OFFICE

Attached: Executive Director's Response to Comments

Application Information:

- Air Permit No.: _____ Name: _____ If known, Docket or CCO Tracking #: _____
- Waste Permit No.: _____ Name: _____ If known, Docket or CCO Tracking #: _____
- Water Permit No.: WQ0003259000 Name Gerben Leyendekker/Leyendekker Dairy If known, Docket or CCO Tracking #: _____

Action Required (pick one):

Date stamp and return copy to above-referenced ELD staff attorney and do one of the following:

FOR WASTE & WATER:

- Send Response to Comments Letter which solicits hearing requests and requests for reconsideration to those on the mailing list in your files
For Waste and Water this would occur in all circumstances when comments have been received

FOR AIR:

- Send Response to Comments Letter which solicits hearing requests and requests for reconsideration to those on the attached list AND the mailing list in your files
For Air applications this would occur only when there are pending hearing requests
- Place in File - no further action required by OCC
*For Air applications this would occur when the matter is uncontested but comments were received. ED will send a copy with MTO letter
For Waste and Water this would not occur*
- Hold until a Commission Agenda date is requested and then enclose with the Agenda Setting Letter
For Air applications this would occur when the executive director's position is that the matter meets TCAA §382.056(g) & (o)
- Other Instructions: Please include Joy Tegbe, MC-150 on the mailing list for this RTC.

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

2009 MAR 18 PM 4:09

Application by
Gerben Leyendekker/Leyendekker Dairy
for TPDES Permit No. WQ0003259000

§
CHIEF CLERK'S OFFICE
§
Before the
TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENT

The Executive Director (ED) of the Texas Commission on Environmental Quality (the Commission or TCEQ) files this Response to Public Comment (Response) on the application by Gerben Leyendekker/Leyendekker Dairy (Applicant) for a major amendment and conversion to Texas Pollutant Discharge Elimination System (TPDES) Permit Number WQ0003259000 and on the ED's preliminary decision on the application. As required by Title 30 of the Texas Administrative Code (30 TAC) Section (§) 55.156, before a permit is issued, the ED prepares a response to all timely, relevant and material, or significant, comments. The Office of Chief Clerk timely received comment letters from the City of Waco (Waco). This Response addresses all comments received, whether or not withdrawn. If you need more information about this permit application or the wastewater permitting process, please call the TCEQ Office of Public Assistance at 1-800-687-4040. General information about the TCEQ can be found at our website at www.tceq.state.tx.us.

BACKGROUND

Description of Facility

The Applicant has applied to the TCEQ for a major amendment and conversion to a TPDES individual permit state registration No. WQ0003259000 for a Concentrated Animal Feeding Operation (CAFO) to authorize the expansion of an existing dairy cattle facility from 700 head to a maximum capacity of 999 head, all milking cows. The facility is located on the south side of County Road 261 approximately 3 miles east of its intersection with Farm-to-Market Road 219 in Erath County, Texas. The facility is located in the drainage area of the North Bosque River in Segment No. 1226 of the Brazos River Basin.

Procedural Background

The application was received on May 1, 2008, and declared administratively complete on June 27, 2008. The Notice of Receipt of Application and Intent to Obtain a Water Quality Permit (NORI) was published in the *Stephenville Empire Tribune* on July 14, 2008. The alternative language NORI was published in the *Tex-Mex Noticias* on July 29, 2008. The ED completed the technical review of the application and prepared a draft permit. The Notice of Application and Preliminary Decision for a Water Quality Permit (NAPD) was published in the *Stephenville Empire Tribune* on October 23, 2008. The alternative language NAPD was published in the *Tex-Mex Noticias* on October 23, 2008.

and the public comment period ended on November 24, 2008. This application is subject to the procedural requirements adopted pursuant to House Bill 801 (76th Legislature, 1999).

COMMENTS and RESPONSES

COMMENT 1:

Waco is concerned that the draft permit does not require a stage/storage table to calculate the effect of evaporation on the monthly water balance. Waco requests that Section VII.A.5(a)(2)(iv) should be revised as follows: "a stage/storage table for each RCS with minimum depth increments of one foot, including the storage volume and surface area provided at each depth."

RESPONSE 1:

The stage storage table is not a requirement since the ED is evaluating proposed construction. Once construction is complete an actual stage storage table will be part of the retention control structure (RCS) management plan. The construction will need to ensure that the volume requirements are met or exceeded.

The surface area used in the RCS design and water balance inflow for the RCS was calculated from the top of the berm of the existing structures, plus the expected surface area of the proposed expansion. The expected evaporation surface area used in the water balance was taken as a percentage of the total top of the berm surface area. Actual stage-storage data will not be available until the RCS expansion is complete.

COMMENT 2:

Waco comments that the draft permit does not require an RCS Management Plan until after the RCS is modified. At minimum, Waco recommends revising the draft permit to require the RCS Management Plan to be submitted to TCEQ permitting staff when completed for review and approval. Additionally, Waco comments that the draft permit does not appear to require an RCS Management Plan for the existing RCSs before the permit is issued. Waco notes that this seems inconsistent with the requirement of 30 TAC § 321.42(g), which requires an RCS Management Plan for all RCSs.

RESPONSE 2:

The CAFO rules at 30 TAC § 321.42(g) and the draft permit require that the Applicant implement an RCS management plan and maintain a copy in the pollution prevention plan (PPP). TCEQ rules do not require review of RCS management plans prior to issuing the permit. This requirement is being implemented through issuance of the permit. *See* 30 TAC § 321.42(a). Until the actual expansion and modification of the RCS system is completed and volumes certified, which takes place after the permit is issued, the RCS management plan cannot be completed and implemented.

The draft permit does require an RCS management Plan for all RCSs authorized in the draft permit. The Applicant has 180 days from the date the permit is issued to make RCS modifications. Until RCS modification is complete, the dairy may not exceed the 700 head currently authorized.

COMMENT 3:

Waco comments that Section X.G.3. of the draft permit allows storage of slurry from freestall barns if they are vacuumed or scraped, but that no storage areas are identified on the site map and the waste flow chart does not show any storage. Since no RCS has been identified for slurry storage, Waco believes Section X.G. should be deleted from the draft permit and replaced with a provision that makes clear that the Applicant may not store slurry from vacuum or scraping, unless the permit is amended.

RESPONSE 3:

TCEQ CAFO rules do not require a permit amendment to construct slurry storage areas. Section X.E. of the draft permit requires that any storage of slurry be in the drainage area of the RCSs. The site map identified a manure storage area within the drainage area of RCS #1. This area can be used for storage of slurry. Section X.G.3 of the draft permit states:

Slurry removed from freestall barns must be stored within the drainage area of an RCS, and the storage area must be large enough to prevent overflow into settling basins and/or RCSs. Any overflow of these storage basins shall be recorded in the PPP and notification shall be provided to the regional office within thirty (30) days. Based on review of the information this permit may be formally amended to require additional controls or other requirements.

COMMENT 4:

Waco comments that the site map indicates the presence of a calf barn outside of the drainage area. Waco states that the Applicant has not provided any information describing how manure generated from activities in the barn will be managed. Waco believes that the draft permit should include a provision prohibiting any discharge from this barn.

RESPONSE 4:

The permit only authorizes discharges from a properly designed, constructed, operated, and maintained RCS in the event of chronic or catastrophic rainfall events, or catastrophic conditions that cause an overflow. Discharges are not authorized under any circumstances from the calf barn outside the drainage area of the RCS.

COMMENT 5:

Waco comments that the Applicant indicates that the majority of runoff will flow directly through the manure storage area. Waco suggests amending the draft permit to require a network of berms or ditches to route the runoff and process wastewater around the manure storage piles.

