DOCKET NUMBER 2008-0569-AGR

APPLICATION BY PETER HENRY SCHOUTEN AND NOVA DARLENE SCHOUTEN dba P&L DAIRY FOR PERMIT NO. WQ0003675000	§ § § §	**BEFORE THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**

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 Peter Henry Schouten and Nova Darlene Schouten dba P&L Dairy (Applicant) for a major amendment of its existing Concentrated Animal Feeding Operation (CAFO) Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0003675000. The City of Waco (Waco) submitted a contested case hearing (CCH) request.

Attached for Commission consideration are the following:

Attachment A -	Satellite Map of Area
Attachment B -	Fact Sheet and ED's Preliminary Decision
Attachment C -	Draft Permit
Attachment D -	Executive Director's Response to Public Comments (RTC)
Attachment E -	Compliance History
Attachment F -	Waco Request for Reconsideration on Broumley Dairy – filed 3/12/08 (without attachments)
Attachment G -	ED's Response to Hearing Request and Request for Reconsideration on Broumley Dairy – filed 8/15/08 (without attachments)
Attachment H -	EPA "No Objection" Letter – dated 10/30/07

II. Description Of The Facility

The Applicant has applied for a major amendment of their CAFO individual permit that would authorize the operation of an existing dairy cattle facility and to expand the herd size at the dairy from a maximum of 580 head to a maximum of 990 head. The facility consists of two retention control structures (RCSs) and four land management units (LMUs). The facility is located at the southwest corner of the intersection of County Road 229 and County Road 231 approximately 1.8 miles south of the intersection of County Road 229 and Farm-to-Market Road 913 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 permit application was received on June 15, 2004 and was considered administratively complete on March 11, 2005. The new CAFO rules were approved in July 2004. The new rules resulted in revisions to the CAFO permit application process and revisions in the required engineering and technical data. Pursuant to the new rules, the Applicant submitted a revised technical information packet on November 27, 2006. TCEQ staff completed a technical review of the application and prepared a draft permit. A combined revised Notice of Receipt and Intent to Obtain a Water Quality Permit (NORI) and revised Notice of Application and Preliminary Decision (NAPD) for a Water Quality Permit was published in the *Stephenville Empire Tribune* on November 20, 2007.[1] The public comment period ended on December 20, 2007. The ED filed the RTC on February 28, 2008. This application is subject 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 30 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 . . . ." 30 TAC § 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

1 The original NORI was mailed to the Applicant by the Office of the Chief Clerk on March 23, 2005. However, proof of publication of the NORI was not found in the Office of the Chief Clerk file. When the ED reached a preliminary determination on the draft permit in 2007, staff notified the Applicant that there was no evidence in TCEQ's files that the NORI was published and the Applicant was unable to supply documentation that the NORI was published in 2005. Therefore, the Applicant published a combined NORI and NAPD as allowed by 30 TAC § 39.405.

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. 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).

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

B. Whether Requestors Meet the Requirements of an Affected Person

30 TAC § 55.203(b) states that local governments with authority under state law over issues raised by the application may be considered affected persons. However, Waco has no authority to regulate dairies located outside its boundaries in another county. Also, Waco has no authority under state law over whether the dairies comply with 30 TAC Chapter 321, Subchapter B regulating CAFOs.

The ED also considered the factors listed in 30 TAC § 55.203(c) to determine whether Waco is an affected person for purposes of this permit application. Waco has water rights in Lake Waco, approximately 89 miles downstream from the dairy to the surface water intake points on the lake. The distance from the P&L Dairy to the City of Waco and Lake Waco weigh heavily against Waco's claim it is an affected person for purposes of this particular permit application.

The draft permit would only authorize a discharge from the RCSs in the event of a rainfall event that exceeds the 25-year, 10-day storm event for this area. Additionally, runoff from LMUs and third party fields are considered non-point source runoff and exempt agricultural runoff, not regulated under the Clean Water Act, as long as waste is land applied at agronomic rates and in compliance with TCEQ's CAFO rules.

A discharge from this particular dairy is unlikely to impact the health and safety of persons who drink Waco's water or to impact the use of the waters of Lake Waco. The dairy is located approximately 82 miles upstream of the point where the North Bosque enters Lake Waco and another 6.8 miles across Lake Waco to reach the point where Waco extracts drinking water from the lake. This distance is such that if there is a discharge from the facility, assimilation and dilution should occur long before the water reaches Lake Waco. *See* Attachment A.

Attempting to show affected person status, Waco attached an affidavit from Bruce Wiland, P.E., a consulting expert that states his conclusions regarding waste from P&L Dairy. Mr. Wiland states that in his professional opinion, waste from this dairy would negatively impact Lake Waco. However, Mr. Wiland does not cite any specific reference in the other attached documents that support his conclusions that the issuance of this permit to this dairy will have any impact on the cumulative nutrient issue in the North Bosque watershed. In fact, the ED did not find any other reference to this specific dairy operation in any of the hundreds of pages of reports and studies Waco included with their hearing request.

The ED does not dispute there is an issue with nutrients in the North Bosque watershed. That conclusion is supported by the exhibits to Waco's CCH request. However, the CCH process for one particular permit application is not the proper forum for addressing cumulative water quality issues in the North Bosque watershed.

The ED recommends that the Commission find that Waco is not an affected person in regards to this permit application and deny the hearing request.

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

As noted above, the ED recommends denial of Waco's hearing request. However, in the event the Commission determines that Waco is an affected person in this case, the ED analyzed the issues raised in their CCH request 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, unless otherwise noted. None of the issues were withdrawn. All identified issues in the response are considered disputed, unless otherwise noted.

1. Whether the permit application contains factual technical errors or omissions in sizing of RCSs that are in violation of the CAFO rule requirements in 30 TAC, Chapter 321. (RTC #13, #14, #15, and #24)

Whether the permit application and draft permit meet the rule requirements for sizing of the RCSs are issues of fact. Since this permit will implement new requirements on pond sizing this information is relevant and material to a decision on the application. The ED recommends referring this issue to SOAH.

2. **Whether the land application calculations in the permit application contain factual technical errors or omissions that are in violation of the CAFO rule requirements in 30 TAC, Chapter 321. (RTC #19 and #20)**

Whether the permit application and draft permit meet the rule requirements for calculating the land application rates of waste are issues of fact. If it can be shown that these calculations do not meet TCEQ rule requirements that information would be relevant and material to a decision on the application. The ED recommends referring this issue to SOAH.

3. **Whether the draft permit meets the applicable regulatory requirements in regards to addressing water quality concerns potentially caused by bacteria and other pathogens. (RTC #40)**

This is an issue of fact. Bacteria and other pathogens are water quality concerns. If the draft permit does not comply with the applicable regulatory requirements for bacteria and other pathogens that information would be relevant and material to a decision on the application. The ED recommends referring this issue to SOAH.

4. **Whether the ED has completed any required review of the draft permit for assurance that the draft permit meets the applicable water quality standards. (RTC #5)**

This is an issue of fact. If the ED has not met the applicable water quality standard review for this permit application that information would be relevant and material to a decision on the permit application. The ED recommends referring this issue to SOAH.

5. **Whether the expansion of the dairy is a "new source" under federal law and if it is, whether it meets the requirements of 40 CFR § 122.4(i). (RTC #1 and #2)**

Less than one month prior to filing their CCH request on this permit application, Waco filed a Request for Reconsideration (RFR) on another Bosque dairy operation raising the identical "new source" argument. *See* Attachment F, pages 7-8. In that RFR, Waco explains that they are raising the "new source" issue as a question of law and not as a question of fact. There is no disputed fact issue that the P&L Dairy is seeking to expand its herd size. Therefore, the ED agrees with Waco that this is an issue of law. 30 TAC § 50.115(c) requires that for an issue to be referred to SOAH it must raise factual, not legal issues. The ED recommends not referring this issue to SOAH.

6. **Whether the ED is properly implementing the Total Maximum Daily Load (TMDL) and TMDL implementation plan (TMDL I-Plan) for the North Bosque River in the draft permit. (RTC #3 A-E and #4)**

This is an issue of law. Waco raises no factual issues with this permit application with regards to TCEQ's implementation of the North Bosque TMDL. Waco argues that TCEQ's interpretation of the law and its interpretation of the TMDL through the TMDL I-Plan are not properly implemented in the individual dairy permits in the North Bosque River. Waco apparently agrees that this is an issue of law because in the RFR filing on the Broumley Dairy less than one month prior to their CCH filing in this case, they raise the identical issue and state that it is being raised as an issue of law. See Attachment F, pages 9-11. The ED agrees with Waco that this is an issue of law. 30 TAC § 50.115(c) requires that for an issue to be referred to SOAH it must raise factual, not legal issues. The ED recommends not referring this issue to SOAH.

7. Whether the ED failed to make a best professional judgment (BPJ) determination that the best conventional pollutant control technology was used as required by 40 CFR § 125.3(d)(2). (RTC #6)

As raised by Waco, this is an issue of law. Waco does not dispute the facts concerning this particular permit application, but takes issue with the ED's legal interpretations regarding this determination. Waco has previously agreed that this issue is a matter of law. *See* Attachment F, pages 11-12. The ED agrees that this is an issue of law. 30 TAC § 50.115(c) requires that for an issue to be referred to SOAH, the issue must raise factual, not legal issues. The ED recommends not referring this issue to SOAH.

8. Whether third party fields should be considered land management units. (RTC #7)

This issue is an issue of law. 30 TAC § 321.42(j)(3) was specifically worded to reflect that "LMUs are not associated with third party fields."[2] To qualify as third party fields under the rules, the CAFO operator does not control the third party field, but it is used for land application under contract with the CAFO. Application on third party fields is optional and represents "excess capacity to provide for more sound waste management by existing dairy CAFOs."[3] As raised by Waco, this issue takes exception to the CAFO rules and does not raise a disputed issue of fact. In fact, Waco has previously agreed that this is an issue of law. *See* Attachment F, page 12. The ED agrees with Waco that this is an issue of law. 30 TAC § 50.115(c) requires that for an issue to be referred to SOAH, the issue must raise factual, not legal issues. The ED recommends not referring this issue to SOAH.

9. Whether the ED must evaluate each of the following plans prior to permitting and make them available to the public throughout the public comment period due to the holding in the *Waterkeeper*[4] case: Nutrient management plans (NMPs), comprehensive nutrient management plans (CNMP), nutrient utilization plans (NUPs), RCS management plans, and pollution prevention plans (PPPs). (RTC #8)

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2 29 TexReg 6652, 6658 (July 9, 2004).

3 *Id.* at 6692.

4 *Waterkeeper Alliance, Inc. v. Environmental Protection Agency*, 399 F.3rd 486 (2nd Cir. 2005).

This issue is an issue of law regarding the interpretation of certain aspects of the *Waterkeeper* decision on CAFO permitting. The *Waterkeeper* decision found that NMPs were the equivalent of effluent limitations that should be incorporated into the permits. The ED is requiring individual CAFO permit applicants in the Bosque watershed to submit NMPs with the permit application. The NMPs are also subject to review and public scrutiny. The *Waterkeeper* case did not express an opinion on whether CNMPs, NUPs, RCS management plans, and PPPs must be incorporated into CAFO permits. Such incorporation is not required by the current version of TCEQ's CAFO rules. Therefore, this issue is not referable to SOAH because it does not involve disputed questions of fact, but interpretations of law or policy. Waco has previously agreed with the ED that this is an issue of law. *See* Attachment F, page 12. The ED agrees with Waco that this is an issue of law. 30 TAC § 50.115(c) requires that for an issue to be referred to SOAH, the issue must raise factual, not legal issues. The ED recommends not referring this issue to SOAH.

10. Whether a stage/storage table should be required as part of the permit application. (RTC #11)

As raised by Waco, this is an issue of law. Waco plainly states they are questioning "the Executive Director's interpretation of the rules," not the facts specific to this dairy. The ED agrees with Waco that this is an issue of law. 30 TAC § 50.115(c) requires that for an issue to be referred to SOAH, the issue must raise factual, not legal issues. The ED recommends not referring this issue to SOAH.

11. Whether the Applicant has included adequate information on settling ponds in the permit application. (RTC #12)

As raised by Waco, this is an issue of law. Waco plainly states they are questioning "the Executive Director's interpretation of the rules" not the facts specific to this dairy. The ED agrees with Waco that this is an issue of law. 30 TAC § 50.115(c) requires that for an issue to be referred to SOAH, the issue must raise factual, not legal issues. The ED recommends not referring this issue to SOAH.

12. Whether the Applicant has operational plans for the process of enlarging its RCSs. (RTC #17)

TCEQ rules do not require ED review or approval of the process an applicant will use to enlarge RCSs or their operational practices while doing so. Therefore, whether the Applicant has operational plans for the enlargement process is not relevant and material to a decision on the application. The ED recommends not referring this issue to SOAH.

13. Whether the permit application includes adequate descriptions of structural controls. (RTC #18)

TCEQ rules and the draft permit require that information be maintained in the PPP. *See* 30 TAC § 321.46(a)(5). This information is not part of the permit application review process. Therefore, this information is not relevant and material to a decision on the application. The ED

recommends not referring this issue to SOAH.

14. Whether the RCS Management Plan is subject to public comment and ED review prior to the permit being issued. (RTC #21)

As noted in the RTC, 30 TAC § 321.42(g) and the draft permit require the Applicant to implement a RCS management plan and maintain a copy in the PPP. TCEQ rules do not require review of RCS management plans prior to issuing the permit nor does it require that the RCS Management Plan be subject to public notice. 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. Waco contends that the complete RCS management plan must be available before the permit is issued. However, that is not required under the current version of the CAFO rules. Therefore, this issue is not relevant and material to a decision on the application. The ED recommends not referring this issue to SOAH.

15. Whether the ED is properly interpreting liner design requirements regarding sampling in 30 TAC § 321.38(g). (RTC #25)

As raised by Waco this is an issue of law. Waco does not contend there is an error in the permit application or that there is a disputed issue of fact. Waco contends that the ED has incorrectly interpreted 30 TAC § 321.38(g)(3)(A) regarding what samples are necessary to meet the requirement. The ED agrees with Waco that this is an issue of law. 30 TAC § 50.115(c) requires that for an issue to be referred to SOAH, the issue must raise factual, not legal issues. The ED recommends not referring this issue to SOAH.

16. Whether the Applicant should be required to certify its structural controls immediately upon issuance of the permit. (RTC #27)

As raised by Waco this is an issue of law. Section VII.A.10(b) of the draft permit and 30 TAC § 321.46(c)(1) require that once every five years the Applicant must 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; and for the Applicant to maintain that documentation in the PPP. The Applicant is required to re-certify the liner and RCS capacity documentation when the RCS modification occurs. TCEQ rules do not require immediate re-certification of structural controls. Therefore, this issue is an issue of law not referable to SOAH. The ED recommends not referring this issue to SOAH.

17. Whether the draft permit should require more than a single annual sample of wastewater and a single annual sample of manure from the RCS. (RTC #28)

As raised by Waco this issue is an issue of law. The sampling provision for manure, litter, and wastewater management in 30 TAC § 321.36(e)(1) states an Applicant must sample:

At least one representative sample of wastewater, if applicable, and one representative

sample of manure/litter shall be collected and analyzed each year for total nitrogen, total phosphorus, and total potassium.

Waco is correct in noting if conditions warrant that the ED could require additional samples. However, Waco has not made the case that conditions warrant additional samples; Waco simply disagrees with this rule and wants the ED to require more samples. Waco is not arguing that there are specific factual issues in this case that require additional sampling. Waco is arguing that the rule itself is inadequate. Therefore, this issue is not referable to SOAH as a disputed issue of fact. The ED recommends not referring this issue to SOAH.

18. Whether the draft permit potentially allows over 90% of the phosphorus generated by the facility to be land applied on third party fields in the North Bosque watershed. (RTC #29)

As raised by Waco this is an issue of law. Waco does not contend as a factual matter that the permit application or draft permit do not account for proper management of phosphorus, but that there should be some limit on the amount that a dairy can land apply to third party fields in the Bosque watershed. TCEQ rules currently do not identify any limits for land application on third party fields based on the total volume of phosphorus generated by a particular dairy. 30 TAC § 321.42(j)(2) prohibits the dairy operator from delivering manure, litter, or wastewater to an operator of a third party field once the soil test phosphorus analysis shows a level greater than or equal to 200 ppm. Land application on third party fields are limited by the amount of phosphorus in the soil, not based on the volume of phosphorus produced. Therefore, this issue is not referable to SOAH because it is an issue of law. The ED recommends not referring this issue to SOAH.

19. Whether the Applicant is legally required to remove 50% of the solid manure from the watershed. (RTC #30)

As raised by Waco this is an issue of law. Texas Water Code (TWC) § 26.503(b)(2) gives new or existing CAFOs who seek to expand their herd size in the North Bosque watershed five options for dealing with 100% of the collectible manure, one of which is removing the manure from the watershed. There is no regulatory or statutory requirement to remove 50% of the collectible or solid manure from the North Bosque watershed. Also, the TMDL I-Plan does not require a 50% haul-out of either all solid or collectible manure. Therefore, this issue is not referable to SOAH. The ED recommends not referring this issue to SOAH.

20. Whether land application on LMUs that exceed 200 ppm for phosphorus should be prohibited. (RTC #31)

As raised by Waco this is an issue of law. 30 TAC § 321.42(o) specifically allows land application on LMUs that show a phosphorus level between 200 and 500 ppm of phosphorus as long as it is supported by a certified NUP. Waco disagrees. The ED recommends not referring this issue to SOAH.

21. Whether the rules require the Applicant to submit records of crops and crop yields to

be submitted to TCEQ. (RTC #35)

As raised by Waco this is an issue of law. Record keeping requirements at 30 TAC § 321.46(d)(8)(f) state the actual yield of each harvested crop must be recorded by the Applicant on a monthly basis. This provision applies regardless of whether the draft permit includes a specific provision reciting the rule. There is no specific requirement in the rules that this information must be submitted to TCEQ. Therefore, the issue is not referable to SOAH. The ED recommends not referring this issue to SOAH.

22. Whether it should be required that the NMP address the full five years of the permit term rather than just the first year of the permit. (RTC #37)

TCEQ CAFO rules do not require the NMP to be submitted prior to permit issuance. However, the *Waterkeeper* decision found that NMPs were the equivalent of effluent limitations that should be incorporated into the permits. The ED is requiring individual CAFO permit applicants in the Bosque watershed to submit NMPs with their permit applications. 30 TAC §§ 321.36(e) and (g) requires annual sampling and the NMP must be updated to modify application amounts based on soil testing and wastewater/manure/slurry testing. Because the NMP is likely to change each year based on site specific sampling results, the ED is not requiring an NMP for the term of the permit. Therefore, whether the NMP addresses the entire permit term is not relevant and material to a decision on the application. 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.

V. 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 contested case hearing on this matter of nine months from the preliminary hearing to the presentation of a proposal for decision before the commission.

VI. Executive Director's Recommendation

The ED recommends the following actions by the Commission:

1. Find that Waco is not an affected person and deny the hearing request because the dairy is located approximately 89 upstream miles from Waco's surface water intake for their drinking water. Due to distance, assimilation and dilution should occur long before any discharge from this dairy reach Waco's drink water intakes. Therefore, a discharge from this particular dairy is unlikely to impact the health and safety of persons who drink Waco's water or to impact the use of the waters of Lake Waco.