RESPONSE 5:

As runoff encounters a manure storage pile, the pile itself will re-direct the runoff around it. If the pile is not large enough to divert the runoff around it, runoff may travel over or through the pile. Any manure transported by the runoff into the RCS and settling basins is addressed by the requirements in Special provision X.E. and X.M. Special Provision X.E. requires that the sludge volume in RCS #1 be measured and recorded in the PPP, as needed, but at a minimum, beginning in year three of the permit and then annually thereafter. Special Provision X.M. requires that manure and settled solids accumulations in the settling basin be removed on a regular and consistent basis to assure attainment of the 60% designed removal efficiency. These provisions are sufficient to manage any likely runoff through the manure storage stockpile. Therefore, the ED declines to make this change.

COMMENT 6:

Waco comments that settling basins meet the definition of RCSs. Waco notes that Section VII.A.3(a) of the draft permit appears to be inconsistent with TCEQ rules concerning capacity certifications for settling basins. Waco believes a capacity certification for the settling basin should be required.

RESPONSE 6:

The permit requires that documentation describing the sources of information, assumptions, and calculations used in determining the appropriate volume capacity and structural features of each RCS must be included in the PPP.

The ED agrees that settling basins are defined as RCSs. However, settling basins are an optional treatment practice to reduce sludge accumulation in the RCS designed to store wastewater. Settling basins are not used to store wastewater, so their capacity may not be used to meet the minimum required volume on page 1 of the draft permit. Therefore, the capacity of the settling basin is not relevant for purposes of sizing the RCS so that it meets the 25-year, 10-day design volume.

COMMENT 7:

Waco comments that there is no evidence in the permit application that the settling basin will meet the removal efficiency assumption of 60% of the solids. Waco comments that the Applicant cites the Midwest Plan Services Structures and Environment Handbook in justifying the removal rate, but notes that pond identified as the settling basin was built as a storage lagoon. Therefore, the Applicant has not justified use of a 60% solid removal rate.

RESPONSE 7:

The Midwest Plan Service Structures and Environmental Handbook, the Applicant used to derive the settling basin removal rate, states that: "Settling basins remove 50%-85% of the solids from lot runoff..." The application is based on 60% removal rate, which falls within the acceptable range in the reference material. The draft permit requires that documentation describing the sources of information, assumptions, and calculations used in determining the appropriate volume capacity and structural features of each RCS must be included in the PPP.

The RCS is designed for five years of sludge accumulation. If the settling basins do not achieve the removal efficiencies proposed in the design calculations, sludge will accumulate in the RCS at a faster rate than expected. The permit addresses this issue by requiring sludge accumulation to be monitored as needed, but at least annually beginning in year three of the permit. Taking volume measurements starting in year three will help reevaluate the accumulation rates prior to reaching the five-year design volume. The permit also requires the Applicant to maintain the sludge volume at or below the designed sludge volume.

COMMENT 8:

Waco comments that there should be more specific requirements for removing manure and solid accumulations in the settling basins. Waco recommends that Section X.M. of the draft permit be revised as follows: "Solids from the settling basin shall be removed after every rainfall event in excess of one inch and at a minimum of four times per year."

RESPONSE 8:

The ED declines to make this change. Settling basins are used to reduce the sludge accumulation in RCSs. The RCS is designed for five years of sludge accumulation. If the settling basins do not achieve the removal efficiencies proposed in the design calculations, sludge will accumulate in the RCS at a faster rate than expected. The permit addresses this issue by requiring sludge accumulation to be monitored as needed, but at least annually beginning in year three of the permit. Taking volume measurements starting in year three will help reevaluate the accumulation rates prior to reaching the five-year design volume. The permit also requires the Applicant to maintain the sludge volume at or below the designed sludge volume.

COMMENT 9:

The City comments that settling basin solids should be defined as "sludge" and not "manure" as in Section X.H.1.

RESPONSE 9:

The ED declines to make this change. Settling basin solids are not "sludge" since there is no sludge volume allocation. Therefore, settling basin solids are defined as "manure."

If settling basin solids are land applied, an annual sample must be collected and analyzed in accordance with Section VII.A.9(a) of the permit, in addition to other manure and wastewater.

COMMENT 10:

Waco comments that Section VII.A.3(a)(2) should be amended to make it clear that all capacity certifications require certification of both total as-built capacity and the remaining capacity as a result of sludge accumulation by inserting the following sentence: "Capacity certifications shall include both the total as-built RCS capacity and the remaining RCS capacity due to sludge accumulation."

RESPONSE 10:

Capacity certifications reflect the total as-built capacity. This maximum volume does not change, unless modifications are made to the RCS. Sludge accumulations, on the other hand, fluctuate, just as the wastewater levels fluctuate. Sludge accumulations are required to be monitored and recorded in the PPP, as necessary, but at minimum, within one year of the new capacity certification for the RCS expansion and then annually thereafter.

COMMENT 11:

Waco comments that the existing capacity certification for RCS #1 does not state whether the listed capacity is an as-built or existing capacity. Waco states that without certification of the sludge volume, the Applicant cannot demonstrate that RCS #1 will accommodate the 25-year, 24-hour storm event, as required, until it is enlarged.

RESPONSE 11:

The current RCSs volumes are not relevant to what is proposed by this permit application and are not required as part of the permitting process. Existing RCS volume requirements are contained in the existing authorization and are enforced under that authorization by TCEQ Field Investigators. If the draft permit is issued, the new 25-year, 10-day volume requirements will become effective and construction is required to meet those new requirements within 180 days. The RCSs must meet the new requirements before the dairy is authorized to exceed 700 head. The required minimum volume allocations are shown in X.A.1. of the draft permit. Section VII.A.3.(a) of the draft permit requires that after completion, liner and capacity certifications for new construction be maintained in the PPP.

COMMENT 12:

Waco comments that the Applicant has not properly certified the settling basin or RCS. Waco asserts that the liner certifications submitted with the permit application are inadequate. Waco encourages TCEQ to require, prior to issuance of the permit, that all basins and RCSs be certified by a professional engineer.

RESPONSE 12:

TCEQ regional inspectors can review the current liner certifications during site inspections and determine their compliance with TCEQ rules and the existing authorization. RCS #1 from the previous authorization will become the settling basin and RCS #2 from the previous authorization will become RCS #1. The permit requires RCS #1 to be enlarged to contain the required capacities listed on page 1 of the permit. Section VII.A.3(a) of the draft permit also requires documentation of liner and capacity certifications to be completed for the modified RCS prior to use after modification and requires that documentation be maintained in the on-site PPP. Also, note that Section X.A.2. of the draft permit gives the Applicant 180 days after the permit is issued to complete all RCS modifications required by the permit.

COMMENT 13:

Waco comments that in previous Bosque CAFO permits, TCEQ required a minimum of one floor sample per acre of surface area and a minimum of one sidewall sample per each two acres of surface area in order to certify the hydraulic conductivity of the liner. Waco believes this should be the minimum standard in this permit as well.

RESPONSE 13:

The requirement in the draft permit exceeds the requirement of the existing permit and of the rules. Section VII.A.2.(g)(3)(ii) of the draft permit requires that for each RCS, a minimum of one undisturbed sample must be collected per plan surface acre at the spillway elevation.

For the purpose of determining the number of samples to collect, surface acres must be rounded up to the next whole acre. Distribution of the samples must be representative of liner characteristics and proportional to the surface area of the sidewalls and floor. Documentation must be provided identifying the sample locations with respect to the RCS liner. This requirement is considered to provide certifications that will adequately document the permeability of the RCS liners. Therefore, the ED declines to make the change.

COMMENT 14:

Waco recommends that in addition to the compaction testing requirement at Section VII.A.3(f)(4) of the draft permit that also require the following: 1) requiring the field density tests be based on predetermined moisture density compaction curves, 2) defining the frequency of testing, 3) requiring compaction testing on each lift during construction of the liner, 4) requiring documentation of compaction test locations and results provided to TCEQ, and 5) requiring continuous on-site inspection during construction.

RESPONSE 14:

Section VII.A.3(b) of the permit requires that the RCS be designed and constructed in accordance

with the technical standards developed by NRCS, ASABE, ASCE, or ASTM. Additionally, the permit identifies specific RCS design, construction, and testing criteria in Section VII.A.3.(f). The construction and testing requirements for embankment lifts are in Section VII.A.3.(f)(2) and that section states:

Embankment Lifts. The embankment shall be constructed in lifts or layers no more than eight (8) inches compressed to six (6) inches thick at a minimum compaction effort of 95 percent (%) Standard Proctor Density (ASTM D698) at -1% to +3% of optimum moisture content.

The compaction testing requirements are in Section VII.A.3(f)(4) and are as follows:

Compaction Testing. Embankment construction must be accompanied by certified compaction tests including in place density and moisture in accordance with the American Society of Testing Materials (ASTM D 1556, D 2167 or D 2937 for density and D 2216, D 4643, D 4944 or D 4959 for moisture, or D 6938 for moisture and density. Compaction tests will provide support for the liner certification performed by a licensed Texas professional engineer as meeting a permeability equal to, or less than, 1×10^{-7} cm/sec over a thickness of 18 inches or its equivalency in other materials.

More specific liner requirements are included in Section VII.A.3(g)(2) of the permit:

The liner must be designed by a licensed Texas professional engineer and documented to have hydraulic conductivities no greater than 1×10^{-7} cm/sec in accordance with ASTM D 5084, or other method approved by the ED, with a thickness of 18 inches or greater or its equivalency in other materials. The ED believes these testing requirements are adequate and protective of water quality.

COMMENT 15:

Waco comments that the draft permit should include a specific list of circumstances that would qualify for granting extensions to the RCS compliance schedule.

RESPONSE 15:

The conditions that may delay construction of a RCS are numerous and highly variable. The extension request must provide an explanation of the conditions that prevented construction during the specified timeframe. The ED will evaluate the specific reasons to determine if an extension should be granted.

COMMENT 16:

Waco comments that the permit application does not provide an adequate description of the structural controls, particularly the berms and the ditches.

RESPONSE 16:

A Runoff Control Map was submitted by the Applicant that clearly identifies the control features directing run-off. This map shows a thick dashed line identified as the ditch, berm, and underground pipe.

The permit only authorizes discharges from a properly designed, constructed, operated, and maintained RCS in the event of chronic or catastrophic rainfall events, or catastrophic conditions that cause an overflow. Discharges are not authorized under any circumstances from diversion structures.

The permit requires the Applicant to conduct weekly inspections on all control facilities, including the RCS, storm water diversion devices, runoff diversion structures, control devices for management of potential pollutant sources, and devices channeling contaminated storm water to the RCS; and to annually conduct a complete site inspection of the production area. Additionally, the permit requires the Applicant to have a licensed Texas professional engineer complete a site evaluation of the structural controls every five years.

COMMENT 17:

Waco comments that the Applicant has failed to demonstrate the adequacy of its dewatering capability and it asks the ED to verify the dewatering capabilities of the equipment listed in the application.

RESPONSE 17:

TCEQ rules do not require ED review or approval of the equipment an applicant will use to dewater the RCS. The draft permit requires that the Applicant ensure that the irrigation system design is capable of removing wastewater from the RCS on a regular schedule. Equipment capable of dewatering the RCS must be available and operational whenever needed to restore the operating capacity required by the RCS management plan. This gives the Applicant flexibility on the type of equipment to be used at the time of dewatering.

COMMENT 18:

Waco comments that the draft permit does not require the annual facility inspection report or five year evaluation to be sent to TCEQ as required by 30 TAC §§ 321.46(c)(2) and (e)(2). The City states that submission to TCEQ should be required by the draft permit and not just be kept in the PPP.

RESPONSE 18:

The rules cited by Waco do not require these records be submitted to TCEQ. However, 30 TAC § 321.46(d) requires that these records be maintained on site for a minimum of five years from the date

the record was created and submitted to the Commission within five days upon written request by the ED. These records should be maintained in the PPP where they are subject to review during site inspections conducted by TCEQ field staff. Failure to conduct an annual site inspection or the five year evaluation; and to document the findings of both in the PPP or failure to correct the deficiencies identified would be a violation of the permit and rules subjecting the Applicant to potential enforcement action by the Commission.

COMMENT 19:

Waco comments that the draft permit should be amended to require that an engineer certify to the adequacy of structural controls in the five year evaluation. Additionally, Waco comments that the Applicant should be required to provide a current certification of structural controls before the draft permit is issued.

RESPONSE 19:

The draft permit will require a licensed Texas professional engineer to review the existing engineering documentation, complete a site evaluation of the structural controls, review existing liner and RCS capacity documentation, and complete and certify a report of their findings. The site evaluation would be a comparison of what is required by the engineering documentation and the actual structural controls, as constructed, operated, and maintained. Should the engineer determine that the structural controls are inadequate with respect to the design requirements in the engineering documentation, those findings would be included in the certified report. Licensed Texas professional engineers are subject to standards of performance as established by the Texas Board of Professional Engineers. These permit provisions become effective upon issuance of the draft permit.

There are no rule requirements that require certification of existing structural controls prior to issuance of the permit.

COMMENT 20:

Waco comments that the draft permit fails to require adequate sampling of wastewater and manure, with respect to sample collection and frequency, and the approximate locations or time of year that soil tests will be taken. Waco comments that this information is necessary to properly use Texas NRCS Code 590.

RESPONSE 20:

The permit provisions for sampling and monitoring are consistent with 30 TAC § 321.36(g) and with the requirements of NRCS Practice Standard Code 590. The draft permit requires that representative samples be collected annually for manure, wastewater, and soils. The results of the analyses must be used in determining application rates. Because they are used in determining application rates, the sample collection should be representative of the material, as applied. If manure and wastewater samples are not representative of the materials, as applied, the following year's soil analyses may be

higher than expected. This in turn would result in a reduced application rate.

Texas NRCS Code 590 (p. 590-7) requires the approximate locations where soil tests will be taken and the timing and frequency of soil sampling. Page 7 of the NMP, in the permit application, states the location as "each field" and frequency as "annually". These statements comply with 30 TAC § 321.36(g) and Section VII.A.9.(b) of the draft permit.

COMMENT 21:

Waco comments that the draft permit fails to account for proper management of phosphorus production. Waco comments that 999 cows will produce 389 lb/day P_2O_5 which is equivalent to 141,985 lb/yr P_2O_5 and only 38,999 lb/yr of P_2O_5 will be applied to LMU's or third-party fields as indicated in the NMP. Waco states that leaves 102,986 lb/yr P_2O_5 to be managed.

RESPONSE 21:

The permit application identifies how much phosphorus is generated and the methods used to utilize or dispose of it. It is projected that 999 cows will generate 389 lbs. of phosphorus per day. The calculation is based on a book value for phosphorus production by dairy cows developed by the American Society of Agricultural and Biological Engineers. It is part of a set of data intended for use in designing facilities to accommodate actual waste production. As long as the phosphorus being land applied or hauled-out is accounted for as required under TCEQ rules, an accounting to reflect what remains in the CAFO production area is not necessary.