3. If the Commission finds Waco to be 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

Mark R. Vickery, P.G., Executive Director

Robert Martinez, Director
Environmental Law Division

By _____ for
Robert D. Brush, Staff Attorney
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Representing the Executive Director of the
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CERTIFICATE OF SERVICE

I hereby certify that on August 29, 2008 the original and eleven true and correct copies of the "Executive Director's Response to Hearing Request" relating to the application of Peter Henry Schouten and Nova Darlene Schouten dba P&L Dairy for Permit No. WQ0003675000 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.

_____ for
Robert D. Brush, Staff Attorney
Environmental Law Division
State Bar No. 0078877

MAILING LIST
FOR PERMIT NO. WQ0003675000
Peter Henry Schouten and Nova Darlene Schouten dba P&L Dairy

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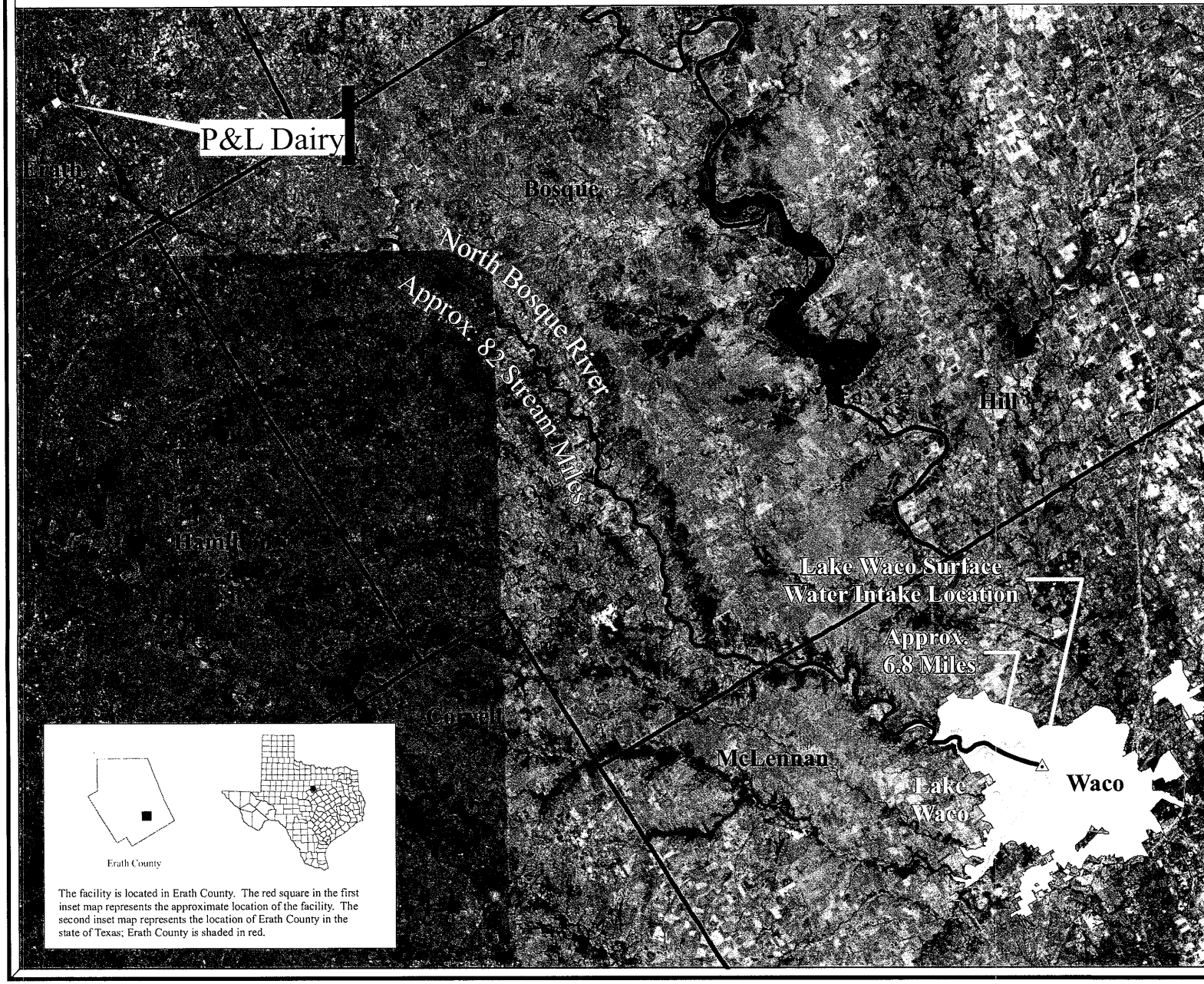
Attachment

A

P&L Dairy
WQ0003675000
Map Requested by TCEQ Office of Legal Services for Commissioners Agenda



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.

Protecting Texas by Reducing and Preventing Pollution

TCEQ

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

March 27, 2008

0 5 10 Miles

Projection: Texas Statewide Mapping System (TSMS)

Scale 1:503,345

Legend

○ Wastewater Outfall

Requestor's Property

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).

This map depicts the following:
(1) The approximate location of the dairy. This is labeled "P&L Dairy".

M McDonough CRF-080613055

Attachment

B

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Permit No.:	WQ0003675000
Owner:	Peter Henry Schouten, Sr. and Nova Darlene Schouten
Regulated Activity:	Concentrated Animal Feeding Operation; Dairy
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 Texas Pollutant Discharge Elimination System Permit No. WQ0003675000 for a Concentrated Animal Feeding Operation (CAFO) to authorize the permittee to expand an existing dairy facility from 580 head to a maximum of 990 head.

III. PROJECT DESCRIPTION AND LOCATION

Maximum Capacity: 990 total head
Land Management Units (LMUs) (acres): LMU#1- 16, LMU#2- 6, LMU#3- 19, LMU#4 – 2

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

Volume Allocations for RCSs (Acre-feet)						
	Design Rainfall Event Runoff	Process Generated Wastewater	Minimum Treatment Volume	Sludge Accumulation	Water Balance	Total Required Capacity
RCS #1	4.51	1.91	0	3.94	2.49	12.85
RCS #2	6.88	0	0	.80	6.71	14.39

A settling basin is in series with RCS #1.
RCS capacity certifications submitted with the application were dated later than the existing permit issued April 19, 2001.

The volume allocations are determined using Natural Resource Conservation Service standards, American Society of Agricultural 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 RCSs are 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 RCSs, 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 RCSs, runoff from roofed areas that contribute to the RCSs and direct rainfall on the surface of the RCSs. 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 RCSs are reflective of the land use and condition of the areas between the open lots and RCSs. A curve number of 100 is used for the RCS surfaces 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 a RCS. Wastewater includes all water used directly or indirectly by the facility that comes in contact with manure or other waste. The Process Generated Wastewater volume must contain the process generated wastewater from a 21 day period or greater. RCS #1 is designed to contain 30 days of process generated waste water for this permit.

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

RCSs that receive wet manure from flushing or other similar activities or runoff from open lot areas are required to have capacity allocated for sludge accumulation. The sludge accumulation volume for wet manure entering the RCS is based on a rate of 0.0729 cubic feet of storage capacity per pound of total solids in the wet manure entering the RCS during the design sludge accumulation period. The sludge accumulation volume allocated for runoff open lots is estimated as 25% of the design storm volume from the open lots. A minimum of one year of sludge storage is required in the RCS. Design sludge volumes in this permit reflect five (5) year accumulation for RCS #1 and RCS #2.

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.

Location: The facility is located at the southwest corner of the intersection of County Road 229 and County Road 231 approximately 1.8 miles south of the intersection of County Road 229 and Farm-to-Market Road 913 in Erath County Texas. Latitude: 32° 7' 18"N Longitude: 98° 5' 14"W.

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

IV. SUMMARY OF CHANGES FROM EXISTING AUTHORIZATION

The proposed permit includes revisions to 30 Texas Administrative Code Chapter 321, Subchapter B. The permittee is requesting to increase from 580 head to 990 head, and decrease the land application acreage from 46.85 acres to 43 acres. The proposed permit requires an increase in RCS capacity from 16.7 acre-feet to 27.24 acre-feet to accommodate the required margin of safety. Furthermore, land application of wastewater must be in accordance with a nutrient management plan. For additional changes from the existing authorization, see Attachment 1.

V. WATER QUALITY PROTECTION

Although the proposed permit is allowing an increase from 580 head to 990 head and a reduction in land application acreage from 46.85 acres to 43 acres, 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 (12.1 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 RCSs.

2. A RCS management plan is required to be implemented. This plan must establish expected end of the month water storage volumes for the RCSs. These maximum levels are based on the design assumptions used to determine the required size of the RCSs. 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 RCSs 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 RCSs. An operating volume of 5.13 acre-feet exceeds calculations of the maximum 30 day inflow minus evaporation.

3. The wastewater level in each 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 each RCS must be maintained at or below the design sludge volume. Previously, sludge had to be maintained at or below 50% of the treatment capacity, and 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 all RCSs. Proper sludge management will reduce overflows associated with insufficient wastewater storage capacity. This permit requires that sludge accumulations in the RCSs be measured at least annually beginning in year three of the permit. The RCSs are designed with a 5 year sludge capacity.

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 wastewater 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 LMUs 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, soil permeability, 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 evaluates the amount of nutrients needed for optimal crop production and then balances that need between the nutrients in the soils and nutrient source (i.e. wastewater). 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 manure and sludge produced on site and all excess wastewater that cannot be land applied in accordance with the nutrient management plan to be routed to off-site facilities (see item #3 below for additional discussion on excess wastewater).

Record keeping and reporting requirements, such as the amount of manure produced, amount of wastewater land applied, soil sampling and analyses, and the amount of manure, sludge or wastewater 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 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. The CNMP must be implemented by December 31, 2006. The CNMP for this facility was approved on January 12, 2005. 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 facility, and manure removed from the facility. Losses include volatilization, stormwater runoff, and leaching.

3. All manure and sludge produced on site and all 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. By requiring specific outlets for all manure produced on this facility, this permit provision limits unregulated use of manure within the watershed. Offsite use requires additional record-keeping to document how manure is 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). This CAFO is required to remove 100% of the manure from the facility.

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 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#	Vegatative Buffer setback (feet)	Additional Buffer Setback NRCS Code 393 Filter Strip flow length (feet)
1	Buffers are not applicable.	
2	100	30
3	100	30
4	100	30

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, 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 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 is 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 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 is applied, basis for and the total amount of nitrogen and phosphorus applied per acre to each LMU, including sources of nutrients other than wastewater and on a dry basis, 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 irrigation wastewater and one representative sample of 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 580 head to 990 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 manure and sludge produced on this facility and all excess 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 RCSs that must be designed to exceed the federal sizing requirement. The RCSs are required to be designed with a margin of safety, which requires a larger portion of the RCSs to remain dry (i.e. the distance between the normal wastewater operating level and the spillway). This permit requires the RCSs 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 RCSs. 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 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 TAC §307.10) for Segment 1226 are contact recreation, public water supply, high aquatic life use, and 5.0 mg/L dissolved oxygen.

Segment 1226 is currently listed on the State's inventory of impaired and threatened waters (the 2002 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.

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 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 cropping patterns. The proposed permit requires a nutrient management plan to be implemented upon issuance of the permit and also specifies that all manure will be exported from the facility. 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 excess 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 develop and implement a CNMP by December 31, 2006. In the interim, the permittee must implement the nutrient management or nutrient utilization plan submitted with the permit application and all subsequent updates.

These nutrient plans determine the nutrient application rate based on the potential for phosphorus transport to receiving waters, whereas the current authorization allows land application rates based on the nitrogen requirement of the crop. These application rates, based on the phosphorus risk assessment, will lower the potential for land applied nutrients to enter surface water and increase the amount of excess manure to be managed off-site. The implementation of these enhanced nutrient management practices 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. RCSs must be designed to contain the volume associated with a 25 year/10 day rainfall event,
2. a permanent marker, graduated in one foot vertical increments from the bottom of the RCS to the top of the 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 must be submitted to the TCEQ, and
7. a report of discharges must 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*, states that "...some of the technical professionals working on this committee are convinced that a significant part of the dairy source loading as 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 when required a 100-foot wide vegetative buffer plus a 30-foot filter strip 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 applications received on June 15, 2004 and subsequent revisions
2. TCEQ Permit No. WQ0003675000 issued April 19, 2001
3. Interoffice Memorandum from the Water Quality Assessment Team, Water Quality Assessment Section, Water Quality Division, dated August 16, 2007
4. Interoffice Memorandum from the Water Quality Standards Team, Water Quality Assessment Section, Water Quality Division, dated March 22, 2007
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

Manure, sludge or wastewater 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:

1. discharge of manure, sludge or wastewater 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 a RCS;

3. a discharge resulting from a chronic rainfall event from a 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 RCSs 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 and122.

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 dated November 22, 2006 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.

Soil Series and Map ID	Potential Limitations	Best Management Practices
HoB	Slow water movement, slow water perolation	Land application not to exceed agronomic rates and soil infiltration rates for nutrients and soil hydraulic rates (refer to NMP)
Ma, PcC, Pd	Droughty, Depth to bedrock	Land application will be based upon the AWC (refer to NMP) of the soil and will not exceed agronomic rates for nutrients. Irrigation events will be managed to assist in maintaining soil moisture levels within the range of the AWC of that LMU.

Soils on this facility have been identified by the NRCS as highly erodible land (HEL). LMUs will be protected with conservation farming practices within the standards of NRCS.

The Trinity aquifer consists of early Cretaceous age formations of the Trinity Group where they occur in a band extending through the central part of the state in all or part of 55 counties, from the Red River in North Texas to the Hill Country of South-Central Texas.

Formations comprising the Trinity Group are (from youngest to oldest) the Paluxy, Glen Rose, and Twin Mountains-Travis Peak. Updip, where the Glen Rose thins or is missing, the Paluxy and Twin Mountains coalesce to form the Antlers Formation. The Antlers consists of up to 900 feet of sand and gravel, with clay beds in the middle section. Water from the Antlers is mainly used for irrigation in the outcrop area of North and Central Texas (Ashworth and Hopkins, 1995).

The aquifer is underlain and confined by low-permeability rocks that range in age from Precambrian to Jurassic. Where the aquifer does not crop out, it is confined above by the Walnut Formation in most of the area.

Recharge to the Trinity aquifer is generally as precipitation that falls on aquifer outcrop areas and as seepage from streams and ponds where the head gradient is downward. In the Hill Country, water might flow laterally into the Trinity aquifer from the adjacent Edwards-Trinity aquifer. The aquifer discharges by evapotranspiration, spring discharge, diffuse lateral or upward leakage into shallower aquifers, and withdrawals from wells (USGS, 2003). The table below lists all wells on the facility, their status, and what measure will be taken to protect groundwater.

Well (Map Number)	Status	BMPs
1	Producing	Well head is sealed to a concrete surface slab in good condition
2	Producing	Well head is sealed to a new concrete surface slab
3	Producing	Well head is sealed to a concrete surface slab in good condition
4	Capped	100 foot buffer
5	Capped	100 foot buffer

2. The RCSs at the CAFO must be adequately lined and certified by a professional engineer; alternatively, certification must document a lack of hydrologic connection between wastewater in the RCSs 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 RCSs was submitted with the application.

RCS No.	Construction Date	Liner Certification Date
1	Approximately 1993	March 18, 1997
2	Approximately 1993	October 27, 1999
settling basin	Approximately 2001	December 24, 2001

3. RCS design criteria must include volumes for the design rainfall event, sludge, and process generated wastewater to meet "best available technology economically achievable" and "best practicable control technology". 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 the RCS system. 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, sludge or wastewater removed from the facility, inspections of control facilities and land application equipment; and monthly records of wastewater 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 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 RCSs must be minimized. The site includes berms to both direct contaminated runoff into the RCSs and prevent uncontaminated stormwater runoff from entering the RCSs.

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 (zero (0) to six (6) inches if incorporated, zero (0) to two (2) or two (2) to six (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 which is phosphorus, 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 (zero (0) to six (6) inches if incorporated, zero (0) to two (2) or two (2) to six (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 nutrient application, and best management practices including physical structures and conservation practices utilized by the CAFO to assure the beneficial use of wastewater 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 (zero (0) to six (6) inches if incorporated, zero (0) to two (2) or two (2) to six (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 judgement.

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, 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). Samples must be taken annually from land application areas 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 BY LAND APPLICATION AND EVAPORATION

The proposed permit contains requirements related to the collection, handling, storage and beneficial use of wastewater by land application or evaporation. 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 development and implementation of a CNMP by December 31, 2006. The CNMP for this facility was approved on January 12, 2007. The CNMP must consider manure, sludge or wastewater 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. The permittee must have a contract with the operator of the third-party fields. The written contract must require all transferred manure, sludge or wastewater 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 (zero (0) to six (6) inches if incorporated, zero (0) to two (2) or two (2) to six (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, sludge or wastewater to an operator of a third-party field once the soil test phosphorus analysis shows a level greater than 200 ppm in Zone 1 (zero (0) to six (6) inches if incorporated, zero (0) to two (2) or two (2) to six (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, sludge or wastewater 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 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.

For additional information about this application, contact James moore at (512)-239-0171.

James M. Moore — September 12, 2007

James M. Moore, P.E. — Date
CAFO Permit Team
Water Quality Assessment and Standards Section
Water Quality Division

Attachment 1

	Existing Authorization #3675 issued 4/19/2001	Proposed permit
Head Count	580	990
RCS Required Capacity (acre-feet)	16.7	27.24
RCS Actual Capacity (acre-feet)	17.35	TBD
additional capacity (acre-feet)	0.65	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 RCSs	clean out required when volume exceeds 50 % of treatment capacity, not required in RCS without treatment capacity	clean out required when sludge volume meets or exceeds the sludge volume designed for each 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 has reason to believe could be in the discharge	monitored for all previous parameters plus total coliform, total dissolved solids, nitrate, and total phosphorus
Chronic discharge determination	not required	required
land application of sludge	based on nitrogen requirement of the crop	land application of sludge prohibited
agronomic rate	based on nitrogen requirement of crop	based on phosphorus requirement of crop
land application of manure and wastewater	at agronomic rates unless soil phosphorus levels exceed 200 ppm	land application of wastewater in accordance with a certified nutrient management plan, unless soil phosphorus levels exceed 200 ppm, land application of manure prohibited
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 (if applicable)
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	• 60% increase to the storage capacity reserved for chronic rainfall • an additional portion of the structure above the 25 year/24 hour marker will also remain dry, except during chronic or catastrophic rainfall events • will reduce overflow frequency
RCS management plan	• predicts expected end of the month water storage volumes for each RCS • requires permittee to manage water level accordingly • requires permittee to maintain minimum wastewater volume • will reduce overflow frequency
monitor and record RCS wastewater level daily	• provides visual indication of compliance
One foot increments on pond marker	• 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	• 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	• reduces the potential of irrigation related discharges associated with equipment malfunctions
Nutrient Management Plan (based on crop requirement 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)	• stabilizes and/or reduces phosphorus on high phosphorus LMUs by establishing the annual application rate based on the amount of nutrients removed by the previous year's harvest based on NRCS Practice Standard 590
CNMP	• 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
All manure must go to compost, landfill, outside of watershed, or third-party fields	• limits unregulated use of manure within the watershed • offsite use incurs additional record-keeping to document how all manure is used. • provides mechanism to track 50% voluntary removal goal in TMDL

chronic discharge determination	• 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	• 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	• 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)	• reduce erosion, suspended solids and nutrients in runoff from LMUs. • site specific conditions and NRCS practice standards specifies which Conservation Practices must be implemented

Attachment

C

TPDES Permit No. WQ0003675000
This Permit supersedes and replaces Permit No. WQ0003675000 issued on April 19, 2001.
[*For TCEQ use only: EPA ID No. TX0126471*]

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

I. Permittee:

A.	Owner	Peter Henry Schouten, Sr. and Nova Darlene Schouten
B.	Business Name	P&L Dairy
C.	Owner Address	3728 County Road 229 Hico, Texas 76457

II. Type of Permit: Major Amendment/Water Quality

III. Nature of Business Producing Waste: Concentrated Animal Feeding Operation (CAFO); Dairy; SIC No. 02410

IV. General Description and Location of Waste Disposal System:

Maximum Capacity: 990 total head
Site Plan: See Attachment A.
Retention Control Structures (RCS) total required capacities without freeboard (acre-feet):
RCS #1-12.85, RCS #2-14.39
Land Management Units (LMUs) (acres): LMU#1-16, LMU#2-6, LMU#3-19, LMU#4-2; See Attachment B for locations.
Location: The facility is located at the southwest corner of the intersection of County Road 229 and County Road 231 approximately 1.8 miles south of the intersection of County road 229 and Farm-to-Market Road 913 in Erath County, Texas. Latitude: 32° 7' 18"N Longitude: 98° 5' 14"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 and/or the maximum number of milking cows;
     - (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; RCSs or other control facilities; LMUs, including off-site areas which are owned, operated, or under the control of the facility owner or operator which will be used for land application of wastewater; water wells, abandoned and in use, which are on-site or within 500 feet of the facility boundary; all springs, lakes, or ponds located on-site or within one mile of the facility boundary; and dead animal burial sites.

(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 dated November 22, 2006 shall be implemented, updated by the permittee as often as necessary, and maintained in the PPP.

(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 RCSs. 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 RCSs which meet the above criteria.

(b) Monitoring Requirements. The permittee shall sample and analyze all discharges from RCSs 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 #1 and RCS #2 (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 Texas State Board of Professional Engineers requirements.

(2) Documentation of liner and capacity certifications must be completed for each RCS prior to use and kept on-site in the PPP. Once construction of modified RCS #1 and RCS #2 is complete, new capacity and liner certifications will be provided. Upon issuance of this permit, a new liner certification will be provided for the settling basin. The table below shows current liner and capacity certifications provided in the permit application.

RCS	Liner Certification	Capacity Certification	
	Date	Date	Volume (acre-feet)
RCS # 1	March 18, 1997	December 22, 2003	9.81
RCS # 2	October 27, 1999	December 22, 2003	7.54
Settling basin	December 24, 2001	N/A	N/A

(b) Design and Construction Standards. The permittee shall ensure that each 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 RCSs.

(2) The permittee shall maintain the drainage area to minimize ponding or puddling of water outside of the RCSs.

(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 each RCS, including embankment and liners.

(2) Design Rainfall Event. Any RCS system authorized under this individual 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 12.1 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 RCSs on a regular schedule. Equipment capable of dewatering the RCSs shall be available and operational whenever needed to restore the operating capacity required by the RCS management plan.

(f) Embankment Design and Construction. The RCSs on this CAFO have a depth of water impounded against the embankment at the spillway elevation of three feet or more, therefore the RCSs are 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 any structural modification of an RCS.

(1) Soil Requirements. Soils used in the embankment shall be free of foreign material such as 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 the American Society of Testing Materials (ASTM D 1556, D 2167, D 2922 or D 2937; and D2216, D 3017, D 4643, D 4944 or D 4959) or equivalent testing standards. 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 x 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 #1 and RCS #2, which are 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 during chronic or catastrophic rainfall that is greater than the design rainfall event.

(6) Embankment Protection. For all structural modifications of existing RCSs, each 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. RCSs without spillways must have a minimum of two (2) vertical feet between the top of the embankment and the required storage capacity.

(g) RCS Hydrologic Connection. The permittee shall ensure site-specific documentation is prepared and certified by a licensed Texas professional engineer or licensed Texas professional geoscientist that shows that no significant hydrologic connection exists between the contained wastewater and water in the state. Where the permittee cannot document that no significant hydrologic connection exists, RCSs must have a liner consistent with the requirements of this subsection.

(1) Documentation must show that there will be no significant leakage from the RCSs; or that any leakage from the RCSs will not migrate to water in the state.

(2) If it is claimed that no significant leakage would result from the use of in-situ materials, documentation must be provided by an NRCS engineer, or a licensed Texas professional engineer or a licensed Texas professional geoscientist that a liner is not needed to prevent a significant hydrologic connection between the contained wastewater and waters in the state. This information will be considered documentation that no significant hydrologic connection exists.

(3) Site-specific conditions may be considered in the design and construction of liners. Where no site-specific assessment has been performed demonstrating that there will be no significant leakage from the RCSs or that any leakage from the RCSs will not migrate to water in the state, a liner must be designed by a licensed Texas professional engineer and documented to have hydraulic conductivities no greater than 1 x 10^{-7} cm/sec in accordance with ASTM D 5084, or other method approved by the Executive Director, with a thickness of 1.5 feet or greater or its equivalency in other materials. The liner must be constructed in accordance with the

design and certified as such by a licensed Texas professional engineer. The permittee shall maintain the liner to minimize the percolation of wastewater through the liner.

(4) Liner Sampling. The licensed Texas professional engineer or licensed Texas professional geoscientist shall use best professional practices to ensure that the core samples or other liner samples will be appropriately plugged with material that also meet liner thickness or saturated hydraulic conductivity tested at optimal moisture content standards.

(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 hydrologic connection 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 RCSs must be certified by a licensed professional Texas engineer as providing protection equivalent to the requirements of this permit.

5. Operation and Maintenance of RCSs

(a) RCS Operation and Maintenance

(1) The permittee must operate and maintain a margin of safety in the RCSs 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 system, 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 RCSs 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 each 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 each 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 RCSs 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 RCSs are otherwise being managed according to the RCS Management Plan criteria. In circumstances where the RCSs have 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 RCSs 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 a 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 RCSs. 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 this permit in 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 RCSs, visible from the top of the berm to show the following:

(i) the volume for the design rainfall event; and

(ii) one-foot increments beginning from the bottom of the RCSs to the top of the embankment or spillway.

(iii) design volumes 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 RCSs. (See Special Provision X.H for additional requirements related to sludge monitoring.)Sludge shall be removed from the RCSs in accordance with the design schedule for cleanout 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 third party field if in accordance with Section VII.A.8(e)(5). Alternatively, sludge may be disposed by any of the following method(s):

(i) delivery to a composting facility authorized by the executive director;

(ii) delivery to a permitted landfill located outside the major sole source impairment zone; or

(iii) beneficially utilized by land application to land located outside of the major sole source impairment zone.

(8) Liner Protection and Maintenance. The permittee shall maintain the liners 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 liners or embankments. Any mechanical or structural damage to the liners 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 RCSs 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 Land Application Team of the Water Quality Division in Austin (MC-150) within ninety (90) days of when operation of the CAFO or an individual RCS terminates. The closure plan for the RCSs 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 Cooperative 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. This provision applies to vacuum tanks used to scrape manure in freestall barns but does not apply to dry manure handling systems.

(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 RCSs.

(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.E. 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 the RCSs 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 a 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.

(4) Temporary storage of manure or sludge shall not exceed thirty (30) days and is allowed only in a RCS drainage area. Temporary storage of manure and sludge 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.

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 the RCSs 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.

The table presented below lists the wells on this CAFO, their current status and the Best Management Practices used to protect groundwater. A Well Buffer Exception request for Well #1, Well #2, and Well #3 was submitted and approved by the TCEQ Water Quality Assessment Team.

Well (Map Number*)	Status	BMPs
1	Producing	Well head is sealed to a concrete surface slab in good condition
2	Producing	Well head is sealed to a new concrete surface slab
3	Producing	Well head is sealed to a concrete surface slab in good condition.
4	Capped	100 foot buffer
5	Capped	100 foot buffer

8. Land Application

(a) Nutrient Management Plan (NMP) Required. The certified NMP dated June 12, 2007 shall be implemented upon issuance of this permit. The plan shall be kept in the PPP and updated according to NRCS guidance for Practice Standard 590. The operator 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 develop and operate under a CNMP certified by the Texas State Soil and Water Conservation Board. The CNMP must be implemented by December 31, 2006.

(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 (zero (0) to six (6) inch incorporated; zero (0) to two (2) or two (2) to six (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 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 or may elect to continue operating under the approved NUP for an additional period of time.

(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 Cooperative 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 (zero (0) to six (6) inch incorporated; zero (0) to two (2) or two (2) to six (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 (zero (0) to six (6) inch incorporated; zero (0) to two (2) or two (2) to six (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 manure, wastewater, and sludge 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 manure, sludge or wastewater. Manure, sludge or wastewater 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 manure, sludge, or wastewater 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 manure, sludge or wastewater 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 or 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 concentrations 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, not to exceed the crop nitrogen requirement, when soil phosphorus concentrations 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, not to exceed the crop nitrogen requirement, when soil phosphorus concentrations 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) Third-party fields which have had manure, sludge or wastewater applied during the preceding year must be sampled by a certified nutrient management specialist and the samples analyzed in accordance with 30 TAC §321.36.

(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 manure, sludge or wastewater is prohibited on third party fields.

(ii) The permittee is prohibited from delivering manure, sludge or wastewater to an operator of a third-party field once the soil test phosphorus analysis shows a level 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 manure, sludge or wastewater 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 discharge of manure, sludge or irrigated wastewater is prohibited from a LMU, unless authorized under Section VII.A.5.(a)(4).

(ii) Where wastewater 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 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 application, application shall only be allowed from one 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 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 application on LMUs or manure, sludge or wastewater application on third party fields, the permittee shall have at least one representative soil sample from each of the LMUs or third party fields 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 Cooperative 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: zero (0) to six (6) inches (for an LMU where the manure, sludge, slurry, or compost is incorporated

directly into the soil) or zero (0) to two (2) inches (for an LMU 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 zero (0) to two (2) inch sample is required, then an additional sample from the two (2) to six (6) inch soil depth zone shall be obtained in accordance with the provisions of this section; and

(B) Zone 2: six (6) to twenty-four (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 from LMUs 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 RCSs.

(3) Weekly Inspections. The permittee shall conduct weekly inspections on:

(i) all control facilities, including the RCSs, storm water diversion devices, runoff diversion structures, control devices for management of potential pollutant sources, and devices channeling contaminated storm water to the RCSs; and

(ii) equipment used for land application of wastewater.

(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 and shall document the findings, including any significant observations requiring further action in the PPP.

(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

(D) records documenting significant observations made during the site inspection.

(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;

(c) a copy of the comprehensive nutrient management plan, nutrient management plan and nutrient utilization plan, if required;

(d) the RCS liner certifications;

(e) any written agreement with a landowner which documents the allowance of

nighttime application of wastewater;

(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 each 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 RCSs, 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/or 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/or 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 Cooperative 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 RCSs, as shown on the depth marker. In circumstances where a 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 manure, sludge, or wastewater 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 applied on LMUs. Such records must include the following information:
      (i) date of wastewater application to each LMU;
      (ii) location of the specific LMU and the volume applied during each application event;
      (iii) acreage on which wastewater is applied;
      (iv) total amount of nitrogen and phosphorus applied per acre to each LMU on a dry basis, including sources of nutrients other than wastewater;
      (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) actual annual yield of each harvested crop for each LMU;
   (b) percent moisture content of the manure and wastewater;
   (c) annual nutrient analysis for at least one representative sample of irrigation wastewater and one representative sample of manure (solid and slurry) for total nitrogen, total phosphorus and total potassium;
   (d) any initial and annual soil analysis reports;
   (e) the annual site inspection report; and
   (f) any measurements of sludge accumulation in all of the RCSs including, but not limited to the requirements in VII.A.5.(a)(7)
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 and as built capacity certifications;
   (d) embankment certifications;
   (e) liner certifications;
   (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 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. 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.

(d) Discharge monitoring analyses required by this permit.

4. In the event of a discharge from the RCSs or LMUs 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 RCSs or LMUs 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 land applied during the last twelve (12) months on-site at the CAFO facility;
   (d) total manure, sludge, or wastewater 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, litter, or wastewater 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 increase the size of RCS #1 and RCS #2 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 RCSs.

RCS#	Design Rainfall Event Runoff	Process Generated Wastewater	Minimum Treatment Volume	Sludge Accumulation	Water Balance	Required Capacity without Freeboard	Actual Capacity without Freeboard
1	4.51	1.91	0	3.94	2.49	12.85	TBD
2	6.88	0	0	0.80	6.71	14.39	TBD

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 580 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 580 head.
3. Once modification of RCS #1 and RCS #2 is completed, the RCS management plan will be modified to reflect the new volumes and implemented within thirty (30) days.

B. Future Revisions to Bosque River Total Maximum Daily Load (TMDL). The permittee is hereby placed on notice that this permit may be amended by the Texas Commission on Environmental Quality in order to make the terms and conditions of this permit consistent with any revisions to the Bosque River TMDL, associated Implementation Plan, and with any revisions to federal regulations.

C. The permittee shall submit the following records to the TCEQ Regional Office and the Enforcement Division (MC-224) annually, in conjunction with the annual report required by Section VIII.B.7 of this permit:

1. date of wastewater application to each LMU;
2. location of the specific LMU and the volume applied during each application event;
3. acreage of each individual crop on which wastewater is applied;
4. basis for and the total amount of nitrogen and phosphorus applied per acre to each LMU, including sources of nutrients other than wastewater on a dry basis;
5. 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
6. annual nutrient analysis for at least one (1) representative sample of irrigation wastewater and one representative sample of manure (and sludge , if sludge is removed from a RCS) for total nitrogen, total phosphorus, and total potassium.

D. Manure includes slurry from freestall barns, solids from open lots, settling basin solids, bedding, feed, and other raw materials commingled with feces and/or urine. If slurry or settling basin solids are being land applied an annual sample analysis must be provided along with analysis for other manure solids and wastewater.

E. Slurry removed from freestall barns, if temporarily stored on site, must be stored within the drainage area of a 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.

F. The table below describes the buffers that the permittee is required to install and maintain 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#	Vegatative Buffer setback (feet)	Additional Buffer Setback NRCS Code 393 Filter Strip flow length (feet)
1	Buffers are not applicable.	
2	100	30
3	100	30
4	100	30

G. There will be no grazing of livestock on the LMUs for this CAFO unless the NMP is amended to reflect grazing and NRCS grazing practices are implemented to protect buffers.

H. The sludge volume in the RCSs will be measured and recorded in the PPP as necessary, but at least annually beginning in year three (3) of the permit.

I. All runoff from silage 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 storage area located outside the drainage area of the RCSs.

J. No application of manure or sludge may take place on the LMUs.

K. The RCS Management Plan will have a site specific contingency plan for removal of wastewater to keep planned withdrawals from exceeding maximum allowed allocations. All wastewater that cannot be applied in accordance with the NMP will be removed from the facility at a minimum of once per calendar year.

L. Prior to removal of any sludge from the facility, the permittee shall have a representative sample analyzed for total nitrogen, total phosphorus and total potassium.

M. Flushing of the freestall barns is prohibited. Manure removal may be accomplished by dry scrape or vacuum only.

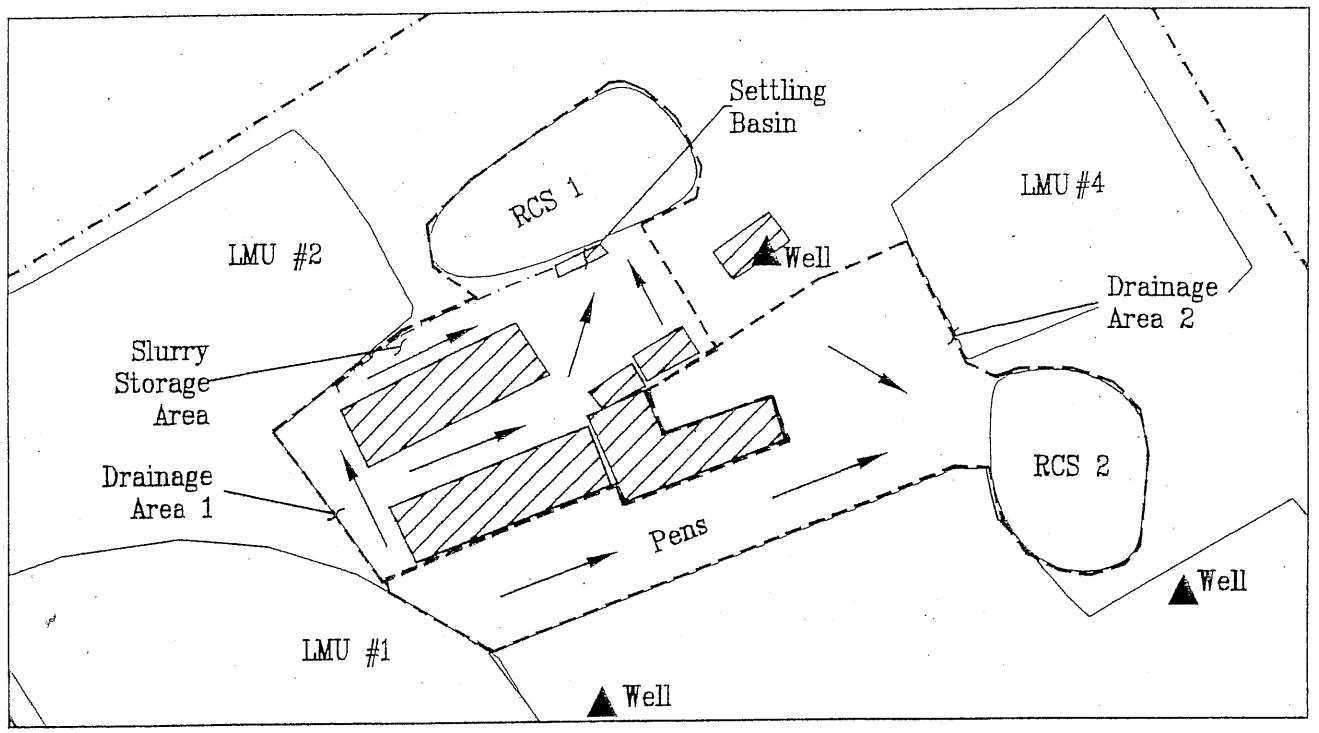
N. Manure and settled solids accumulations in the settling basin must be removed on a regular and consistent basis so as to assure attainment of the 40% designed removal efficiency.

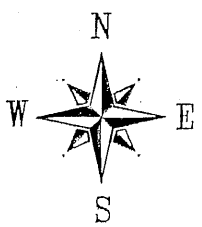
O. Once modification of RCS #1 and RCS #2 is complete, updated capacity and liner certifications will be placed in the PPP within 30 days.

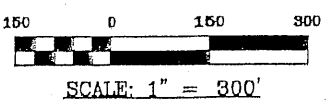
P. Upon issuance of this permit, a new liner certification for the settling basin will be placed in the PPP.