COMMENT 22:

Waco recommends that the draft permit be revised to require that up to 50% of the waste generated by the proposed operation be managed outside of the North Bosque watershed in a manner that is consistent with the goals of the applicable TMDL.

RESPONSE 22:

The North Bosque TMDL has a goal of a 50% reduction in instream loading. The TMDL and TMDL I-Plan address growth of CAFOs through BMPs designed to decrease loading. Neither the TCEQ rules nor the TMDL I-Plan requires a 50% haul-out of collectible manure.

COMMENT 23:

Waco comments that multiple NMP's have been submitted and that the draft permit should state the date of the most recent NMP that the facility will operate under for the year following permit issuance.

RESPONSE 23:

In response to comment, the date of the most recent NMP was added to Section V of the Fact Sheet.

COMMENT 24:

Waco comments that Texas NRCS Code 590 requires sampling to be conducted in accordance with Texas A&M University guidance. The course and guidance limit the size of LMUs to 40 acres or less. Three of the Applicant's LMUs are greater than 40 acres. Waco recommends subdividing the three oversized LMUs to meet the NRCS Code 590 standard and requiring submission of a revised LMU map and revised NMP.

RESPONSE 24:

The CAFO rules in 30 TAC Chapter 321 do not require that the soil sampling area define the size of an LMU. Also, the CAFO rules do not specify or limit the size of a LMU. Management considerations are important when determining LMU size.

COMMENT 25:

Waco comments that the Applicant is not proposing to adequately buffer well #8 in LMU #4. Waco notes that this well is buffered into LMU #4 not away from it. Waco states that the Applicant should be required to correct its maps, recalculate the LMU acreage, and prepare a new NMP based on the revised acreage.

RESPONSE 25:

The Applicant identified in Figure 1.3 and Figure 5.3 (Rev 02/03/09) that well #8 has a buffer of 150 feet around it. The draft permit states that a 150 foot buffer must be maintained around wells #5-#9. Therefore, the application and draft permit meet the buffer requirements in 30 TAC § 321.38(b)(2).

COMMENT 26:

Waco comments that the USGS map of the Applicant's property indicate a stream bed transecting the facility and running just north of LMU #1 and #1A. Waco notes that correspondence in the TCEQ file indicate this stream was diverted to run south of the RCSs when they were constructed. Therefore, the new stream location is not properly identified on the maps submitted with the permit application. Additionally, Waco states that the stream must be buffered in its new location and that those buffers have not been identified. Once buffers have been identified the acreage in LMU #1 and #1A should be adjusted and a revised NMP prepared.

RESPONSE 26:

The Applicant revised maps (Figures 1.3, 3.1, 5.2, 5.3 and 6.1) to show a grassed waterway for the relocated stream bed. In response to the comment, the ED added the following Special Provision to the draft permit to address this issue:

X.Q.: Grassed Waterways.

1. The permittee shall design, construct, and maintain grassed waterways around the relocated native stream bed on the south of the settling basin and RCS #1:
 - a. The design and construction shall adhere to the capacity, velocity, width, side slopes, depth, drainage, outlets, vegetative establishment, and plans and specifications requirements as described in NRCS Practice Standard Code 412, as amended.
 - b. The grassed waterways shall be planted and maintained in permanent vegetation, such as Bermuda grass. The period for re-establishment of vegetation following maintenance activities is not a violation of this provision.
2. The permittee shall develop and implement an operation and maintenance plan for the grassed waterways in accordance with NRCS Practice Standard Code 412, as amended. The plan shall be kept in the PPP. The operation and maintenance plan shall include the following:
 - a. The permittee shall inspect the grassed waterways weekly and within 24 hours after a one inch or greater rainfall event, in accordance with Section VII.A.10(a) of this permit. The inspection report shall document the presence of bare areas, erosion, ponding or puddling of water, and depressions or reduced vegetation density that may lead to erosion, ponding or puddling.
 - b. In the event that bare areas, erosion, ponding or puddling, depressions, or reduced vegetation density are documented in the inspection report, the permittee shall:
 - i. submit the inspection report to the TCEQ Regional Office within 5 days of the date of inspection, and
 - ii. implement corrective actions within 30 days of the inspection. In the event that corrective actions cannot be implemented within 30 days, the permittee shall document the factors delaying implementation of corrective actions and implement corrective actions as soon as possible.

3. In conjunction with the five year evaluation required by Section VII.A.10(b) of this permit, a licensed Texas professional engineer must review NRCS Practice Standard Code 412, complete a site evaluation of the grassed waterway, and include their findings in the certified report.
4. Channelized flow leaving the grassed waterways is prohibited by this permit.

COMMENT 27:

Waco comments that the boundaries of LMU #2 are incorrect and that the area should be recalculated; and a revised NMP prepared based on the revised acreage.

RESPONSE 27:

The Applicant has since submitted a revised NMP with the correct acreage for LMU #2 (35 acres) and all the affected maps submitted with the permit application were also revised to show the proper acreage. Page 1 of the permit was revised to show LMU #2-35 acres. Attachment B was also updated to reflect this change.

COMMENT 28:

Waco comments that the area of LMU #1A is 16 acres, but is represented as 25 acres in the permit application. Waco comments that the acreage needs to be corrected and a new NMP prepared or additional portion of LMU #1A be identified on the map.

RESPONSE 28:

The ED verified that LMU #1A was approximately 25 acres during technical review of the permit application. The Applicant has since revised the Proposed Site & Land Management Unit map to identify all portions of LMU #1A on that map.

COMMENT 29:

Waco comments that the Applicant should be required to submit to TCEQ the actual annual yields of harvested crops for both LMUs and third party fields to demonstrate that reasonable crop yields are being used. Alternatively, Waco requests that Section VII.8(e)(5)(iv) be revised to clarify the methods that TCEQ will employ to determine compliance in the absence of any annual harvested yield reporting.

RESPONSE 29:

Record keeping requirements at 30 TAC § 321.46(d)(8)(F) state the actual yield of each harvested crop for LMUs must be recorded on a monthly basis. The information is available to the ED during

field investigations. Crop removal rates are based on yields when the NMP software is used.

There are no rules requiring CAFO operators to track yields on 3rd party fields. 30 TAC § 321.42(j) requires CAFO operators to submit records to the appropriate region office on a quarterly basis that contain the name, locations, and amounts of litter or wastewater transferred to operators of third party fields.

COMMENT 30:

Waco comments that the Applicant's proposed NMP does not include the approximate locations or time of year that soil tests will be taken. Waco questions how the NMP can be consistent with NRCS Code 590 without this information.

RESPONSE 30:

Section VIII.A.4 requires the Applicant to update records annually to include the actual annual yield of each harvest crop for each LMU. The information is available to the ED during field investigations. Crop removal rates are based on yields when the NMP software is used.

The draft permit allows the Applicant to provide wastewater, sludge or manure to third-party fields. The third party field operators must adhere to the contract requirements outlined in the draft permit, which include land application at an agronomic rate based on soil test phosphorus. The draft permit establishes a three tiered approach to application rates on third-party fields. The proposed crop and yield goal are used by the third-party operator to determine the application rates. In the event the yield goal is not achieved, the soil test results will be higher than expected. If soil test results reach 200 ppm, the Applicant cannot provide wastewater, sludge or manure to that third-party field operator. Based on these requirements, the ED disagrees that submitting crops and yields on third-party fields is necessary.

COMMENT 31:

Waco comments that NMP does not account for the nutrients available to plants in the root zone to satisfy the crop requirement.