Q. No temporary storage of manure or sludge is allowed on the LMUs.

ATTACHMENT A
SITE MAP

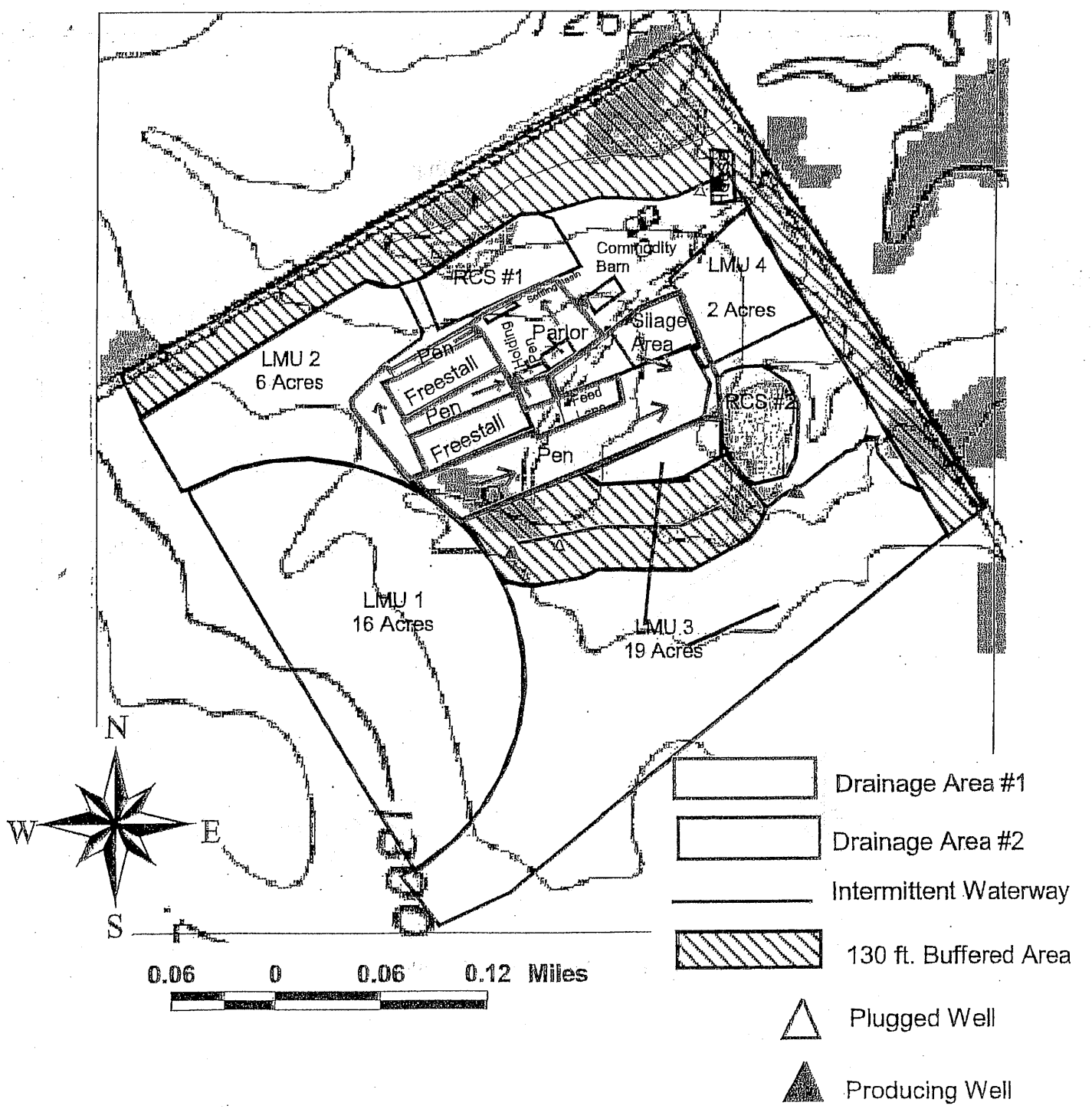






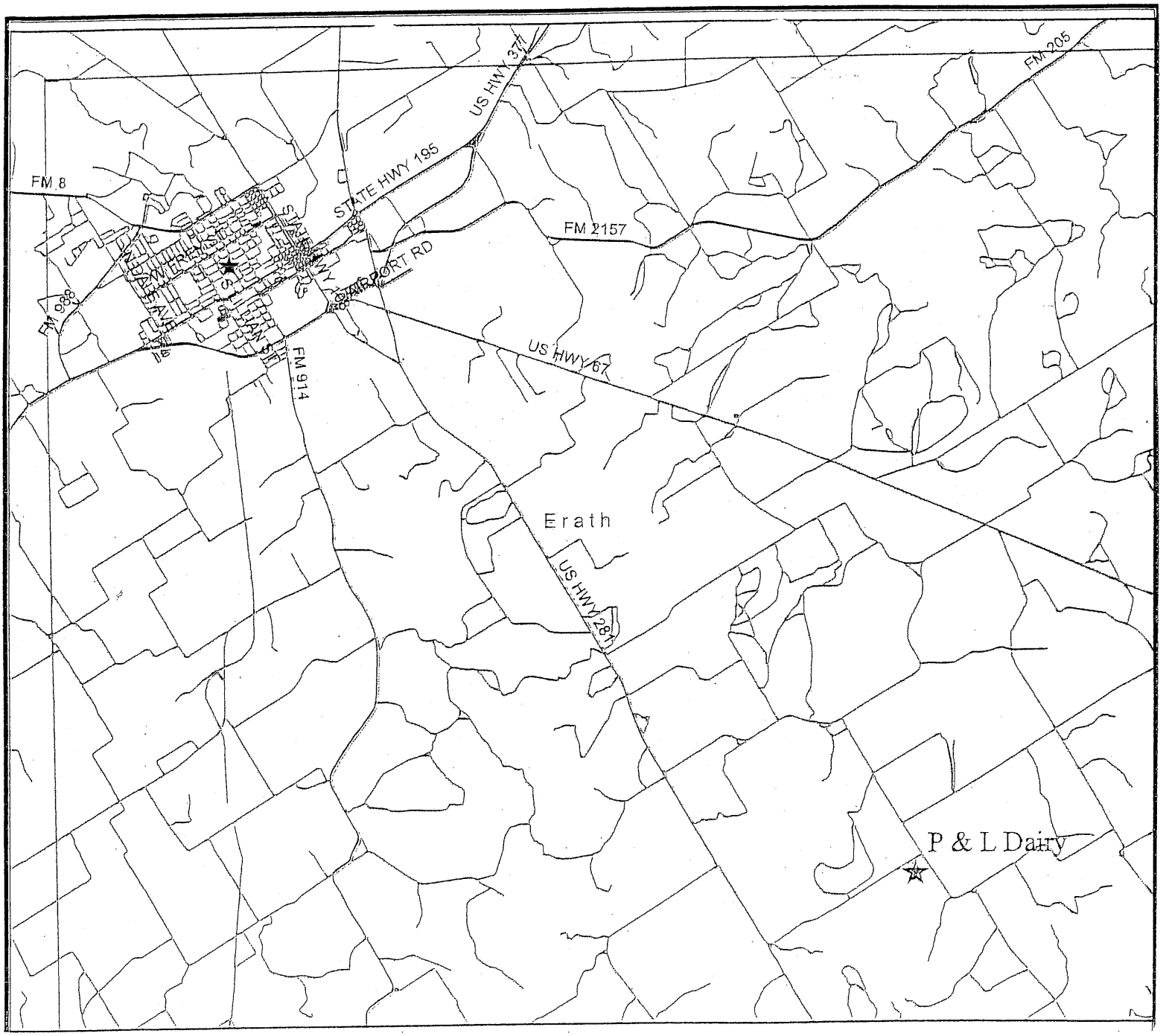
Note:
Arrows denote flow direction.

ATTACHMENT B
LAND APPLICATION AREAS



All Acreage Figures Are Animal Waste Appliable Acreage Only

ATTACHMENT C
VICINITY MAP



Attachment

D

TPDES PERMIT NO. WQ0003675000

APPLICATION BY	§	BEFORE THE
PETER HENRY SCHOUTEN, SR.	§	TEXAS COMMISSION ON
AND NOVA DARLENE SCHOUTEN,	§	ENVIRONMENTAL QUALITY
DBA P&L DAIRY	§	

EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENT

The Executive Director (ED) of the Texas Commission on Environmental Quality (TCEQ or Commission) files this Response to Public Comment on the preliminary decision by the ED to approve the application of Peter Henry Schouten, Sr. and Nova Darlene Schouten, dba P&L Dairy (Applicant) for a major amendment of its existing Concentrated Animal Feeding Operation (CAFO) Texas Pollutant Discharge Elimination System (TPDES) permit no. WQ0003675000. 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 the Chief Clerk received timely public comments from the City of Waco, represented by Brown McCarroll L.L.P. (Waco).

This response addresses all such timely public 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 for a major amendment of their CAFO individual permit that would allow it to operate an existing dairy cattle facility and to expand its herd size from a maximum of 580 head to a maximum of 990 head. The facility consists of two retention control structures (RCSs) and four land management units (LMUs). The facility is located at the southwest corner of the intersection of County Road 229 and County Road 231 approximately 1.8 miles south of the intersection of County Road 229 and Farm-to-Market Road 913 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 permit application was received on June 15, 2004 and declared administratively complete on March 11, 2005. TCEQ staff completed a technical review of the application and prepared a draft permit. A combined revised Notice of Receipt and Intent to Obtain a Water Quality

Permit (NORI) and revised Notice of Application and Preliminary Decision (NAPD) for a Water Quality Permit was published in the *Stephenville Empire Tribune* on November 20, 2007.[1] The public comment period ended on December 20, 2007. This application is subject to House Bill 801, 76th Legislature, 1999.

COMMENTS AND RESPONSES

Comment 1:

Waco comments that the facility is a "new source" as defined by Title 40 of the Code of Federal Regulations (40 CFR) § 122.2 and as required by 30 TAC § 305.2(24) since it was constructed in 1988, and therefore, should be classified as a "new source" subjecting it to the review required by 40 CFR § 122.2(i). Waco also contends that because the Applicant proposes to expand the size of their retention control structures (RCSs) that also creates a "new source." Waco comments that because dairy is a "new source" it requires TCEQ to do a load allocation to determine if there is sufficient load allocations remain for discharges from this dairy. Waco comments that this has not been done and that most significantly Footnote 2 in Table 1 of Mr. Cooke's EPA letter of 12/31/01 to TCEQ ED Jeff Saitas states the TMDLs "did not include any allocation whatsoever for discharges from the CAFO lagoons."

Response 1:

40 CFR §§ 122.4(a) and (d) prohibit issuing a permit if the conditions of the permit do not provide for compliance with the Clean Water Act (CWA) and when the imposition of conditions cannot insure compliance with the applicable water quality requirements. 40 CFR § 122.4(i) also prohibits issuance of a permit to a "new source" if the discharge from its construction or operation will cause or contribute to the violation of water quality standards. The ED does not find that the draft permit violates these provisions.

"New source" is defined in the federal rules at 40 CFR § 122.2. The definition states that a "new source" is:

> Any building structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced: (A) after promulgation of standards of performance under CWA, § 306, or (B) after proposal of standards of performance in accordance with CWA, § 306, which are applicable to such source, but only if the standards are promulgated in accordance with § 306 within 120 days of their proposal.

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1 The original NORI was mailed to the Applicant by the Office of the Chief Clerk on March 23, 2005. However, proof of publication of the NORI was not found in the Office of the Chief Clerk file. When the ED reached a preliminary determination on the draft permit in 2007, staff notified the Applicant that there was no evidence in TCEQ's files that the NORI was published and the Applicant was unable to supply documentation that the NORI was published in 2005. Therefore, the Applicant published a combined NORI and NAPD as allowed by 30 TAC § 39.405.

According to 40 CFR § 122.29(b), an applicant is a "new source" if it meets the above definition and meets the following criteria:

(i) It is constructed at a site where no other source is located;
(ii) It totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or
(iii) Its processes are substantially independent of an existing source at the same site (In making this determination, factors to consider include to the extent the new facility is integrated with the existing facility and to the extent the new facility is engaged in the same general activity as the existing source).

The Applicant is applying for an expansion of an existing dairy and the expansion will be constructed at a site where a source is already located. Also, the Applicant does not seek to replace the existing process. The dairy expansion would be integrated with the existing facility. The expansion of the RCSs to meet the new 2004 CAFO rule requirements does not meet any of the criteria outlined in 40 CFR § 122.29(b), but simply expands an existing part of the facility. Therefore, the facility is not a new source.

Comment 2:

Waco comments that there has not been a demonstration that there is sufficient remaining TMDL pollutant load allocations of phosphorus discharged from the CAFO or that existing dischargers are subject to compliance schedules. Waco states that the general load allocation for phosphorus discharges performed by TCEQ in the two Total Maximum Daily Loads (TMDLs) did not include any allocation whatsoever for discharges from CAFO wastewater lagoons.

Response 2:

The ED disagrees that load allocations for discharges from CAFO wastewater lagoons were excluded. Page 7 of the TMDL I-Plan specifically addressed this issue as follows: "All loadings that emanated from any aspect of a dairy operation during the monitored period were addressed in the analyses as WAFs, although it is probable that some amount of loading actually originated from authorized or unauthorized 'point source' discharges from retention structures." Furthermore, CAFO loads are not amenable to simple total daily allocations of the type that are often applied to continuous point source discharges.

TCEQ established rules to implement the TMDL I-Plan and the draft permit is consistent with those rules. TCEQ rules and permit requirements are consistent with or more stringent than the federal rules and national guidance. TCEQ has performed TMDL evaluations sufficient to satisfy federal requirements and to justify implementing the new CAFO regulations. The draft permit is consistent with the Bosque TMDL, TMDL I-Plan, and CAFO rules in 30 TAC, Chapter 321. The draft permit for the Applicant was approved by EPA on October 4, 2007.

Comment 3:

Waco comments that issuing the draft permit undercuts the following key modeling assumptions for the TMDLs for phosphorus on Segments 1226 and 1255 of the North Bosque River.

A) 40,450 dairy cows in the watershed;
B) 50% of solid manure from 40,450 dairy cows would be removed from the watershed;
C) Phosphorus in the diet of permitted cows would be limited to 0.4%;
D) Waste application on existing fields would be limited so that phosphorus never exceeds 200 parts per million (ppm);
E) Waste application rates would be limited to the phosphorus needs of the crop; and
F) Initial phosphorus on new fields would be 60 ppm and could not exceed that level.

Response 3A – Cows in the Watershed:

The North Bosque River TMDL for phosphorus is based on narrative water quality criteria and uses BMPs to protect water quality. The TMDL does not limit the number of dairy cows in the watershed. However, permits that are issued must be consistent with the TMDL.

The Applicant will be required to construct RCSs that are designed to hold a 25-year, 10-day rainfall event. This will increase the RCS capacity by approximately 60% over the previous standard in earlier versions of the CAFO rules. It is also anticipated the loading will be reduced due to the emphasis the new CAFO rules place on phosphorus levels in soil application areas.

An adaptive management approach is an appropriate means to manage phosphorus loading in the Bosque. The TMDL Implementation Plan (TMDL I-Plan) emphasized this approach to achieve the phosphorus reductions targeted in the TMDL. The CAFO rules in 30 TAC Chapter 321 reflect the necessary adjustments to management practices necessary to, over time, reach the TMDL target. Accordingly, the TMDL is not directly tied to the number of animals permitted in the watershed. It is instead tied to BMPs, including the land application of the nutrients, consistent with management practices that ensure appropriate utilization by the crops.

The model used in the TMDL demonstrated that water quality conditions would improve significantly even with many more dairy cattle in the watershed if management practices were improved. The new CAFO rules incorporated more stringent management practices in the watershed in order to address phosphorus loading. Regardless of the number of dairy cattle, the in-stream water quality goals remain as they were established in the TMDL.

The TMDL I-Plan recognizes that new dairies may begin operating or existing dairies may expand in the watershed.[2] New or expanding operations are required to meet all the new management

2 See "An Implementation Plan for Soluble Reactive Phosphorus in the North Bosque Watershed," December, 2002, page 26: "New or expanding dairy CAFOs will be required to demonstrate through the application process that they will operate under the nutrient management practices as stipulated in Chapter 321 rules pertinent to a major sole source impairment zone." (Emphasis added.)

practices found in the Chapter 321, Subchapter B CAFO rules, which were approved by EPA as meeting all federal requirements for the protection of water quality. The focus of the rules was to reduce nutrient loading by requiring BMPs designed to significantly decrease the potential for discharges. Special provisions applicable to the North Bosque watershed that were not in the previous version of the CAFO rules were designed and adopted to specifically address the TMDL requirements to reduce phosphorus loadings. The operational and management strategies in the rules and draft permit are designed to reduce nutrient loading and be consistent with the North Bosque River TMDL.

Response 3B – 50% Removal of Solid Manure from the Watershed:

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, not by capping the number of head or acres of land. Neither the TCEQ rules nor the TMDL I-Plan requires a 50% haul-out of collectible manure. New or existing CAFOs who seek to add head in the watershed are given five options for dealing with 100% of the collectible manure. The options are found in TWC § 26.503(b)(2) and are:

(A) Disposed of or used outside of the watershed;
(B) Delivered to a composting facility approved by the ED;
(C) Applied as directed by the commission to a waste application field owned or controlled by the owner of the CAFO if the field is not a historical waste application field;
(D) Put to another beneficial use approved by the ED; or
(E) Applied to a historical waste application field that is owned or operated by the owner or operator of the CAFO only if:
    (i) Results of representative composite soil sampling conducted at the waste application field and filed with the commission show that the waste application field contains 200 or fewer ppm of extractable phosphorus; or
    (ii) The manure is applied with commission approval, in accordance with a detailed nutrient utilization plan approved by the commission that is developed by:
        (a) An employee of the United States Department of Agriculture's Natural Resources Conservation Service;
        (b) A nutrient management specialist certified by the United States Department of Agriculture's Natural Resources Conservation Service;
        (c) The State Soil and Water Conversation Board;
        (d) The Texas Agricultural Extension Service;
        (e) An agronomist or soil scientist on the full-time staff of an accredited university located in the state; or
        (f) A professional agronomist or soil scientist certified by the American Society of Agronomy.

The nutrient management plan (NMP) submitted with the application reflects that the present intent of the Applicant is to route manure off-site. However, the other disposal methods allowed by TWC § 26.503(b)(2) remain available to the Applicant, subject to modification of their NMP.

Response 3C – Phosphorus Limit in Diet to 0.4%:

The TMDL I-Plan states that dairy operators will receive training related to diet control but does not mandate lower phosphorus content in feed. There is no TCEQ rule related to requiring reduced phosphorus content in feed rations. The nutrient content in the annual wastewater and manure samples should reflect the Applicant's efforts to lower phosphorus content in feed rations if the Applicant pursues this BMP in an effort to manage nutrients.

The Applicant is required to implement a comprehensive nutrient management plan (CNMP) and one aspect of that planning process is the consideration for reduced phosphorus in the feed. The Applicant may consider the nutritional needs of his herd in implementing a CNMP.

Response 3D – Limiting Application so that Phosphorus Never Exceeds 200 ppm:

TCEQ established rules to implement the TMDL I-Plan and the draft permit is consistent with those rules. Neither the rules nor the TMDL I-Plan cap phosphorus at 200 ppm on LMUs. The model used in development of the TMDL did not provide that soil test phosphorous levels on application fields remain at or below 200 ppm. Predicted soil concentrations after the 39 years of application that were simulated by the TMDL model were not specifically considered in discussions or in development of the TMDL. The draft permit requires implementation of an NMP. When LMUs test in excess of 200 ppm of phosphorus, the Applicant must also implement a nutrient utilization plan (NUP) specific to those LMUs that takes into consideration the phosphorus crop removal rate.

Response 3E – Application Limited to the Phosphorus Needs of the Crop:

The model used for the TMDL simulated land application rates at the "phosphorus agronomic rate" recommended by U.S. Department of Agriculture and others. Recommended agronomic rates account for some soil storage of phosphorus and may not be identical to the crop phosphorus "need only" application rate. The NMP provided by the Applicant addresses application limitations based on the agronomic needs of the crop. If phosphorus levels rise beyond 200 ppm on LMUs, a NUP must be implemented that will require phosphorus application based on crop removal levels, rather than on the agronomic needs of the crop. This is consistent with the TCEQ CAFO rules.

Response 3F – Phosphorus on New Fields Would Not Exceed 60 ppm:

The TMDL model assumed that new waste application fields began at soil concentrations of 60 ppm for phosphorus as an estimate of typical conditions across the North Bosque watershed. The model did not limit application to the new waste application fields to keep soil phosphorus at or below 60 ppm and was not able to do so because of model code limitations. Soil concentrations in the simulated new waste application fields would have been something different than 60 ppm after the

39 years of application simulated by the TMDL model, but that was not specifically considered during development of the TMDL. The TMDL is based on meeting in-stream water quality criteria, not soil concentrations.

Comment 4:

Waco comments that contrary to the TMDL, the draft permit discourages the composting or exporting of dairy waste outside the watershed and notes that the basic goal of the TMDL strategy is to remove from the North Bosque watershed approximately 50% of the manure produced by the dairies. Waco also comments that the expanded use of third party fields with little control of nutrient application encourages dairies to avoid exporting of waste.

Response 4:

The permit is consistent with the TCEQ rule requirements for allowing the Applicant to use third party fields. Composting is one of the options available to the Applicant for handling its waste. Section VII.A.8.(e)(5) of the permit provides for the following offsite methods of disposal or use of wastewater, manure, and sludge:

1) Delivery to a composting facility authorized by the ED;
2) Delivery to a permitted landfill located outside of the major sole source impairment zone, subject to the requirements of commission rules relating to industrial solid waste;
3) Beneficial use outside of the major sole source impairment zone; or
4) Put to another beneficial use approved by the executive director.
5) Providing manure, wastewater, and/or sludge to operators of third-party fields that have been identified in the PPP.

Land application on third party fields must be in accordance with the applicable land application requirements established in 30 TAC § 321.36 and 30 TAC § 321.40 at an agronomic rate based on soil test phosphorus. The permit goes beyond the rule requirements by setting a tiered application rate based on soil test results on third party fields. Also, the draft permit caps land application on third party fields when soil test phosphorus levels reach 200 ppm, which is consistent with the rule.

Land application of nutrients to third party fields conducted in accordance with the rules and permit will allow beneficial use of the nutrients for crop production. Crops take phosphorus from the soil into the plant tissue, binding it such that it is not available for runoff. As crops are harvested, the amount of phosphorus taken from the soil into the plant tissue will be removed. Allowing landowners in the watershed to utilize the nutrients in dairy wastewater, manure, and sludge will reduce the amount of inorganic fertilizer imported into the watershed for crop production. Inorganic fertilizer application rates are not regulated. The application rates for dairy wastewater, manure, and sludge on third party fields will be regulated through the CAFO permit.

Comment 5:

Waco comments that the ED has provided no technical justification for asserting that the measures recited in the draft permit will attain the water quality standards for phosphorus and implement the TMDLs.

Response 5:

The ED disagrees with this comment. TCEQ rules and provisions in the draft permit contain control actions and management measures to address the goals of the TMDL. TCEQ conducts in-stream monitoring to monitor loading in the North Bosque and the issuance of CAFO dairy permits under the new rules will provide for additional protection in order to meet the goals of the TMDL.

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

The TMDL I-Plan also included a recommendation that the CAFO rulemaking consider more stringent requirements for RCSs, in order to reduce overflows from RCSs. In response, the CAFO rules adopted in July, 2004 by the Commission included the following requirements consistent with the TMDL I-Plan to help manage the phosphorus load in the stream:

1. RCSs must be designed to contain the volume associated with a 25-year, 10-day rainfall event;
2. A permanent marker, graduated in one foot increments from the maximum sludge accumulation volume to the top of the spillway must be installed;
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 must be developed;
4. Daily monitoring records of wastewater levels must be conducted;
5. Notification of TCEQ of discharges within one hour of discovery;
6. Discharge sample analyses must be submitted to the TCEQ; and
7. A report of discharges must be submitted to the TCEQ regional office, documenting that overflows from cumulative rainfall events were beyond the Applicant's control.

Comment 6:

Waco comments that the ED has failed to make any best professional judgment (BPJ) determination that the best conventional control technology (BCT) standards for the control of pathogens have been

met by the limitations imposed on the Applicant as required by the *Waterkeeper*[3] case.

Response 6:

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 stream concentrations to obtain and 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 P-Index approach reduces allowable application of nutrients to levels that are appropriate for reducing and minimizing all pollutants that are constituents of animal wastes.

Additionally, 40 CFR § 122.43(k)(3) allows states to use BMPs to control or abate discharges "when numeric effluent limitations are infeasible." In the case of North Bosque dairies, they are only authorized to discharge in the event of a chronic or catastrophic rainfall event that exceeds the 25-year, 10-day storm event. If a discharge event occurs, the amount of rainfall involved and any resulting discharge will be highly variable both in volume and concentration of waste. Discharges from chronic or catastrophic rainfall events are not comparable to the continuous discharges from municipal wastewater treatment plants or industrial facilities.

Comment 7:

Waco comments that the third party fields the Applicant plans to use are not identified and should be regulated as LMUs. Waco comments that to implement its NMP, the Applicant must have a plan for where the wastewater will go. Waco comments that the Applicant needs control of application fields

3 *Waterkeeper Alliance, Inc. v. Environmental Protection Agency*, 399 F.3d 486 (2nd Cir. 2005).

to make sure they are able to dewater the lagoons when necessary. Therefore, these fields are actually offsite LMUs. Waco comments that TCEQ needs to explain how irrigation of wastewater to third party fields is possible without them being considered LMUs and whether EPA concurs with the agency's reasons.

Response 7:

TWC § 26.503 provides for disposal practices for dairy CAFOs, which include allowing manure to be put to other beneficial uses, such as land application on third party fields. 30 TAC § 321.42(j)(3) was specifically worded to reflect that "LMUs are not associated with third party fields."[4] The CAFO operator does not control the third party fields under contract with the CAFO. Application on third party fields is optional and represents "excess capacity to provide for more sound waste management by existing dairy CAFOs."[5] Even though an applicant does not control third party fields, the rules provide that an applicant is responsible for any non-compliance with the permit or TCEQ rules on such fields. Additionally, third party fields have a 200 ppm cap on phosphorus. Once a third party field contains phosphorus at 200 ppm or greater, land application must cease. Rates of application are set based on annual soil test levels as long as they are below 200 ppm.

Section X.K. of the draft permit requires that the RCS Management Plan have a site specific contingency plan for removal of wastewater to keep planned withdrawals from exceeding maximum allowed allocations, and that all wastewater that cannot be applied in accordance with the NMP be removed from the facility at a minimum of once per calendar year. In addition, the draft permit includes an additional six acre-feet of storage in RCS #2 for the purpose of storing wastewater that cannot be land applied in accordance with the NMP, which is the estimated amount of wastewater that is in excess of what can be applied under the current NMP.

EPA issued a letter on October 30, 2007 stating they have no objection to the issuance of the draft permit.

Comment 8:

Waco states that the federal court in the *Waterkeeper* case determined that NMPs are the equivalent of effluent limitations. Therefore, NMPs should be reviewed by the permitting authority, included in the permit, and made available to the public before the permit is issued. Waco comments that this reasoning should extend to other site specific technical plans and documented demonstrations of the methods by which the discharge of pollutants will be controlled at CAFOs permitted by TCEQ, including: CNMPs, NUPs, RCS management plans, and pollution prevention plans (PPPs).

Response 8:

Waterkeeper states that if the NMP is not included in permits the public is deprived of the right to assist in development, revision, and enforcement of an effluent limitation. EPA has established nine

4 CAFO Rule Preamble, 29 TexReg 6652, 6658 (July 9, 2004).
5 *Id.* at 6692.

critical elements to be considered as part of the NMP. Included with the permit application is a table that lists the nine elements and the location of those elements in the file reviewed by the ED and made available to the public. The ED requires North Bosque dairies to submit their NMP with their permit applications and the NMP was technically reviewed and available to the public.

A CNMP is not required by the CWA and is not addressed in the *Waterkeeper* case. TCEQ rules at 30 TAC § 321.42(s) require all dairy CAFOs in a major sole-source impairment zone to operate under a CNMP approved by the Texas State Soil and Water Conservation Board. Bosque dairy permits required implementation of the CNMP by December 31, 2006, and the Applicant is required to maintain a copy of the CNMP as part of their PPP. However, the rules do not require the submission of the CNMP to TCEQ and the review of that document is not part of the CAFO permitting process. Furthermore, the CNMPs are confidential under state law as part of the local soil and water conservation district's files unless the Applicant chooses to make the information available to the public. However, most of the information contained in the CNMP is part of the permit technical information packet and available in that form to the public.

NUPs are NMPs that utilizes a crop removal application rate. However, NUPs are not required until annual testing of LMUs indicates phosphorus in excess of 200 ppm. Based on the statute and rule, the NUP is not considered part of the permit, but may be changed to address changing conditions. TWC § 26.504 requires testing every 12 months to determine whether phosphorus levels exceed 200 ppm. Reaching the 200 ppm level triggers the requirement to develop and implement a NUP. TWC § 26.504(c) states "the operator shall file with the commission a new or amended nutrient utilization plan with a phosphorus reduction component. . . . ." The statute does not require the NUP to be a part of the permit or permit application. 30 TAC § 321.40 tracks the statute, but also states that land application can begin under a NUP 30 days after the NUP is filed with the ED, unless the ED has returned the NUP for not meeting rule requirements. This requirement is also an indication that the NUP is not intended to be part of the permit.

The draft permit and CAFO rules at 30 TAC § 321.42(g) require that the Applicant implement an RCS management plan and maintain a copy in the PPP. TCEQ rules do not require review of RCS management plans prior to issuing the permit. The RCS management plan must establish expected end of the month water storage volumes for each RCS. These maximum levels are based on the design assumptions used to determine the required size of the RCSs. This plan assures that the Applicant will maintain wastewater volumes within the design capacity of the structures. The Applicant must document and provide an explanation for all occasions when 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 RCSs. The operating volume in RCS #1 is 12.85 acre-feet. The operating volume for RCS #2 is 14.39 acre-feet. Until the actual expansion of the RCS system is completed and volumes certified, the RCS management plan cannot be completed and implemented; and that expansion cannot take place until after the permit is issued.

The draft permit lists the requirements for what to include in the PPP. The Applicant is required to have documentation for all of the following as part of their PPP: Copy of the CNMP, NMP, NUP (if required), RCS liner certifications, the RCS operation and management plan; and the capacity of each RCS, as certified by a licensed Texas professional engineer. The draft permit specifically allows the Applicant to amend the PPP; and lists specific instances when it must be amended. One of those instances being within 90 days of receiving written notification from the ED that the plan does not meet permit requirements.

The PPP is not part of the permit review process, but the information contained in the application, technical information packet, and the NMP make up the core content of the PPP. The other items contained in the PPP are not subject to TCEQ review except during site investigations.

Comment 9:

Waco questions the calculation of runoff amounts in the water balance. Waco contends that assumptions in the water balance are flawed and that the entire water balance concept needs to be re-examined and a more realistic approach developed.

Response 9:

30 TAC § 321.38(e)(3) requires that RCS designs be based on certain technical standards developed by the National Resources Conservation Service (NRCS) or others. The 30-day runoff curve number was originally utilized by NRCS as part of reservoir operation studies (described in Texas Engineering Technical Note No. 210-18-TX3, dated March, 1983).

Since the early 1990s, the 30-day runoff curve number has been applied by NRCS engineers at the state and national levels to predict average monthly runoff for use in the design of animal waste RCSs. Currently, the 30-day runoff curve number is applied in software developed and used for that purpose by NRCS in Texas and across the nation. The application of the 30-day runoff curve number is an accepted engineering practice for predicting average monthly runoff from the average monthly precipitation.

The application of the 30-day runoff curve number to this permit is appropriate for the purpose of predicting the average monthly runoff from the RCS drainage area and the average monthly runoff from the application fields in the water balance calculations. Use of a one-day curve number for runoff from the application fields could result in a smaller volume requirement for RCSs.

The 25-year, 10-day storm runoff amount used in the application to calculate runoff is based on a 1-day runoff curve number, not the 30-day runoff curve amount.

Comment 10:

Waco comments that the 30-day curve number (CN) values used for CAFOs should be much higher than than those used in Technical Note 210-18-TX3; and that the current approach is useless for

preparing a meaningful water balance. Until more realistic CN adjustments can be made, TCEQ should use the 1-day CN value for calculating monthly runoff from the production areas.

Response 10:

30 TAC § 321.38(e)(3) requires that RCS designs be based on certain technical standards developed by NRCS or others. The 30-day runoff curve number was originally utilized by NRCS as part of reservoir operation studies (described in Texas Engineering Technical Note No. 210-18-TX3, dated March, 1983).

Since the early 1990s, the 30-day runoff curve number has been applied by NRCS engineers at the state and national levels to predict average monthly runoff for use in the design of animal waste RCSs. Currently, the 30-day runoff curve number is applied in software developed and used for that purpose by NRCS in Texas and across the nation. The application of the 30-day runoff curve number is an accepted engineering practice for predicting average monthly runoff from the average monthly precipitation.

The application of the 30-day runoff curve number to this permit is appropriate for the purpose of predicting the average monthly runoff from the RCS drainage area and the average monthly runoff from the application fields in the water balance calculations. Use of a one-day curve number for runoff from the application fields could result in a smaller volume requirement for RCSs.

The 25-year, 10-day storm runoff amount used in the application to calculate runoff is based on a 1-day runoff curve number, not using the 30-day runoff curve amount.

Comment 11:

Waco comments that a stage/storage table was not provided in the permit application and that it is required to perform a water balance since the monthly evaporation from the RCSs is based on the surface area of the RCSs. Waco calculates that the evaporation is over-estimated and notes that it is difficult to know by how much without a stage/storage table.

Response 11:

The stage/storage table is not a requirement because TCEQ is evaluating proposed construction. Once construction is complete an actual stage/storage curve will be part of the RCS management plan, but that information is not available until the RCS expansion is complete.

The surface area used in the RCS design and water balance inflow for the RCSs 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.

Comment 12:

Waco comments that the application fails to provide adequate information on settling ponds. Waco notes that the Applicant intends the settling ponds to remove 40% of the solids produced by the milking parlor, but has not provided information the surface area, depth of the ponds, the design criteria, or the maintenance requirements. Waco states that because the removal rate is so high TCEQ should require the design criteria for the settling ponds be submitted so they can be reviewed.

Response 12:

This 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. Forty percent is considered an attainable removal rate for a settling basin. Specifics on design and maintenance requirements will be developed and kept in the PPP.

Comment 13:

Waco comments that the Applicant did not use the proper RCS sludge accumulation rate for process-generated wastewater. Waco notes that the Applicant has calculated the required sludge accumulation rate from process-generated wastewater based on a rate of 0.0729 cubic feet of storage capacity per pound of total solids. Waco notes that this accumulation rate assumes solids being decomposed in an anaerobic lagoon properly designed for treatment and if the Applicant is to use this rate a minimum treatment level must be provided for in the permit or a much larger value used in the calculation.

Response 13:

The design sludge accumulation rate of 0.0729 cubic feet of storage capacity per pound of total solids in wet manure entering the storage facility is based on the characteristics of wet manure.[6] It is the best estimate of sludge accumulation rate currently available for design of agricultural waste containment structures and is considered adequate for modern dairy facilities by the scientific and research community. Treatment volume is only required for facilities with over 1,000 head and this facility will only be permitted at a maximum of 990 head.

Comment 14:

Waco comments that the Applicant calculated the sludge accumulation volume from runoff based on 25% of the runoff from the 25-year, 10-day storm event and that there is no technical basis or historical data to justify this value. Waco comments that TCEQ cannot allow some arbitrary number in the calculation of sludge accumulation without providing some data or technical basis for using it.

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6 Based on NRCS Agricultural Waste Management Field Handbook.

Response 14:

Sludge accumulation volume requirements for sludge accumulation from runoff have been estimated as 25% of the 25-year, 24-hour runoff volume from open lot areas. The draft permit uses the calculated 10-year sludge volume as a 5-year design volume. It also uses the 25-year, 10-day storm event, which further increases the design volume of the RCSs. Methodologies for estimating sludge volume requirements are limited. The method used by the Applicant in this application is one of a very limited number of methodologies.

One other available method is used by NRCS in Kansas, and is based on mean annual runoff. The sludge volume allocations included in the draft permit are more conservative than the volumes determined by the Kansas NRCS methodology. Therefore, of the available methods for estimating sludge volume requirements for sludge from runoff, the draft permit incorporates the more conservative value.

Comment 15:

Waco comments that the capacity certifications submitted with the application were done in 2003 and did not include any information concerning the accumulated sludge. Waco notes there is nothing in the draft permit requiring that these RCSs be re-certified with respect to the existing sludge volume.

Response 15:

Section VII.A.5.(a)(2) of the draft permit requires as part of the RCS management plan a stage/storage table for each RCS, with minimum depth increments of one-foot, including the storage volume provided at each depth. It also requires 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 depth (or water level) and the type of storage designated by that depth. In addition, Section VII.A.5.(a)(5) requires the Applicant to install and maintain a permanent pond marker (measuring device) in each RCS visible from the top of the berm to show the volume for the design rainfall event. The marker should be in one foot increments beginning from the bottom of the RCS to the top of the embankment or spillway; and design volume levels for maximum sludge accumulation and operating volume (calculated process generated wastewater plus rainfall minus evaporation). Certification of sludge volume prior to year three is not required. However, the above requirements cannot be met if the sludge volume is in excess of its design capacity.

Comment 16:

Waco comments that the liner certification for RCS #1, #2, and the settling pond are inadequate. Waco notes that the certification for RCS #1 is not to scale and does not resemble the shape shown in the capacity certification. Waco also notes that the samples in RCS #1 appear to have been taken in the embankments with none being taken in the bottom of the RCS. Waco comments that the samples in RCS #2 and the settling pond appear to have been taken only in the bottom of the RCS

and none from the embankments. Waco asserts samples should be taken from both the bottom and the embankments.

Response 16:

The liner certifications as well as the samples and their location are consistent with the requirements of the current authorization. The draft permit requires new liner certifications for RCS #1 and RCS #2 and the settling basin. Section VII.A.3.(a)(2) reads as follows:

> (2) Documentation of liner and capacity certifications must be completed for each RCS prior to use and kept on-site in the PPP. Once construction of modified RCS #1 and RCS #2 is complete, new capacity and liner certifications will be provided. Upon issuance of this permit, a new liner certification will be provided for the settling basin. The table below shows current liner and capacity certifications provided in the permit application.

RCS	Liner Certification	Capacity Certification	
	Date	Date	Volume (acre-feet)
RCS # 1	March 18, 1997	December 22, 2003	9.81
RCS # 2	October 27, 1999	December 22, 2003	7.54
Settling basin	December 24, 2001	N/A	N/A

Comment 17:

Waco comments that the Applicant has not addressed how it will enlarge RCS #1 and #2, or its operational plans while the enlargement is taking place, to meet the requirements of the 25-year, 10-day design rainfall event. Waco notes that it does not appear RCS #2 can be enlarged without encroaching upon the drainage way or LMU.