RESPONSE 31:

NMPs are developed in accordance with NRCS Practice Standard Code 590. NMPs evaluate nutrients in the soil as part of the Phosphorus Risk Index. The allowable application rate, as determined by the NMP, takes both risk factors and soil phosphorus levels into account.

COMMENT 32:

Waco comments that the Applicant plans to apply supplemental inorganic phosphorus to LMU #1, #3, and #4. Waco suggests requiring the Applicant to apply manure at a higher rate versus being

allowed to apply supplemental phosphorus as proposed in the NMP is the more prudent approach.

RESPONSE 32:

Appropriate utilization of the nutrients is tied to the BMPs used and is not based on nutrient source. These BMPs include, but are not limited to, land application at agronomic rates and hydrologic needs of the crop in accordance with an NMP, adherence to buffers between land application areas and water in the state; and the prohibition of discharges from land application areas. Whether the nutrients required by the crop are supplied from organic or inorganic sources is irrelevant so long as the Applicant adheres to the required BMPs.

The right half of Table 7 of the NMP is entitled "Supplemental Nutrients Needed at Planned Rates." That the nutrients are "needed" does not equate to "will be applied." The values in this table are calculated by the worksheet and do not represent entries by the NMP preparer. The scores for inorganic P₂O₅ application rate in the PI Index by the field table for the NMP suggest that supplemental P₂O₅ may be added.

COMMENT 33:

Waco comments that the draft permit should be revised to prohibit waste application onto non-cultivated fields. At minimum, Waco encourages TCEQ to prohibit application of manure on non-cultivated fields within 500 feet of a stream. In addition, Waco comments that a specific permit provision be added to require adherence to NRCS Code 590 on third party fields if it is more restrictive and that TCEQ should require NMPs for third party fields.

RESPONSE 33:

The ED declines to make the requested change regarding NRCS Code 590 because the CAFO rules do not require that land application on third party fields be consistent with the NRCS Practice Code 590. However, the limitations placed in the draft permit assure that application on third party fields will take into account the potential for phosphorus build-up to occur. Land application on third party fields may not exceed a maximum of 200 ppm of phosphorus. When a third party fields tests 200 ppm or higher for phosphorus, all land application on that field must cease.

The application limitations on third party fields are based on soil test phosphorus levels instead of the Phosphorus Risk Index. The restrictions are more conservative than the rules require. Similar to an NMP, as soil phosphorus levels increase on third party fields, the Applicant will have to reduce waste application rates in order to continue land applying on those fields and to prevent those fields from exceeding 200 ppm of phosphorus.

Section VII.A.8(e)(5) provides the requirements for third-party fields. These provisions apply to cultivated and non-cultivated fields, with the exception of (5)(i)(B), which is specific to cultivated fields. Cultivated fields are fields used for row cropping that require the ground to be tilled, disced, or plowed to prepare for seed planting, such as corn, wheat, and oats. Non-cultivated fields are used

to grow plants that do not require the ground to be tilled, disced, or plowed, such as Bermuda grass or native grasses. If the requirement in (5)(i)(B) to incorporate manure and sludge was applied to non-cultivated fields, the vegetation would be significantly damaged, thus reducing the yield goal and nutrient uptake. The ED finds that the permit has adequate provisions related to land application on both cultivated and non-cultivated third-party fields.

Section VII.A.8(e)(5)(i)(A) of the permit requires that all transferred wastewater, sludge, or manure must be beneficially applied to third-party fields identified in the PPP in accordance with the applicable requirements in 30 TAC §§ 321.36 and 321.40 at an agronomic rate based on soil test phosphorus. The requirements for development or implementation of a NMP or NUP, under 30 TAC § 321.40, do not apply to third-party fields; and 30 TAC § 321.40(h) requires that “vegetative buffer strips must be no less than 100 feet of vegetation to be maintained between manure, litter, or wastewater application areas and water in the state. The CAFO operator must maintain the buffer strips in accordance with NRCS guidelines.

COMMENT 34:

Waco comments that according to the technical information packet, the Applicant appears to plan to apply wastewater to third party fields. However, Waco notes that there does not seem to be any way wastewater can be applied without using any portion of the dairy’s irrigation system, since utilizing this type of system would necessitate control over the third party field by the Applicant, which is prohibited. Waco recommends the draft permit be amended to allow wastewater application to third party fields only when wastewater is transported from the dairy by truck.

RESPONSE 34:

TCEQ rules do not require a review or approval of the mode of conveyance an applicant will use to transport wastewater to third-party field. The draft permit allows the Applicant to provide wastewater to operators of third party fields, but does not specify the delivery method. This gives the Applicant flexibility on the mode of transportation to be used at the time of transfer to third party fields. Therefore, the ED declines to make the change as requested by Waco.

COMMENT 35:

Waco comments that the draft permit should be revised as to not allow sludge to be applied to third-party fields. Waco comments that 30 TAC § 321.42(j) allows only manure, litter, and wastewater to be applied to third-party fields.

RESPONSE 35:

30 TAC § 321.32(49) defines sludge as solid, semi-solid, or slurry waste generated during the treatment of or storage of any wastewater. The term includes materials resulting from treatment, coagulation, or sedimentation of waste in a RCS. 30 TAC § 321.32(56) defines waste as manure (feces and urine), litter, bedding, or feedwaste from animal feeding operations. Therefore, sludge is

a product of the treatment, coagulation, or sedimentation of its parent materials, waste, and wastewater. More simply, it is modified manure and wastewater. Therefore, 30 TAC § 321.42(j), which allows dairy operators to transfer manure, litter, and wastewater to operators of third party fields is inclusive of sludge. The draft permit incorporates this rationale by explicitly including the term sludge when appropriate.

Appropriate utilization of the nutrients is tied to the BMPs used and is not based on nutrient source. These BMPs include, but are not limited to, land application at agronomic rates and hydrologic needs of the crop, adherence to buffers between land application areas and water in the state, and the prohibition of discharges from land application areas. Land application on third party fields is not only limited to agronomic rates, but is further limited by soil test phosphorus ranges. For example, land application rates may not exceed the crop nitrogen requirement when soil phosphorus concentration in Zone 1 is less than or equal to 50 ppm phosphorus. Ultimately, land application on third party fields is prohibited once the soil test phosphorus level is equal to or greater than 200 ppm.

COMMENT 36:

Waco comments that the draft permit fails to require a demonstration of sustainability for the term of the permit.

RESPONSE 36:

30 TAC § 321.36(d)(2) and Section VII.A.8(a) of the permit require the operator to create and maintain a site-specific NMP along with documentation regarding implementation of the plan. 30 TAC §§ 321.36(e) and (g) and Section VII.A.8(c)(1) through (5) of the permit require annual sampling and the NMP must be updated to modify application amounts based on soil testing and wastewater testing. A five-year NMP would be impracticable because the NMP is likely to change yearly due to changing climatic and operational conditions; and soil sampling results. It is important that NMPs remain flexible. When the NMP is updated, the new version should be kept with their PPP documentation and available to TCEQ personnel during field investigations.

Long term sustainability of a field may be a planning consideration, but there are no rule requirements that LMUs be sustainable for the permit term.

COMMENT 37:

Waco comments that the historical waste application fields should be identified in the application or the permit.

RESPONSE 37:

Section VII.A.9(b)(2) of the draft permit requires the Applicant to have soil samples collected annually for each current and historical LMU. This provision tracks the requirement in 30 TAC § 321.42(k) that historical waste application fields must be sampled every year, regardless of whether

the Applicant eliminates them from the permit.