Response 17:

TCEQ rules do not require ED review or approval of the process an applicant will use to enlarge RCSs or their operational practices while doing so. However, Section X.A.1. - 3. of the draft permit requires the Applicant to increase the capacity of RCS #1 and RCS #2 within 180 days of the issuance of the permit. Section VII.A.3 requires that the design and completed construction of the RCS be certified by a licensed Texas professional engineer prior to use; and that documentation of liner and capacity certifications be completed for the RCS prior to use and kept on site in the PPP. Based upon the ED's review of the Site Map provided by the Applicant, there appears to be adequate area to enlarge RSC #2 to meet the requirements in the draft permit.

Comment 18:

Waco comments that the permit application does not provide an adequate description of the structural controls, especially the berms. Without a more adequate description it will be difficult for the Applicant and any TCEQ inspector to evaluate compliance. Waco comments that the permit application and draft permit should describe the berms in sufficient detail with respect to location, size, and construction so that TCEQ inspectors can determine if the facility is in compliance and the operator can make needed repairs, if necessary.

Response 18:

TCEQ rules and the draft permit require that this information be maintained in the PPP. This information is not part of the permit application review process.

Comment 19:

Waco comments that the basic methodology for calculating agronomic rates is flawed because the NMP fails to take into account the nutrients available to plants in the root zone to satisfy the crop requirement. Waco notes that for application of biosolids, the ED requires agronomic rate calculations take into account the nutrients in the soil by taking the crop requirement and subtracting the nutrients available in both the 0-6 inch and 6-24 inch soil depths for the most recent year. This allows only the amount of nutrients needed to satisfy the overall crop requirement for that year to be applied.

Response 19:

The methodology used by the Applicant for the calculation of waste application for beneficial use follows the requirements of the NRCS 590 Standard as required by the CAFO rules in 30 TAC § 321.42(i). The NMP based on the NRCS 590 Standard does account for nutrients available to plants. The phosphorus index makes current soil test levels for phosphorus a component of that index value that affects the rate of application.

Comment 20:

The Applicant represented in item #1 and #2 of Section 6.2 of the application that a NUP that limits phosphorus application to crop requirements and incorporate a phosphorus reduction component on fields over 200 ppm and that it will limit maximum phosphorus levels in soils to 200 ppm. Waco notes that LMUs #3 and #4 currently have soil phosphorus levels of 198 ppm and the Applicant is planning to land apply at the crop phosphorus level for both. Considering the crop yield, Waco asserts this will result in a net phosphorus increase of 42 ppm in LMU #3 and 35 ppm in LMU #4 after the first year. Additionally, Waco calculates that all the LMUs will be over 200 ppm for phosphorus after four years. Waco notes that if the Applicant really intended to limit maximum phosphorus levels in soil to 200 ppm as represented, it would be applying no waste to its LMUs by the end of the permit term.

Response 20:

It is permissible for a permitted facility to establish goals more restrictive than permit or rule requirements. The goal presented by the Applicant in Section 6.2 of the application is not a requirement of Chapter 321, Subchapter B CAFO rules. However, Section VII.A.8.(c)(1)(ii) in the draft permit is consistent with requirements in Chapter 321, Subchapter B relative to the implementation of NUPs.

Regarding the conclusion that it is likely that the dairy will be applying 100% of its waste to third party fields by the end of the permit term, as noted in Response #3B, new or existing CAFOs who seek to add head in the watershed are given five options for dealing with 100% of the collectible manure and are within the existing CAFO rules by exercising any combination of those options.

Comment 21:

Waco comments that the RCS management plan is not reviewed by the ED before the permit is issued and that this does not allow for any public comment and notes that the plan will only be seen is when inspectors see it on annual inspections.

Response 21:

30 TAC § 321.42(g) and the draft permit require the Applicant to implement a RCS management plan and maintain a copy in the PPP. TCEQ rules do not require review of RCS management plans prior to issuing the permit. 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.

Comment 22:

Waco comments that Section X.N. of the draft permit indicates solids in the settling basin must be removed on a "regular and consistent basis." Waco notes that is a very subjective phrase given the importance of removing solids so that the settling basin retains its removal efficiency. Therefore, the removal requirements should be more specific in the permit.

Response 22:

Operating factors and climatic conditions affect how often the settling basin would need to be maintained. The draft permit requires a level of maintenance to ensure solids are removed efficiently as opposed to being removed to comply with a specific schedule.

Comment 23:

Waco questions how the sludge volume will be monitored in the RCSs. Waco comments that because sludge accumulation problems can take over a year to get corrected, the draft permit should require sludge measurement in the RCSs annually rather than three years after the permit is issued. Waco notes that at this dairy sludge accumulation has not been measured in at least four years.

Response 23:

30 TAC § 321.39(c) prohibits the Applicant from allowing sludge accumulation to exceed the design volume. This is achieved by removing the sludge according to the design schedule. The design criterion for this dairy is five years of accumulation. The RCS management plan will establish accumulation rates in the RCSs, which will identify the current sludge volume in each RCS. Taking volume measurements starting in year three will help reevaluate the accumulation rates prior to reaching the five-year design volume.

By starting measurements in year three, the operator will have time to complete modification and expansion of RCSs; and to develop and implement an RCS management plan to appropriately manage the sludge volume in the ponds. Furthermore, taking daily pond marker readings should assist in determining excessive sludge accumulation in any RCS.

Comment 24:

Waco comments that the required RCS capacity certification under Section VII.A.3.(a)(2) is ambiguous. Waco states it is not clear whether it refers to total as-built capacity or available capacity above the sludge. Waco states that the permit should clearly reflect that all capacity certifications require both as-built capacity and the volume of sludge accumulation.

Response 24:

The RCS management plan requires that the stage/storage data be maintained in the PPP. That data should include increments of water level ranges for volumes of total design storage, including the storage volume provided at each specified depth. This requirement will assure that sludge levels are accounted for on a continuing basis. Accumulated sludge volumes are not required as a part of the permit application.

Comment 25:

Waco comments that the permit does not identify all liner design specifications required by 30 TAC § 321.38(g). Further, Waco states 321.28(g)(3)(A) requires information on the "materials underlying and forming walls of the containment structure up to the wetted perimeter. Waco comments that the information provided in Section VII.A.3.(f) to satisfy this requirement is inadequate.

Response 25:

Section VII.A.3(b) of the permit requires that the RCSs be designed and constructed in accordance with the technical standards developed by NRCS, the American Society of Agricultural and Biological Engineers (ASABE), the American Society of Civil Engineers (ASCE), or the American Society for Testing and Materials (ASTM). Additionally, the draft permit identifies specific design criteria in Section VII.A.3.(g)(3):

> ...a liner must be designed by a licensed Texas professional engineer and documented to have hydraulic conductivities no greater than 1 X 10^{-7}cm/sec in accordance with ASTM D 5084, or other method approved by the Executive Director, with a thickness of 18 inches or greater or its equivalency in other materials.

These requirements are consistent with the rules. The requirement in 30 TAC § 321.28(g)(3)(A) for information on the "materials underlying and forming walls of the containment structure up to the wetted perimeter" pertains to the determination of lack of hydrologic connection. It is not a specific liner design requirement.

Comment 26:

Waco notes that the draft permit contains some procedures and requirements for liner and embankment construction, but does not provide adequate procedures for testing. Waco comments that at a minimum TCEQ should: 1) require the field density tests to be based on predetermined moisture-density compaction curves, Atterberg limits, and laboratory permeability of undisturbed field samples of compacted soil liner, 2) define the frequency of testing, e.g. the number of tests per specific area per lift for both bottom and sides of RCSs, 3) require testing during, not after, construction of the liner, and 4) require continuous on-site inspection during construction. Waco states that TCEQ must be able to review the soils testing results to make an independent verification of the certification.

Response 26:

Section VII.A.3(b) of the draft permit requires that the RCSs are designed and constructed in accordance with the technical standards developed by NRCS, ASABE, ASCE, or ASTM. Additionally, Section VII.3.(f) of the permit identifies specific RCS design, construction, and testing criteria. The construction and testing requirements for embankment lifts are in Section VII.A.3.(f)(4) and are as follows:

> 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, D 2922 or D 2937; and D 2216, D 3017, D 4643, D 4944 or D 4959) or equivalent testing standards. 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.3.(g)(3) of the permit as noted in Response #34. The ED believes these testing requirements are adequate and should be protective of water quality.

Comment 27:

Waco notes that Section VII.A.10.(b) requires an engineer to complete a site evaluation of the structural controls once every five years and certify a report of findings. Waco comments that the Applicant should be required to certify structural controls prior to or upon issuance of the permit. If a certification has not been provided with the permit application, Waco believes the five-year evaluation should occur immediately upon issuance of the permit and then every five years thereafter.

Response 27:

TCEQ rules and the draft permit require that this information be maintained in the PPP. This information is not part of the permit application review process.

Comment 28:

Waco comments that the permit requires only one annual sample of wastewater and manure. Waco notes that wastewater is typically sampled from the surface of an RCS and that will result in significantly different sample concentrations than taking it from the irrigation pipeline. Waco contends that operation of the irrigation pumps elevates phosphorus levels beyond what is found in wastewater surface samples. Waco recommends that RCS wastewater samples be taken from the irrigation pipeline following the pump rather than from the surface of the RCS and should be taken more often, preferably at least once during each irrigation event.

Also, Waco comments that manure should be sampled more than once annually, preferably one each month or once for each transport event. Waco notes that a single sample may not be representative and comments that there are factors that can cause significant errors in calculating the application rates due to reliance on a single annual sample.

Response 28:

The permit provisions for sampling and monitoring are consistent with 30 TAC § 321.36(e) and (g), and with the requirements of the NRCS Practice Standard Code 590. The draft permit requires annual sampling and the NMP must be updated to modify application amounts based on soil testing and wastewater/manure/slurry testing.

Comment 29:

Waco calculates that the permit application fails to account for proper management of phosphorus production.

Response 29:

It is projected that 990 cows will generate 385 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.

The permit is consistent with the TCEQ rule requirements for allowing the Applicant to use third party fields. Composting is one of the options available to the Applicant for handling its waste. Section VII.A.8.(e)(5) of the permit provides for the following offsite methods of disposal or use of wastewater, manure, and sludge:

1) Delivery to a composting facility authorized by the ED;
2) Delivery to a permitted landfill located outside of the major sole source impairment zone, subject to the requirements of commission rules relating to industrial solid waste;
3) Beneficial use outside of the major sole source impairment zone; or
4) Put to another beneficial use approved by the executive director.
5) Providing manure, wastewater, and/or sludge to operators of third-party fields that have been identified in the PPP.

Land application on third party fields must be in accordance with the applicable land application requirements established in 30 TAC § 321.36 and 30 TAC § 321.40 at an agronomic rate based on soil test phosphorus. The permit goes beyond the rule requirements by setting a tiered application rate based on soil test results on third party fields. Also, the draft permit caps land application on third party fields when soil test phosphorus levels reach 200 ppm, which is consistent with the rule.

Land application of nutrients to third party fields conducted in accordance with the rules and permit will allow beneficial use of the nutrients for crop production. Crops take phosphorus from the soil into the plant tissue, binding it such that it is not available for runoff. As crops are harvested, the

amount of phosphorus taken from the soil into the plant tissue will be removed. Allowing landowners in the watershed to utilize the nutrients in dairy wastewater, manure, and sludge will reduce the amount of inorganic fertilizer imported into the watershed for crop production. Inorganic fertilizer application rates are not regulated. The application rates for dairy wastewater, manure, and sludge on third party fields will be regulated through the CAFO permit.

Comment 30:

Waco comments that the permit fails to remove 50% of collectible manure from the watershed as recommended by the North Bosque TMDL. Waco notes that while removal is listed as one of the possible options, there is no indication that any of the manure transferred to other persons will be sent to composting or out of the watershed.

Response 30:

New or existing CAFOs who seek to add head in the North Bosque watershed are given five options for dealing with 100% of the collectible manure. Those options are found at TWC § 26.503(b)(2). *See* Response #3B and Response #29 for those options. The NMP submitted with the application reflects the Applicant's present intent to dispose of manure off-site. However, the other disposal methods allowed by TWC § 26.503(b)(2) remain available to the Applicant. As noted in the comment, the TMDL for the North Bosque "recommends" removal of 50% of the collectible manure, it does not require it.

Comment 31:

Waco comments that Section VII.A.8.(c)(2) of the draft permit allows land application on land exceeding 200 ppm of phosphorus as long as a NUP has been prepared and approved by TCEQ. Waco notes that even when the phosphorus concentrations exceed 500 ppm, application may continue as long as the NUP contains a phosphorus reduction component. Waco states that land application on fields that exceed 200 ppm of phosphorus should be prohibited in order to be consistent with the TMDL; and at the very least, be subject to a NUP with a phosphorus reduction component. Waco notes that on page 16 of the North Bosque I-Plan it states that formal enforcement will result if CAFOs apply waste or wastewater to a waste allocation field that has been documented to have exceeded 200 ppm of phosphorus in zone 1 of the soil horizon.

Response 31:

The draft permit requirements are consistent with TCEQ rules relative to phosphorus reduction in waste application fields. The use of phosphorus based assessments requires action on fields exceeding 200 ppm. All waste application is limited under the permit provisions to avoid significantly increasing phosphorus runoff into the North Bosque River. An LMU that reaches 200 ppm of phosphorus triggers the NUP requirement. See 30 TAC § 321.40(k)(3). A NUP must be approved by the ED prior to land application of any additional manure, sludge, or wastewater to the LMU addressed by the NUP. For third party fields, there is no NUP requirement, but land

application of all manure, sludge, or wastewater must cease when a field reaches a phosphorus level of 200 ppm or higher. Beneficial use refers to the level of nutrients a crop can use. The crop will use the nutrients applied without regard to the level of nutrients in the soil. The 590 Standard considers both the application rate and the soil test phosphorus level a risk factor.

Page 16 of the TMDL I-Plan for the North Bosque does read as indicated by Waco. However, immediately following this statement the document states that more information is available in the section entitled "Enforcement Program." In that section of the TMDL I-Plan, it states that owners of facilities would be subject to enforcement if they performed land application on fields where soil phosphorus exceeded 200 ppm, unless land application was done according to an approved NUP.[7] This is consistent with TCEQ rules that require an approved NUP prior to any additional land application on LMUs that exceed 200 ppm of phosphorus and prohibit land application on third party fields that exceed that amount.

Comment 32:

Waco requests revision to the provisions applicable to third party fields at paragraphs VII.A.8.(e)(5)(i)(E) to state land application is allowed on third party fields is only allowed when phosphorus levels are less than 200 ppm. Waco states that the current language that allows land application when phosphorus levels are less than or equal to 200 ppm is not in compliance with the rule that states land application on third party fields must cease when phosphorus levels are exactly 200 ppm or higher.

Response 32:

The ED agrees with the comment and modifies Section VII.A.8.(e)(5)(i)(E) of the draft permit as follows:

> (E) Land application rates shall not exceed one times the phosphorus crop removal rate when soil phosphorus concentration in Zone 1 (zero(0) to six(6) inch incorporated; zero(0) to two(2) or two(2) to six(6) inch if not incorporated) is greater than 150 ppm and less than 200 ppm phosphorus.

Comment 33:

Waco requests revision to the provisions applicable to third party fields at paragraphs VII.A.8.(e)(5)(i)(C)-(E) to make it clear that the application rate cannot exceed the requirements of NRCS Code 590. Waco comments that adherence to NRCS Code 590 should be required if it is more restrictive than the permit.

7 See "An Implementation Plan for Soluble Reactive Phosphorus in the North Bosque Watershed," December, 2002, page 39:

Response 33:

The ED declines to make the requested change because the CAFO rules do not require that land application on third party fields be consistent with the NRCS Practice Code 590. 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.

Comment 34:

Waco comments that according to Section VII.A.8.(e)(5)(i)(A) of the draft permit, no NMP is required for third party fields and that the requirements of Section VII.A.8.(e)(5)(i)(C)-(E) cannot be met since the NMP is the planning tool necessary to determine the appropriate application rates. Waco states a NMP should be required for third party fields.

Response 34:

The draft permit limits application on third party fields based on soil test phosphorus levels. 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 and be required to cease land application.

Comment 35:

Waco requests that Section VII.8.(e)(5)(iv) of the draft permit be revised to include a requirement that records of crops and crop yields be submitted to TCEQ on a quarterly basis and that Section VIII.B.7. needs to include a requirement that the yield records be submitted to TCEQ in the annual report.

Response 35:

Record keeping requirements at 30 TAC § 321.46(d)(8)(f) state the actual yield of each harvested crop must be recorded on a monthly basis. The information is available to the ED during field investigations and in the annual report submitted to the ED. Crop removal rates are based on yields when the NMP software is used.

Comment 36:

Waco believes that the best management practice in the impaired Bosque watershed is to remove or compost 100% of the sludge. However, if the permit is not going to contain a BMP for removing 100% of the sludge from the watershed or sending it to composting greater oversight is needed over

land application. Therefore, Waco comments that TCEQ should include a provision in the permit that the Applicant provide 10-day notification to TCEQ regarding the date and location of the planned application and an application plan prepared by a certified nutrient management specialist demonstrating that the requirements of Section VII.A.8.(e)(5)(i) will be met.

Response 36:

Section VIII.A.1. of the draft permit requires the Applicant to provide 10-day notification to TCEQ before undertaking RCS cleaning. The rules do not require notification prior to land application. If the concern is that TCEQ's Region Office needs notice, then notifying them prior to cleanout should be adequate. The rules do not require a land application plan. However, the restrictions on land application rates in Sections VII.A.8.(e)(5)(i)(C)-(E) apply to both sludge and manure; and are more restrictive than the rules require.

Comment 37:

Waco comments that the NMP only addresses the first year of the permit term and states that the NMP should be prepared for the five year permit term so that it is possible to see whether, at the projected application rates, it has enough land to sustain its operation during that time.

Response 37:

30 TAC § 321.36(d)(2) requires 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) requires annual sampling and the NMP must be updated to modify application amounts based on soil testing and wastewater/manure/slurry 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 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 regarding sustainability.

Comment 38:

Waco notes that Section X.F. of the draft permit requires the Applicant to install and maintain buffers according to NRCS standards. Waco notes that NRCS has practice standards for filter strips, but not for vegetative buffers. Waco states that TCEQ has previously responded to this comment the riparian forest buffer (Code 391), which is referenced by filter strips (Code 393) qualifies as a vegetative buffer. Waco comments that TCEQ seems to indicate that it is defining vegetative buffers in the Bosque watershed to mean filter strips as defined by NRCS Practice Code 393. Waco states that if TCEQ is defining vegetative buffers to mean either filter strips or as riparian forest buffers as defined in the applicable NRCS code, then this definition should be included in the permit.

Response 38:

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 and/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. Citing the practice code is adequate for permit requirements. The practice standard has an adequate definition.

Comment 39:

Waco comments that it is not clear where the measurement of the vegetative buffers and filter strips begin in relation to the stream bed and the center of the stream. Waco notes that TCEQ has previously indicated that the vegetative buffers can only exist as close to the normal water line or at the top of the banks. Waco accepts this definition, but believes it would be clearer if the language in the permit included this definition.

Response 39:

The ED agrees that the measurement of the vegetative buffers and filer strips should be done from the banks of a stream, not from the center of the stream. Filter strips,[8] vegetative buffers, and riparian forest buffers are, by definition, vegetated strip flow lengths. These vegetated strips can only exist as close as the normal water line or at the top of the bank.[9] Because the Applicant has to maintain the distance from where the vegetation can be established, no definition is needed. Field marking of land application areas is not required by the regulations. The ED does not believe this definition needs to be added to the permit. It is logical that the appropriate set back distance can only be measured from the land surface.

Comment 40:

Waco states that previous responses to their comments regarding the failure to address the discharge of bacteria and other pathogens are inadequate for the following reasons: 1) There has been no demonstration by TCEQ that the management measures for controlling phosphorus will have any effect on bacteria, 2) TCEQ has not indicated they have any idea how much reduction would occur it if does occur, and 3) Though bacteria and pathogen loads may originate from the same sites and materials and transported by the same river and streams the processes and removal mechanism for bacteria are "far different" than those for phosphorus.

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8 Filter strips are an area of herbaceous vegetation.

9 Per Practice Standard Code 391.

Response 40:

As stated previously, 40 CFR § 122.43(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 in the event of a chronic or catastrophic rainfall event that exceeds the 25-year, 10-day storm event. Since discharges are not allowed except in the event of a chronic or catastrophic rainfall, there are no bacteria discharged from the control facilities except during chronic or catastrophic rainfall events. If such an event occurs, the amount of rainfall involved and any resulting discharge will be highly variable both in volume and concentration of waste. Discharges from chronic or catastrophic rainfall events are not comparable to the continuous discharges from municipal wastewater treatment plants or industrial facilities. A discharge during chronic or catastrophic rainfall events is authorized by EPA and TCEQ rules. Therefore, no bacteria are discharged from the control facilities except during authorized discharges. 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.

Comment 41:

Waco comments that the ED has failed to prepare an accurate Fact Sheet because on page 5 it states:

> In determining the application rate, the nutrient management plan also evaluates the amount of nutrients needed for optimal crop production and then balances that need between the nutrients in the soils and nutrient source (i.e. wastewater).

Waco states that this statement is factually incorrect because the NMP allows nutrients in the soil to far exceed what is needed for optimal crop production and allows continued application of nutrients in excess of this.

Changes to Draft Permit as a result of public comment:

Section VII.A.8.(e)(5)(i)(E) of the draft permit now reads:

> (E) Land application rates shall not exceed one times the phosphorus crop removal rate when soil phosphorus concentration in Zone 1 (zero(0) to six(6) inch incorporated; zero(0) to two(2) or two(2) to six(6) inch if not incorporated) is greater than 150 ppm and less than 200 ppm phosphorus.

Respectfully submitted,

Texas Commission on Environmental Quality

Glenn Shankle
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

CERTIFICATE OF SERVICE

I certify that on February 28, 2008 the "Executive Director's Response to Public Comments" for Permit No. WQ0003675000 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

Attachment

E

Compliance History

Customer/Respondent/Owner-Operator:	CN601479512	SCHOUTEN, PETER H	Classification: HIGH	Rating: 0.06
Regulated Entity:	RN102915873	P & L DAIRY	Classification: HIGH	Site Rating: 0.00
ID Number(s):	WASTEWATER AGRICULTURE	PERMIT	WQ0003675000	
	WASTEWATER AGRICULTURE	PERMIT	TX0126471	
	WASTEWATER AGRICULTURE	PERMIT	WQ0003675000	
Location:	3728 COUNTY ROAD 229, HICO, TX, 76457		Rating Date: 9/1/2007	Repeat Violator: NO
TCEQ Region:	REGION 04 - DFW METROPLEX			
Date Compliance History Prepared:	August 06, 2008			
Agency Decision Requiring Compliance History:	Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.			
Compliance Period:	March 03, 2000 to August 06, 2008			

TCEQ Staff Member to Contact for Additional Information Regarding this Compliance History

Name: Phone:

Site Compliance History Components

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

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: 03/10/2000 ADMINORDER 1999-0515-AGR-E

Classification: Moderate
Citation: 30 TAC Chapter 321, SubChapter B 321.42(e)
Rqmt Prov: 1.4.1 PERMIT
1.4.2 PERMIT
Description: Failure to submit a facility certification and a pond liner certification at the time of the inspection.

Classification: Moderate
Citation: 30 TAC Chapter 321, SubChapter B 321.42(d)
Rqmt Prov: 2.3.3,2.4 PERMIT
2.6 PERMIT
Description: Failure to submit required records of soil analsis, waste and wastewater analysis.

Classification: Minor
Citation: 30 TAC Chapter 220, SubChapter B 220.21
30 TAC Chapter 305, SubChapter M 305.503
Description: Failure to pay wastewater inspection and Water Quality fees for 1995, 1996, 1997, 1998, and 1999.

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 12/01/2000 (113682)
2 07/27/2001 (39843)
3 05/08/2003 (34600)
4 03/31/2004 (264579)
5 07/29/2005 (401160)
6 05/25/2006 (479766)
7 11/21/2006 (519372)
8 10/16/2007 (596358)

9 02/25/2008 (636674)

E. Written notices of violations (NOV). (CCEDS Inv. Track. No.)

Date: 12/01/2000 (113682)
Self Report? NO Classification: Moderate
Rqmt Prov: OP PP4.2
Description: FAILURE TO COMPLY
Date: 02/08/2008 (616975)
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 321, SubChapter B 321.33(p)
Description: Failure to obtain an amendment under §321.34 or §321.35 of this title prior to making any modification to the facility which would cause a substantial change to the site plan. The facility was applying waste to LMUs not in the current permit. 30 TAC 321.33 (p)

F. Environmental audits.

N/A

G. Type of environmental management systems (EMSs).

N/A

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

Compliance History

Customer/Respondent/Owner-Operator:	CN601479520	SCHOUTEN, NOVA D	Classification: HIGH	Rating: 0.06
Regulated Entity:	RN102915873	P & L DAIRY	Classification: HIGH	Site Rating: 0.00
ID Number(s):	WASTEWATER AGRICULTURE	PERMIT		WQ0003675000
	WASTEWATER AGRICULTURE	PERMIT		TX0126471
	WASTEWATER AGRICULTURE	PERMIT		WQ0003675000
Location:	3728 COUNTY ROAD 229, HICO, TX, 76457		Rating Date: 9/1/2007	Repeat Violator: NO
TCEQ Region:	REGION 04 - DFW METROPLEX			
Date Compliance History Prepared:	August 21, 2008			
Agency Decision Requiring Compliance History:	permitting			
Compliance Period:	September 01, 2002 to August 31, 2007			

TCEQ Staff Member to Contact for Additional Information Regarding this Compliance History

Name: James Moore Phone: 0171

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 of the site during the compliance period? No
3. If Yes, who is the current owner? N/A
4. if Yes, who was/were the prior owner(s)? N/A
5. When did the change(s) in ownership occur? N/A

Components (Multimedia) for the Site :

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

N/A

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 05/08/2003 (34600)
2 03/31/2004 (264579)
3 07/29/2005 (401160)
4 05/25/2006 (479766)
5 11/21/2006 (519372)

E. Written notices of violations (NOV). (CCEDS Inv. Track. No.)

F. Environmental audits.

N/A

G. Type of environmental management systems (EMSs).

N/A

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

Attachment

F

Brown McCarroll
L.L.P.

111 Congress Avenue, Suite 1400, Austin, Texas 78701-4043
512-472-5456 fax 512-479-1101
direct (512) 479-9757 jbattle@mailbmc.com

March 12, 2008

VIA HAND DELIVERY

Ms. LaDonna Castañuela
Office of the Chief Clerk/MC-105
Texas Commission on Environmental Quality
12100 Park 35 Circle, Building F
Austin, Texas 78753

AGR
54053

Re: Request for Reconsideration and, alternatively, Contested Case Hearing on Draft Permit for Major Amendment
TPDES Permit No. WQ0003395000
Jim Broumley and Keith Broumley, dba Broumley Dairy

Dear Ms. Castañuela:

The City of Waco ("City"), the mailing address of which is P.O. Box 2570, Waco, Texas 76702-2570, phone number (254) 750-5640, fax number (254) 750-5880, **hereby requests reconsideration of and, alternatively, a contested case hearing** on, the Executive Director's decision to approve the application of Jim Broumley and Keith Broumley, dba Broumley Dairy, for a major amendment of TPDES Permit No. WQ0003395000, the draft permit that the Executive Director has issued to Broumley Dairy based on his decision, and the application that Broumley Dairy has filed for this permit amendment.

This request for reconsideration and, alternatively, contested case hearing is made by the City on its own behalf and as *parens patriae* on behalf of its citizens. The person who is responsible for receiving all official communications and documents for the City relating to this request is its undersigned retained legal counsel, Jackson Battle, Brown McCarroll, L.L.P., Suite 1400, 111 Congress Avenue, Austin, Texas 78701, phone number (512) 479-9757, fax number (512) 479-1101.

Because the City believes that it is raising herein only disputed issues of law, this request should be treated by the TCEQ as a request for reconsideration of the Executive Director's decision on the Broumley Dairy permit application, in which case no contested case hearing will be necessary. However, if the TCEQ determines that the City has raised herein disputed, relevant, and material issues of fact, then the City will be entitled to a contested case hearing on those fact issues. Because of this possibility, the City provides the following demonstration that it is an "affected person":

THE CITY OF WACO IS AN "AFFECTED PERSON."

The City is a "person affected" by the Executive Director's decision, as the term is defined in Texas Water Code § 5.115(a), and is an "affected person," as determined applying the factors listed in 30 T.A.C. § 55.203(c). Although it is approximately 45 miles (approximately 75 river miles downstream) from the Broumley Dairy, the City is very significantly and directly adversely affected by the pollutants discharged by this dairy that flow downstream to Lake Waco.

All adjudicated and permitted rights to the water impounded in Lake Waco are owned by the City for recreation, irrigation, water supply, and other municipal use. The City is authorized to divert 78,970 acre-feet per year for municipal use, including meeting the public drinking water needs of over 160,000 of its citizens and the citizens of other smaller municipalities in the area. Tens of thousands of its citizens fish, swim, ski, and engage in other water recreation in Lake Waco every year.

The North Bosque River terminates in Lake Waco; therefore, Lake Waco is a "sink" for any pollutants dissolved or entrained in the waters of the North Bosque River. As stated in the Affidavit by Bruce Wiland, P.E., that is attached hereto as Exhibit A and incorporated herein for all purposes:

- The North Bosque River contributes approximately 64% of the total flow to Lake Waco.
- The North Bosque River contributes, on average, 72% of the total phosphorus (TP) loading to Lake Waco and 44% of the total nitrogen (TN) loading.
- Dairy operations in the watershed of the North Bosque River contribute at least 30% of the TP load and 10% of the TN load to Lake Waco.
- Most of the phosphorus loading to Lake Waco from dairy CAFOs in the North Bosque River watershed occurs in periods of heavy rainstorms, when the travel time from the runoff from dairy waste application fields into the river and downstream to Lake Waco is short, typically less than 5 days and sometimes just a matter of hours.
- Such rainstorm events carry phosphorus and bacteria from reaches of the North Bosque River watershed as distant from Lake Waco as is the Broumley Dairy.
- The primary cause of heavy algal biomass in Lake Waco is the phosphorus that is introduced into the Lake from runoff, particularly from dairy CAFO operations in the North Bosque River watershed.

- Discharges from municipal wastewater treatment facilities into the North Bosque River account for less than 10% of the TP and less than 4% of the TN loadings to Lake Waco.

- Because other sources of TP and TN are largely uncontrollable, control of loadings from dairy CAFOs in the North Bosque River watershed is necessary to reduce the loadings to Lake Waco to a point that overgrowth of blue-green algae can be reduced.

- Discharges from dairy CAFOs in the North Bosque River watershed are the primary cause of the low N:P ratio in Lake Waco that results in the large growths of blue-green algae that impairs the quality of Waco's water supply.

- It is not possible to remedy the impairment of water quality in Lake Waco without substantially reducing the runoff and other discharges of total phosphorus from dairy CAFOs in the North Bosque River watershed.

- Source tracking studies indicate that dairy CAFO operations in the North Bosque River watershed are a probable source of Enterococcus and e-coli, which can possibly be accompanied by cryptosporidium, giardia, and other pathogens, entering Lake Waco.

This expert opinion by Mr. Wiland is corroborated by many studies performed by the Texas Institute for Applied Environmental Research ("TIAER"), by EPA Region 6, by "White Paper" subcommittees focused on the North Bosque River watershed as an aid to the TCEQ in its revision of Subchapter B three years ago, and by ENSR, Inc., in its performance of a recent "Lake Waco Comprehensive Lake Management Study," copies of which are attached to Mr. Wiland's Affidavit and also incorporated herein. Indeed, the TCEQ itself has determined that "Excessive Algal Growth" and Nitrogen in Lake Waco are "concerns" and that "Agriculture, Intensive Animal Feeding Operations, and Confined Animal Feeding Operations Nonpoint Sources" are the sources of these two identified water quality concerns. *See* the 2002 and 2004 Water Quality Inventories – Sources of Pollution for Water Bodies with Water Quality Concerns (October 1, 2002, and May 13, 2005), attached hereto as Exhibits B and C respectively and incorporated herein for all purposes. Even the Third Court of Appeals has found: "The water quality of Lake Waco, which is a 'sink' for any dissolved pollutants in the North Bosque River, has been affected [by upstream dairy CAFOs]" *City of Waco v. TNRCC*, 83 S.W.3d 169, 172 (Tex. App. – Austin 2002, pet. denied).

As concluded by Mr. Wiland, after his review of the Broumley Dairy draft permit, "Fact Sheet," application, public comments, and the Executive Director's Response to Comments, the wastewater discharges and runoff of pollutants from the Broumley Dairy's waste application fields (including "third party fields") that will be authorized by amended Permit No. WQ0003395000 will contribute to the taste, odor, and public health problems identified in Lake Waco:

- If the problems with the draft permit and incorporated application for Broumley Dairy that are identified in Waco's public comment letter are not addressed, corrected, and remedied to any greater extent than described in the Executive Director's Response to Comments, Lake Waco will be adversely affected by the issuance of the proposed permit to Broumley Dairy and its authorized increase in herd size from 990 to 1499 cows, in that the amounts of phosphorus and pathogens transported from Broumley Dairy and its waste application fields (including third party fields) down the North Bosque River to Lake Waco will increase.

- The increase in the amount of phosphorus transported to Lake Waco will likely cause increased algae blooms, resulting in higher levels of geosmin, and greater incidence of objectionable taste and odor problems in drinking water derived from Lake Waco.

- Similarly, the failure of the draft permit and incorporated application by Broumley Dairy to control bacteria loadings into the North Bosque River, as required by the federal Clean Water Act and EPA and TCEQ regulations, will increase the possibility of adverse health effects experienced by persons who engage in water recreation in Lake Waco and drink the water derived from it.

- The distance of Broumley Dairy from Lake Waco does not eliminate these adverse effects because the primary mechanism for transport of these pollutants to Lake Waco is the very heavy rainstorms that occur in the North Bosque River watershed, and that wash the phosphorus and bacteria off the fields on which dairy waste and wastewater are applied, and that can transport these pollutants to Lake Waco in anywhere from a matter of hours to a few days.

Lake Waco and the City's drinking water are adversely affected by the cumulative effects of the wastewater discharges and contaminated runoff from waste applications fields at all of the 50 currently permitted CAFO dairies and the additional unpermitted AFOs in the North Bosque River watershed. However, Lake Waco and the City's water supply also will be adversely affected by Broumley Dairy's wastewater discharges and contaminated runoff from its waste application fields under the inadequate terms and conditions contained in the draft permit and the incorporated permit application filed by Broumley Dairy. With no more effective waste management methods than are required by this permit and application, Broumley's addition of 509 more confined dairy cows to its CAFO will increase the phosphorus loadings to Lake Waco that are causing the excess algae blooms and resulting taste and odor problems, and it will proportionately increase the risk of dairy associated pathogens adversely affecting Waco's citizens who utilize Lake Waco and drink municipal water.

The phosphorus-laden runoff from the LMUs and third-party fields, to which this permit would allow Broumley Dairy's wastewater and manure to be applied in excess of agronomic need, would reach Lake Waco and the City's water supply during recurring periods of heavy

rainfall before significant attenuation occurs to the nutrient loadings contributed by Broumley. This problem is compounded by the fact that the draft permit prepared for Broumley Dairy allows Broumley to apply its wastewater to saturated fields, from which it naturally runs off into the North Bosque River, during rain events that exceed the capacity of its RCSs.

The Affidavit of Richard B. Garrett, P.E., that is attached hereto as Exhibit D and incorporated herein for all purposes, explains the adverse and extremely costly effects that the runoff and discharges of pollutants from dairies such as Broumley in the North Bosque watershed are having on the City, its drinking water, and its citizens' health and quality of life:

- Lake Waco is the sole source of supply of the public water system of the City of Waco, exclusive of emergency water connections. It is the only surface water source of drinking water that the City treats and distributes to its 113,000 citizens and to approximately 45,000 residents of several small neighboring municipalities.

- Runoff from dairy-related waste application fields at CAFOs is the primary contributor of soluble phosphorus into Lake Waco. The amount of soluble phosphorus is the controlling factor ("the limiting nutrient") for the high algal growths that occur in Lake Waco. Therefore, the single greatest cause of algae growth in Lake Waco is the runoff from the waste application fields at dairy CAFOs in the watershed of the North Bosque River.

- The *geosmin* that is a product of the decay of the blue-green algae that occurs in Lake Waco, primarily in warm weather, is the source of objectionable taste and odors in the City's drinking water. The means that the City has employed thus far to address the offensive taste and odor caused by the algae-derived geosmin is increased use of powdered activated carbon in its water treatment process. The expense for this activated carbon has been over $250,000 per year in recent years (not counting equipment, labor, and service costs).

- Many times recently the City has reached the threshhold for the amount of activated carbon that it can use for water treatment, but has been forced to go ahead and deliver offensive tasting and smelling water to its customers. Not only does this cause concern for the diminishment of the quality of the lives of the City's customers who must drink, cook with, and bathe in this water, it threatens the economic development of the City. Waco is the home to several major industries that place a premium on the quality of the water that they use: Masterfoods, Minute Maid, and Allergan, to name a few. If these industrial customers or other industries that evaluate Waco as a site for their plants become dissatisfied enough with the taste, odor, and other qualities of the water that the City provides them, they may well look elsewhere.

- With the City at, and beyond, the limits of its capacity to address the algae-caused problems in its water with activated carbon, it has been forced to plan and budget for the installation of other, much more expensive, treatment systems. It will cost

approximately $50 million for the dissolved air flotation (DAF), ozone addition, and other treatment combinations required to cope with the taste and odor problems caused by the excess algae in the Lake. These and other expensive treatment systems also may be necessary to meet future requirements to address problems with microbes and disinfectant byproducts associated with the algae and animal waste loads conveyed to the Lake from CAFOs in the North Bosque River watershed.

- Even if dairy CAFO waste-associated pathogens do not enter the City's treated drinking water supply, their presence in Lake Waco jeopardizes the enjoyment of the many aquatic recreational activities in which Waco citizens engage there. The pathogens conveyed to Lake Waco from the dairy CAFOs in the North Bosque watershed endanger the health of the City's many citizens who swim, fish, sail, ski and engage in other water recreation in Lake Waco.

Mr. Wiland's and Mr. Garrett's Affidavits support the conclusion that, if the problems with the draft permit and incorporated application for Broumley Dairy that are identified in Waco's public comment letter are not addressed to any greater extent than described in the Executive Director's Response to Comments, Lake Waco, the City's drinking water, the City's financial resources, and the health and welfare of its citizens will be adversely affected by the issuance of the proposed permit and by the runoff and other discharges of pollutants from Broumley Dairy, in all of the many serious ways described herein.