Special Provision X.N. requires the Applicant to maintain a map in the PPP that identifies the location of all historical LMUs and reads as follows: "A LMU map showing historical LMUs shall be maintained in the PPP." Fields no longer associated with the dairy facility (historical LMUs) may be used as third party fields as long as all requirements for land application on third party fields are met.

COMMENT 38:

Waco comments that draft permit fails to provide a meaningful definition of vegetative buffers. Waco recommends adding the following sentence to Section X.D.:

A vegetative buffer shall meet the criteria of Riparian Forest Buffers defined by NRCS Practice Code 391 or the criteria of Vegetative Filter Strips as defined by NRCS Practice Code 393.

RESPONSE 38:

30 TAC § 321.40(h) states: "Vegetative buffer strips shall be no less than 100 feet of vegetation to be maintained between manure, litter, or wastewater application areas and water in the state." Although not defined by TCEQ rules, vegetative buffers are commonly understood to mean vegetation that reduces shock due to contact. NRCS Practice Code 393 refers to Practice Code 391, *Riparian Forest Buffer*. Riparian forest buffers are areas predominantly in trees or shrubs located adjacent to and up-gradient from watercourses or water bodies. One of the purposes of a riparian forest buffer is to reduce excess amounts of sediments, organic material, nutrients, and pesticides in surface runoff. This purpose is the same as that performed by vegetative filter strips according to NRCS Practice Code 393. Citing the practice code is adequate for permit requirements. The practice standard has an adequate definition and the ED made no change in response to the comment.

COMMENT 39:

Waco is concerned about how the bacterial problems in the North Bosque Watershed are being addressed and recommends adding provisions to the draft permit that address the control of pathogens from the land application and irrigation operations.

RESPONSE 39:

40 CFR § 122.44(k)(3) allows states to use BMPs to control or abate discharges "when numeric effluent limitations are infeasible." This also applies to bacteria. In the case of North Bosque dairies, they are only authorized to discharge from an RCS in the event of a chronic or catastrophic rainfall event that exceeds the 25-year, 10-day storm event. The BMPs in place to limit the amount on nutrients applied to the LMUs also limit the amount of bacteria that can be applied. Therefore, bacteria applied to LMUs are limited by the BMPs that limit nutrient application. Additionally, as

long as land application follows the BMPs and NMP application rates, runoff from LMUs are considered non-point source discharges that are not regulated under the draft permit.

The requirements in the draft permit satisfy this requirement because the North Bosque River TMDLs are intended to achieve significant reductions in the annual average concentrations and total annual loading of soluble phosphorus in the river. The TMDLs are designed to do this by focusing on controlling soluble phosphorus loading and in-stream concentrations to protect designated uses. The management measures for controlling phosphorus loading will also have some corollary effect on reducing pathogen and bacteria loading, since non-point source nutrient and pathogen loads largely originate from the same sites and materials; and are transported via the same processes and pathways. Other provisions in the rules and draft permit directed at reducing and minimizing all pollutants, including pathogens and bacteria, that are potential constituents of animal wastes include:

1. Requiring a larger RCS with capacity to contain a designed 25-year, 10-day rainfall event (approximately 60% larger than required to contain the 25-year, 24-hour rainfall event);
2. Establishing an RCS management plan;
3. Controlling runoff from manure piles by covering, berming, or requiring that they drain into an RCS;
4. Setting additional minimum buffer distances between land application units and surface water in the state;
5. Prohibiting nighttime land application between 12 a.m. and 4 a.m.; and
6. Requiring a NMP that uses phosphorus transport considerations to determine allowable applications of nutrients. The phosphorus index approach reduces allowable application of nutrients to levels that are appropriate for reducing and minimizing all pollutants that are constituents of animal wastes.

COMMENT 40:

Waco comments that the draft permit should require the Applicant to report information to TCEQ on third party fields regarding soil testing, areas of application, and application rates. Waco also comments that the information should also be included in the annual report along with copies of contracts with applicable third party field operators, statements of compliance with permit requirements for the previous year, and a summary of discharges from third party fields or a statements that there has not been any discharge from a third party field. For example, Waco suggests adding the following phrase at the end of Section VII.8.(e)(5)(iv):

...a copy of any initial or annual soil analyses, land application locations, dates and times, and nutrient concentration of applied materials, rates, acreage of application areas, and crops and crop yields for the preceding quarter.

RESPONSE 40:

30 TAC § 321.42(j)) and section VII.A.8(e)(5)(iv) of the permit contain the requirements for land

application on third party fields in the North Bosque River watershed. It requires that records be maintained that contain the name, locations, and amounts of manure, litter, or wastewater transferred to operators of third party fields and requires that information be submitted to the appropriate TCEQ region office on a quarterly basis. See 30 TAC § 321.42(j)(4). Soil sample testing on third party fields must be included in the annual report due February 15th and submitted to TCEQ. See 30 TAC §§ 321.46(e)(1) and 321.42(j)(3).

30 TAC § 321.42(j)(1) requires a written contract between the CAFO dairy operator and the operator of a third party field; and any such contracts should be maintained in their PPP. 30 TAC § 321.46(d) specifies the requirements for recordkeeping at the CAFO. Records must be kept on site for a minimum of five years from the date the record was created and must submit them to TCEQ within five days of a request by the ED.

COMMENT 41:

Waco comments that the draft permit should clearly state that drainage or discharges of wastewater or manure from third party fields is prohibited. Waco also comments that the Applicant should be prohibited from any further use of third party fields if it is determined that the Applicant disposed of waste on a third party field when the most current soil test reflects phosphorus concentrations of over 200 ppm or if the application rate established by the permit for third party fields is ever exceeded.

RESPONSE 41:

The ED declines to make the suggested changes. Runoff from third party fields where waste is applied at agronomic rates is allowed under the Clean Water Act. Runoff from third party fields where waste is not applied at agronomic rates or applied using proper operational controls is already prohibited. In those instances, runoff would be an unauthorized discharge and subject to TCEQ enforcement action.

There is no basis in the CAFO rules for including a blanket prohibition against delivery of all waste to all third party fields based on a single violation on a single third party field. However, such land application when soil phosphorus is in excess of 200 ppm or land application in excess of the agronomic rate or established application rate would be a violation of the CAFO rules and subject the operator to enforcement action by TCEQ.

Changes made to the draft permit in response to public comment:

Page 1 of the permit and Attachment B were revised to show LMU #2 is 35 acres.

Added Special Provision X.Q. Grassed Waterways.

1. The permittee shall design, construct, and maintain grassed waterways around the relocated native stream bed on the south of the settling basin and RCS #1:

- a. The design and construction shall adhere to the capacity, velocity, width, side slopes, depth, drainage, outlets, vegetative establishment, and plans and specifications requirements as described in NRCS Practice Standard Code 412, as amended.
 - b. The grassed waterways shall be planted and maintained in permanent vegetation, such as Bermuda grass. The period for re-establishment of vegetation following maintenance activities is not a violation of this provision.
2. The permittee shall develop and implement an operation and maintenance plan for the grassed waterways in accordance with NRCS Practice Standard Code 412, as amended. The plan shall be kept in the PPP. The operation and maintenance plan shall include the following:
- a. The permittee shall inspect the grassed waterways weekly and within 24 hours after a one inch or greater rainfall event, in accordance with Section VII.A.10(a) of this permit. The inspection report shall document the presence of bare areas, erosion, ponding or puddling of water, and depressions or reduced vegetation density that may lead to erosion, ponding or puddling.
 - b. In the event that bare areas, erosion, ponding or puddling, depressions, or reduced vegetation density are documented in the inspection report, the permittee shall:
 - i. submit the inspection report to the TCEQ Regional Office within 5 days of the date of inspection, and
 - ii. implement corrective actions within 30 days of the inspection. In the event that corrective actions cannot be implemented within 30 days, the permittee shall document the factors delaying implementation of corrective actions and implement corrective actions as soon as possible.
 - iii. In conjunction with the five year evaluation required by Section VII.A.10(b) of this permit, a licensed Texas professional engineer must review NRCS Practice Standard Code 412, complete a site evaluation of the grassed waterway, and include their findings in the certified report.

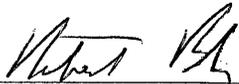
In response to comment, the date of the most recent NMP was added to Section V of the Fact Sheet.

Respectfully submitted,

Texas Commission on Environmental Quality

Mark R. Vickery, P.G.
Executive Director

Robert Martinez, Director
Environmental Law Division

By 
Robert D. Brush, Staff Attorney
Environmental Law Division
State Bar No. 00788772
Representing the EXECUTIVE DIRECTOR of
the Texas Commission on Environmental
Quality

ORIGINAL SOURCE
DATE: 11/14/10
BY: [illegible]

CERTIFICATE OF SERVICE

I certify that on March 18, 2009 the "Executive Director's Response to Public Comments" for Permit No. WQ00032590000 was filed with the Texas Commission on Environmental Quality's Office of Chief Clerk.



Robert D. Brush, Staff Attorney
Environmental Law Division
State Bar No. 00788772

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

2009 MAR 18 PM 4:09

CHIEF CLERKS OFFICE

Compliance History Report

Customer/Respondent/Owner-Operator:	CN602564486 LEYENDEKKER, GERBEN	Classification: AVERAGE	Rating: 9.56
Regulated Entity:	RN102093929 LEYENDEKKER DAIRY FARM	Classification: AVERAGE	Site Rating: 9.56
ID Number(s):	WASTEWATER AGRICULTURE PERMIT	WQ0003259000	
	WASTEWATER AGRICULTURE PERMIT	TX0129291	
Location:			
TCEQ Region:	REGION 04 - DFW METROPLEX		
Date Compliance History Prepared:	July 02, 2009		
Agency Decision Requiring Compliance History:	Enforcement		
Compliance Period:	June 27, 2003 to June 30, 2009		
TCEQ Staff Member to Contact for Additional Information Regarding this Compliance History			
Name:	Robert Brush	Phone:	239 - 5600

Site Compliance History Components

1. Has the site been in existence and/or operation for the full five year compliance period? Yes
2. Has there been a (known) change in ownership/operator of the site during the compliance period? No
3. If Yes, who is the current owner/operator? N/A
4. If Yes, who was/were the prior owner(s)/operator(s) ? N/A
5. When did the change(s) in owner or operator occur? N/A
6. Rating Date: 9/1/2008 Repeat Violator: NO

Components (Multimedia) for the Site :

- A. Final Enforcement Orders, court judgements, and consent decrees of the state of Texas and the federal government.

Effective Date: 11/19/2007 ADMINORDER 2007-0527-AGR-E

Classification: Major

Citation: 30 TAC Chapter 321, SubChapter B 321.42(s)

Description: Failure to develop and operate under a comprehensive nutrient management plan (CNMP) certified by the Texas State Soil and Water Conservation Board by December 31, 2006.
- B. Any criminal convictions of the state of Texas and the federal government.

N/A
- C. Chronic excessive emissions events.

N/A
- D. The approval dates of investigations. (CCEDS Inv. Track. No.)

1	02/03/2004	(257280)
2	08/19/2005	(405002)
3	02/03/2006	(451924)
4	11/21/2006	(516327)
5	01/03/2007	(533592)
6	03/15/2007	(543186)
7	11/16/2007	(596376)
8	02/07/2008	(617373)
9	02/23/2009	(735670)
- E. Written notices of violations (NOV). (CCEDS Inv. Track. No.)

Date: 08/19/2005 (405002) CN602564486

Self Report? NO Classification: Minor

Citation: 30 TAC Chapter 321, SubChapter B 321.39(f)(19)(J)(i)

Description: Failure to include all required information regarding waste / wastewater application in the records.

Self Report? NO Classification: Minor
 Citation: 30 TAC Chapter 321, SubChapter B 321.39(f)(12)
 Description: Failure to install and maintain a marker in the retention control structure (RCS) to indicate the 25-year, 24-hour storm water storage capacity of RCS.
 Date: 01/27/2006 (451924) CN602564486
 Self Report? NO Classification: Moderate
 Citation: 30 TAC Chapter 321, SubChapter B 321.40(11)
 Description: Failure to properly dispose dead animals within 3 days.
 Date: 11/16/2007 (596376) CN602564486
 Self Report? NO Classification: Minor
 Citation: 30 TAC Chapter 321, SubChapter B 321.42(a)(5)
 Description: Failure of the Regulated Entity to sample within the first 30 minutes of the discharge and properly analyze in accordance with EPA approved methods listed in 40 CFR 136 (proper holding times).
 Self Report? NO Classification: Minor
 Citation: 30 TAC Chapter 321, SubChapter B 321.42(a)(7)
 Description: Failure of the Regulated Entity which has discharged and the sample was not taken within 30 minutes of the discovery of the discharge, to include in the notification documentation of what dangerous conditions prevented initial sampling.
 Date: 02/20/2009 (735670) CN602564486
 Self Report? NO Classification: Minor
 Citation: 30 TAC Chapter 321, SubChapter B 321.41(a)(1)
 Description: Failure of the required DOPA training to be completed, including training required for each two-year period.

F. Environmental audits.

Notice of Intent Date: 10/06/2003 (262817)
 No DOV Associated

G. Type of environmental management systems (EMSs).

H. Voluntary on-site compliance assessment dates.

N/A

I. Participation in a voluntary pollution reduction program.

N/A

J. Early compliance.

N/A

Sites Outside of Texas

N/A



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BUSINESS ORGANIZATIONS INQUIRY - VIEW ENTITY

Filing Number: 801059661 **Entity Type:** Domestic Nonprofit Corporation
Original Date of Filing: December 5, 2008 **Entity Status:** In existence
Formation Date: N/A **Non-Profit Type:** N/A
Tax ID: 32038465681 **FEIN:**
Duration: Perpetual
Name: Bosque River Coalition
Address: 701 BRAZOS STE 1050
 AUSTIN, TX 787013232 USA

<u>REGISTERED</u> <u>AGENT</u>	<u>FILING</u> <u>HISTORY</u>	<u>NAMES</u>	<u>MANAGEMENT</u>	<u>ASSUMED</u> <u>NAMES</u>	<u>ASSOCIATED</u> <u>ENTITIES</u>
Assumed Name	Date of Filing	Expiration Date	Inactive Date	Name Status	Counties
No names exist for this filing.					

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Name	Entity Type	Document Description	Filing Date	Entity Filing Number	Jurisdiction Capacity
There are no documents listed for this entity which match your inquiry.					

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Last Update	Name	Title	Address		
December 5, 2008	Larry D Groth	Director	PO Box 2570 Waco, TX 76702 USA		
December 5, 2008	Wiley Stem III	Director	PO Box 2570 Waco, TX 76702 USA		
December 5, 2008	Charles E Markham	Director	11028 County Road 209 Hico, TX 76457 USA		

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				Name Inactive Date	Consent Filing #
		Bosque River Alliance	Prior Legal	December 31, 2008	0
		Bosque River Coalition	In use Legal		0

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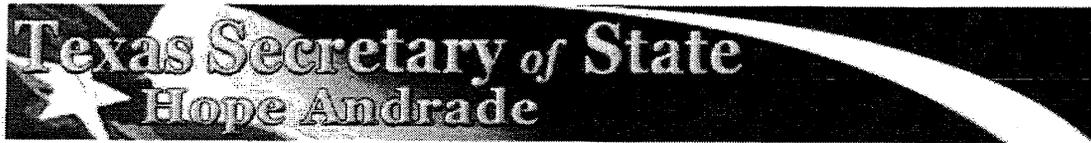
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Name				Address	Inactive Date
Corporation Service Company dba CSC - Lawyers Incorporating Service Company				701 Brazos, Suite 1050 Austin, TX 78701 USA	

Instructions:
 ● To place an order for additional information about a filing press the 'Order' button.



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View Image	Document Number	Filing Type	Filing Date	Effective Date	Eff. Cond Page Count
<input checked="" type="checkbox"/>	238825090002	Certificate of Formation	December 5, 2008	December 5, 2008	No 2
<input checked="" type="checkbox"/>	241423550002	Certificate of Correction	December 31, 2008	December 31, 2008	No 3

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DEC 05 2008

Corporations Section

CERTIFICATE OF FORMATION

OF

BOSQUE RIVER ALLIANCE

The undersigned person of the age of eighteen (18) years or more, acting as the organizer of a non-profit corporation under the Texas Non-Profit Corporation Law, does hereby adopt the following Certificate of Formation for such corporation.

ARTICLE I

NAME

The name of the corporation is the Bosque River Alliance (the "Alliance").

ARTICLE II

NON-PROFIT CORPORATION

The Alliance is a non-profit corporation.

ARTICLE III

DURATION

The period of the Alliance's duration is perpetual.

ARTICLE IV

PURPOSES

The purposes for which the Alliance is formed and is to be operated are the conservation and environmental protection of the Bosque River watershed and the prevention of and opposition to pollution in the Bosque River watershed.

ARTICLE V

INITIAL REGISTERED OFFICE AND AGENT

The address of the Alliance's initial registered office is 701 Brazos Street, Suite 1050, Austin, Texas 78701. The name of the initial registered agent at this office is Corporation Service Company d/b/a CSC-Lawyers Incorporating Service Company.

ARTICLE VI

BOARD OF DIRECTORS

The initial Board of Directors will consist of three (3) persons, in whom the management of the affairs of the Alliance shall be vested. The initial Board of Directors will consist of the following persons at the following addresses:

Larry D. Groth, P.E.
P.O. Box 2570
Waco, Texas 76702

Wiley Stem, III
P.O. Box 2570
Waco, Texas 76702

Charles E. Markham
11028 County Road 209
Hico, Texas 76457

ARTICLE VII
NO LIABILITY OF BOARD OF DIRECTORS

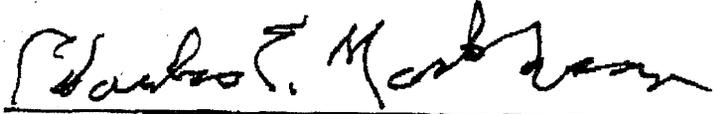
No member of the Board of Directors shall be liable to the Alliance, a member of the Alliance, or any other person for an action taken or not taken as a member of the Board of the Directors so long as the member of the Board of Directors discharged the member's duties in good faith, with ordinary care, and in a manner the member reasonably believed to be in the best interest of the Alliance.

ARTICLE VIII
ORGANIZER

The name and street address of the organizer of the Alliance is:

Charles E. Markham
11028 County Road 209
Hico, Texas 76457

IN WITNESS WHEREOF, I have hereunto set my hand this 4th day of December, 2008.



Charles E. Markham, Organizer

<p>Form 403 (Revised 01/08)</p> <p>Return in duplicate to: Secretary of State P.O. Box 13697 Austin, TX 78711-3697 512 463-5555 FAX: 512/463-5709 Filing Fee: \$15</p>	 Certificate of Correction	<p>This space reserved for office use.</p> <p>FILED In the Office of the Secretary of State of Texas</p> <p>DEC 31 2008</p> <p>Corporations Section</p>
---	---	---

Entity Information

1. The name of the filing entity is:

Bosque River Alliance

State the name of the entity as currently shown in the records of the secretary of state. If the certificate of correction corrects the name of the entity, state the present name and not the name as it will be corrected.

The file number issued to the filing entity by the secretary of state is: 801059661

Filing Instrument to be Corrected

2. The filing instrument to be corrected is : Certificate of Formation

The date the filing instrument was filed with the secretary of state: 12/05/2008

mm/dd/yyyy

Identification of Errors and Corrections

(Indicate the errors that have been made by checking the appropriate box or boxes; then provide the corrected text.)

The entity name is inaccurate or erroneously stated. The corrected entity name is:

Bosque River Coalition

The registered agent name is inaccurate or erroneously stated. The corrected registered agent name is:

Corrected Registered Agent
(Complete either A or B, but not both.)

A. The registered agent is an organization (cannot be entity named above) by the name of:

OR

B. The registered agent is an individual resident of the state whose name is:

<i>First</i>	<i>Middle</i>	<i>Last Name</i>	<i>Suffix</i>
--------------	---------------	------------------	---------------

The registered office address is inaccurate or erroneously stated. The corrected registered office address is:

Corrected Registered Office Address

<i>Street Address (No P.O. Box)</i>	<i>City</i>	<i>State</i> TX <i>Zip Code</i>
-------------------------------------	-------------	--

The purpose of the entity is inaccurate or erroneously stated. The purpose is corrected to read as follows:

The period of duration of the entity is inaccurate or erroneously stated. The period of duration is corrected to read as follows:

Identification of Other Errors and Corrections

(Indicate the other errors and corrections that have been made by checking and completing the appropriate box or boxes.)

Other errors and corrections. The following inaccuracies and errors in the filing instrument are corrected as follows:

Add Each of the following provisions was omitted and should be added to the filing instrument. The identification or reference of each added provision and the full text of the provision is set forth below.

Alter The following identified provisions of the filing instrument contain inaccuracies or errors to be corrected. The full text of each corrected provision is set forth below:

Delete Each of the provisions identified below was included in error and should be deleted.

Defective Execution The filing instrument was defectively or erroneously signed, sealed, acknowledged or verified. Attached is a correctly signed, sealed, acknowledged or verified instrument.

Statement Regarding Correction

The filing instrument identified in this certificate was an inaccurate record of the event or transaction evidenced in the instrument, contained an inaccurate or erroneous statement, or was defectively or erroneously signed, sealed, acknowledged or verified. This certificate of correction is submitted for the purpose of correcting the filing instrument.

Correction to Merger, Conversion or Exchange

The filing instrument identified in this certificate of correction is a merger, conversion or other instrument involving multiple entities. The name and file number of each entity that was a party to the transaction is set forth below. (If the space provided is not sufficient, include information as an attachment to this form.)

<i>Entity name</i>	<i>SOS file number</i>
--------------------	------------------------

<i>Entity name</i>	<i>SOS file number</i>
--------------------	------------------------

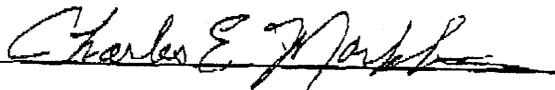
Effectiveness of Filing

After the secretary of state files the certificate of correction, the filing instrument is considered to have been corrected on the date the filing instrument was originally filed except as to persons adversely affected. As to persons adversely affected by the correction, the filing instrument is considered to have been corrected on the date the certificate of correction is filed by the secretary of state.

Execution

The undersigned signs this document subject to the penalties imposed by law for the submission of a materially false or fraudulent instrument.

Date: 12.30.08



Charles E. Markham, Director

Signature and title of authorized person (See instructions.)