THE COMMISSION SHOULD RECONSIDER THE EXECUTIVE DIRECTOR'S DECISION.

The City here identifies each of the Executive Director's Responses to Comments that were based upon errors of law and explains the reasons why the Commission should reconsider the Executive Director's decision and render a decision based upon correct interpretation and application of the law.

In all instances, unless stated to the contrary, the legal basis of the dispute concerns the City's contention that the federal Clean Water Act section 301(b)(1)(C), 33 U.S.C. § 1311(b)(1)(C); United States EPA rules at 40 C.F.R. §§ 122.4(a) & (d) and 122.44(d), as incorporated into TCEQ rules by 30 T.A.C. §§ 305.538 and 305.531(4), prohibit a discharge permit such as this from being issued unless the permit assures attainment of state water quality standards and that, in this case, the permit drafted for Broumley Dairy does not achieve the water quality standards for phosphorus in the North Bosque River. The Executive Director, however, seems to contend in each instance that, as a matter of law, the Clean Water Act and these federal and state rules do not require a TPDES permit to assure attainment of the state water quality standards. The Executive Director does not appear to contend that the permit proposed for the Broumley Dairy *will* assure attainment of the state water quality standards for phosphorus, but he does seem to contend that the contested elements of the draft permit will contribute to eventual attainment of the water quality standards – a position that the City contends does not meet the requirements of the law.

Another legal basis for each disputed issue, unless stated to the contrary in the listing of disputed Responses to Comments that follows, is the City's contention that the federal Clean Water Act § 303(d), 33 U.S.C. § 1313(d), and EPA rules at 40 C.F.R. §§ 130.7 and 122.44(d) require all discharge permits such as the one proposed for Broumley Dairy to comply with any approved TMDL applicable to any water body segment into which the discharge is authorized. The Executive Director does not seem to disagree with this general statement of the law regarding the effect of TMDLs on TPDES permitting, but he does disagree with the City's assertion that each of the contested portions of Broumley's draft permit (and incorporated parts of its application), unless noted to the contrary herein, fails to comply with the approved TMDL for phosphorus in the North Bosque River. These identified disputes regarding compliance with the TMDL involve two basic legal issues: (1) the proper interpretation of the TMDL and its effects and (2) whether the draft permit prepared for Broumley complies with the proper interpretation of the TMDL.

In order to avoid unnecessary repetition of arguments made in the Public Comment letter that it filed on September 10, 2007, the City will adopt herein by reference certain legal arguments made therein without restating them at length. A copy of the City's 9/10/2007 Public Comment letter is attached hereto, for convenience, as Exhibit E.

Individual Disputed Executive Director Responses.

Response 1

The Executive Director's response is that the expansion of Broumley Dairy does not make it a "new source" under state and federal rules and that, therefore, 40 C.F.R. § 122.4(i) is inapplicable.

Legal basis of dispute:

The City stands by and reiterates the legal arguments that it made in part I.1 of its comments in support of its contention that Broumley Dairy is a "new source," as defined in 40 C.F.R. § 122.2.

The Executive Director failed to respond to the City's argument that, because construction of all sources at the site commenced after the first promulgation of the new source standards for CAFOs on February 14, 1974, Broumley has been a "new source" ever since the initial construction and operation of a dairy at the site in 1997.

Moreover, the City disputes the Executive Director's interpretation of the definition at 40 C.F.R. § 122.2 and the criteria in 40 C.F.R. § 122.29(b). The expansion of the retention control structures ("RCSs") from 45.63 acre-feet to at least 71.33 acre-feet creates a "new source" as the term is defined and explained in the cited regulations.

Also, the replacement of 990 head of Holstein cows with 1,499 head of Jersey cows, as allowed by this draft permit, creates a "new source" at Broumley Dairy. Table 5.1 specifying "As-Excreted Manure Characteristics Existing Dairy Facility (Permitted vs. Proposed)," part of

the Technical Packet submitted as part of Broumley's permit application, reveals that the 1,499 Jersey cows will produce manure containing 246 lbs/day of Total Phosphorus, whereas the 990 Holstein cows allowed under the existing permit produce manure containing 168 lbs/day of Total Phosphorus. This increase of 46% in the Total Phosphorus excreted as manure by the new dairy operation should make it a "new source" within the regulatory meaning. Because the determinative facts are stated in the application and not disputed by the Executive Director or the City, only an issue of law remains.

Response 2

The Executive Director responds to the City's contention, in part I.1 of its comments, that there has been no demonstration that there are sufficient remaining load allocations for phosphorus in the North Bosque River to allow for discharges from the expansion of this dairy and that existing dischargers into this river segment have not been subject to compliance schedules, as required by 40 C.F.R. § 122.4(i), by asserting (1) that it is "probable" that the TMDL-I Plan submitted by TCEQ included authorized and *unauthorized* (?!) discharges from RCSs in the loadings that it attributed to "WAFs," and (2) that CAFO loadings "are not amenable to simple total daily allocations."

Legal basis of dispute:

The problem with these two responses is that they both conflict with the interpretation of the phosphorus TMDLs for the North Bosque River that EPA Region 6 Administrator Cooke plainly described in his 12/03/2001 letter to Executive Director Saitas and with which Mr. Saitas expressly concurred in his responsive letter of 12/7/2001 (included in Exhibit F attached hereto). Table 1 included with Mr. Cooke's 12/03/2001 TMDL approval letter expressly contains "simple total daily allocations," and Footnote 2 to this Table expressly states that those allocations do not include discharges from "manure/wastewater holding lagoons" – that is, RCSs. If the Executive Director wants to attempt to revise its TMDLs for phosphorus in the North Bosque River, he may attempt to do so. However, until he does, the TCEQ must live with the EPA's interpretation of those TMDLs with which it agreed in December 2001. The Executive Director has offered no response to the City's contention that all existing dischargers into segments 1226 and 1255 of the North Bosque River have to be subject to compliance schedules before a permit can be issued to Broumley Dairy allowing its discharges. The City adopts and reiterates the legal arguments made in part I.1. of its 9/10/2007 Comment letter.

Given the Executive Director's response, no factual dispute exists regarding (1) whether pollutant load allocations have been performed for wastewater discharges from CAFOs into the North Bosque River (*They have not.*), and (2) whether there were sufficient remaining pollutant load allocations to allow for Broumley Dairy's phosphorus discharges (*There were not.*). Although the Executive Director has not actually responded to the City's contention that all existing discharges into Segment 1226 have not been made subject to compliance schedules, the City infers that the Executive Director does not challenge the City's assertion and that, therefore, no factual dispute on this issue exists.

Response 3A

As part of the Executive Director's response to the City's contention that the draft permit fails to attain state water quality standards by complying with the TMDLs for Phosphorus in the North Bosque River (*see* part I.2.(a) of the City's 9/10/2007 Comment letter), the Executive Director contends that the TMDL does not limit the number of dairy cows in the watershed to 40,450.

Legal basis of dispute:

This response is not accurate. *See Two Total Maximum Daily Loads for Phosphorus in the North Bosque River for Segments 1226 and 1255* ("TMDL" or "TMDLs"), pp. 11-12. The modeling used to develop the TMDL and demonstrate compliance with the water quality standards was based on a certain number of cows in the watershed and is, therefore, directly tied to the number of cows. If the number of cows increase, the amount of manure produced and the amount of manure land-applied will increase. This will in turn increase the amount of phosphorus in the runoff. Therefore, the 40,450 cows used in the modeling is a de facto limit on the number of cows in the watershed. The fact that RCSs will increase in size has no significance with respect to the number of cows. The sizing of the RCS is based on the area of contaminated runoff from dairy production area, not on the number of cows. In any case, the TMDL and the modeling did not make any allowance for RCS overflows.

If one needs further proof of the relevance of the number of cows, one only need look at the TMDL-e and TMDL-f modeling results in Figure 6 on page 56 of the TMDL Implementation Plan adopted December 2002. The index station "Above Meridian" was the one used to establish the target phosphorus goal and a 50% reduction in phosphorus concentration. This station is just downstream of all of the CAFOs. Under the TMDL-e scenario with 40,450 dairy cows and the BMPs implemented, the long-term annual average soluble P concentration is 54.5 ppb, and the long-term annual average soluble P loading is 10,479 kg. Under the TMDL-f scenario with 66,930 dairy cows and the BMPs implemented, the long-term annual average soluble P concentration is 87 ppb, and the long-term average soluble P loading is 13,362 kg. Since the entire TMDL is predicated on meeting the water quality goal and since the TMDL-e is the only scenario that comes close to meeting this goal, there is in fact an implicit limitation on the number of cows whether the TCEQ explicitly states it or not.

The Executive Director makes the argument that "the model used in the TMDL demonstrated that water quality conditions would improve significantly even with many more dairy cattle in the watershed if management practices were improved." While the Executive Director's assertion may be factually correct, it is a misleading argument. It is akin to saying that safety conditions in a school zone where the speed limit is 20 mph would improve significantly even with increased traffic if cars slowed down from 70 mph to 35 mph. It may be an improvement over an extremely bad situation but it doesn't make it acceptable or get you to where you need to be. If one again looks at Figure 6 on page 56 of the TMDL Implementation Plan, one will find the long-term annual average soluble P concentrations: TMDL-Existing = 117 ppb, TMDL-f = 87 ppb, and TMDL-e = 54.5 pbb [Note: the TMDL-existing plot in the lower

left-hand corner is incorrect and the one in the upper left-hand corner must be used]. The TMDL-f scenario (the one with 66,930 cows) shows better conditions than existed in the mid-1990s with no BMPs but it is significantly worse that the TMDL-e scenario (the one with 40,450 cows) which is the basis for the TMDL Implementation Plan. It is puzzling how the Executive Director can expect to achieve the water quality goals with existing authorizations of 59,807 dairy cows and applications for an additional 11,531 dairy cows (a total of 71,338 dairy cows) when the modeling clearly indicates that the goal cannot be achieved with 66,930 cows. Even the TMDL-e with 40,450 cows does not meet the original "preliminary target" of 30 ppm at the "Above Meridian" index station or the 50% reduction from the predicted "Existing" scenario.

With all of the critical facts contained in the TMDL and Implementation Plan and not disputed by the City, the only determinative issues involve interpretations of these TCEQ documents, classic issues of pure law and policy.

Response 3B

The Executive Director contends that the TMDL does not require removal of 50% of the solid manure produced by the dairy cows from the North Bosque River watershed. He recites the five management options provided by Texas Water Code § 26.503(b)(2) and the Subchapter B rules. (*See also* the Executive Director's Response 4.)

Legal basis of dispute:

While the Texas Water Code and the Subchapter B rules provide these general manure management options, other TCEQ and EPA rules require CAFO discharge permits to assure attainment of the state water quality standards for phosphorus in the North Bosque River. *See* 30 T.A.C. § 321.36(b); 40 C.F.R. §§ 122.4, 122.44 (as incorporated into TCEQ rules by 30 T.A.C. §§ 305.531(4), 305.538).

The modeling conducted for the TMDL established the requirements necessary to meet water quality standards in the North Bosque River. One of these requirements is removal of 50% of the solid manure from the North Bosque watershed. If this requirement is not met, the model predicts that water quality standards cannot be met. Simply changing waste application from fields with high soil phosphorus (i.e., LMUs) to fields with lower soil phosphorus (i.e., third-party fields) does nothing to reduce the *loading* to the North Bosque River. Allowing third-party fields that provide little control over the nutrient application works as a disincentive for a dairy to transport waste to a compost facility or out of the watershed and, therefore, violates the requirement that permits assure compliance with the TMDL and attainment of the state water quality standards.

Response 3C

The Executive Director contends that the TMDL does not require that the amount of Phosphorus in the dairy cattle's diet be reduced to 0.4%. Again, he says that no TCEQ rule requires this.

Legal basis of dispute:

Again the City cites the TCEQ to the overriding state and federal rules that require that permits assure attainment of water quality standards. 40 C.F.R. §§ 122.4, 122.44; 30 T.A.C. §§ 305.531(4), 305.538; 30 T.A.C. § 321.36(b).

Three BMPs were assumed in the modeling supporting the TMDL: (1) removing 50% of the solid manure from the watershed, (2) reducing phosphorus application rates on WAFs to one times the phosphorus crop requirement rate, and (3) reducing phosphorus diets for dairy cows to 0.4%. Since the Executive Director has not even addressed phosphorus diet reduction in the permit for Broumley Dairy, it is incumbent upon him to demonstrate how this BMP modeled for attainment of the water quality standards for phosphorus in the River was effectively replaced by another BMP. This he has not done.

Response 3E

The Executive Director contends that the TMDL does not require that a dairy's phosphorus application rate not exceed the *crop requirement rate* for phosphorus, but only that the phosphorus application rate not exceed the agronomic rate recommended by NRCS Code 590.

Legal basis of dispute:

The Executive Director is not requiring limitation of the phosphorus application rates to *one* times the phosphorus crop requirement, as modeled in the TMDL, but is instead requiring only that Broumley Dairy's NMP be based on NRCS Code 590, which allows application rates at *two* times the phosphorus crop requirement until fields exceed 200 ppm Phosphorus. The City maintains that this is contrary to the TMDL and fails to assure attainment of water quality standards for phosphorus in the North Bosque River.

Response 6

The Executive Director responds to the City's contention that he has failed to make any "BPJ" determination that the "BCT" standards for control of pathogens have been met by contending (1) that the management measures for controlling phosphorus loading will also have some corollary effect on reducing pathogen and bacteria loading, (2) that states are allowed to use BMPs to control or abate discharges "when numeric effluent limitations are infeasible," and that it is infeasible to develop and apply numeric limitations to discharges from CAFOs.

Legal basis of dispute:

The Executive Director's response on this issue is completely *unresponsive* to the City's argument. He has offered no argument whatsoever that any of the factors specified in 40 C.F.R. § 125.3(d)(2) or Clean Water Act § 304(b)(4)(B) have been considered. See part II of the City's 9/10/2007 Comment letter. Therefore, the legal issue seems to be whether these requirements in

EPA's rules and the Clean Water Act can be ignored for the reasons offered by the Executive Director.

The Executive Director does not refute the City's contention that none of the factors specified in 40 C.F.R. § 125.3(d)(2) and Clean Water Act § 304(b)(4)(B) have been considered. Therefore, no relevant and material factual issue exists.

Response 7

The Executive Director seems to contend that, as a matter of law, all of the indicia of control of third party fields that the City describes in its Comment III do not add up to sufficient "control" of the third party fields to be utilized by Broumley to make them "land management units" ("LMUs") within the definition at 30 T.A.C. § 321.32(25) and the EPA definition of "land application area" at 40 C.F.R. § 412.2(e).

Legal basis of dispute:

The legal issue that remains is whether all of the controls that Broumley Dairy is required to exert over third party fields, as provided in Part VII.A.8(e)(5)(i) of its permit, means that those third party fields must be treated as LMUs under 30 T.A.C. § 321.32(25) and "land application areas" under 40 C.F.R. § 412.2(e). *See* part III of the City's 9/10/2007 Comment letter for full explanation of the City's position. (There is no factual dispute on this issue.)

Response 8

The Executive Director contends that Comprehensive Nutrient Management Plans ("CNMPs"), Nutrient Utilization Plans ("NUPs"), Pollution Prevention Plans ("PPPs"), and Retention Control Structure ("RCS") management plans are not required by the Second Circuit's 2005 decision in *Waterkeeper Alliance v. EPA* to be submitted with the application, reviewed by the TCEQ, made available to the public, and incorporated into the permit.

Legal basis of dispute:

The City disagrees with the Executive Director's analysis of the law as expressed in the *Waterkeeper* decision, and its application to the CNMPs, NUPs, PPPs, and RCS management plans, for the reasons explained in part IV of its 9/10/2007 Comment letter. The City stands by and reiterates the position on this point that is expressed in its comment letter. (There is no disputed factual issue related to this point.)

REQUEST BY THE CITY.

Because the City believes that it is herein raising only disputed issues of law, its first request is that the TCEQ reconsider the Executive Director's decision on the Broumley Dairy permit application, determine that the Executive Director erred on each of the matters of law identified herein, rescind the draft permit for Broumley Dairy, and remand the application back

to the Executive Director for review and reconsideration in light of the correct interpretations of applicable law that are explained herein.

However, if the TCEQ determines that the City has raised relevant and material fact issues, then the City requests a contested case hearing on each of them and, therefore, requests a referral of the case to SOAH for hearing and proposal for decision on each of the fact issues found to have been raised, any other factual issues that arise in the course of the hearing, and on all applicable issues of law and policy.

Respectfully submitted,

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30419.2

Attachment

G

DOCKET NUMBER 2008-0427-AGR

APPLICATION BYJIM BROUMLEY AND KEITH BROUMLEY dba BROUMLEY DAIRY FOR PERMIT NO. WQ0003395000	§ § § §	BEFORE THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

EXECUTIVE DIRECTOR'S RESPONSE TO HEARING REQUESTS AND REQUEST FOR RECONSIDERATION

I. Introduction

The Executive Director (ED) of the Texas Commission on Environmental Quality (TCEQ or Commission) files this Response to Hearing Requests and Request for Reconsideration on the application by Jim Broumley and Keith Broumley dba Broumley Dairy (Applicant) for a major amendment of its existing Concentrated Animal Feeding Operation (CAFO) Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0003395000. The City of Waco (Waco) submitted both a contested case hearing (CCH) request and a Request for Reconsideration (RFR). The Sierra Club also submitted a CCH request, but later withdrew their request.

Attached for Commission consideration are the following:

Attachment A -	Satellite Map of Area
Attachment B -	Fact Sheet and ED's Preliminary Decision
Attachment C -	Draft Permit
Attachment D -	Executive Director's Response to Public Comments (RTC)
Attachment E -	Compliance History
Attachment F -	EPA No Objection Letter – 9/25/07

II. Description Of The Facility

The Applicant has applied for a major amendment to their CAFO individual permit that would allow it to expand its dairy head capacity from 990 head (Holstein cows) to 1499 total head (Jersey cows) of which 1,100 head are milking cows, with no increase in waste production from the previous permit due to the smaller milking breed. The major amendment also requests a decrease in Land Management Units (LMUs) from 434 acres to 229.5 acres. The facility consists of three retention control structures (RCSs) working in conjunction with an anaerobic digester system and LMUs. The facility is located on the west side of County Road 240, approximately one mile south of the intersection of County Road 240 and State Highway 6, east of the city of Hico in Hamilton 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 permit application was received on January 27, 2004. The new CAFO rules were approved in July 2004. The new rules resulted in revisions to the CAFO permit application process and revisions in the required engineering and technical data. Pursuant to the new rules, the Applicant submitted a supplemental technical information packet that was declared administratively complete on July 7, 2006. The Notice of Receipt and Intent to Obtain a Water Quality Permit was published in the *Hico News Review* on November 9, 2006. TCEQ staff completed a technical review of the application and prepared a draft permit. The Notice of Application and Preliminary Decision for a Water Quality Permit was published in the *Hico News Review* on August 9, 2007. The public comment period ended on September 10, 2007. An extensive number of comments were received and the Response to Comments was filed on February 4, 2008. This application was administratively complete on or after September 1, 1999; therefore, 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 30 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 . . . ." 30 TAC § 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. 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 Requestor Complied With 30 TAC §§ 55.201(c) and (d).

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

B. Whether Requestor Meets the Requirements of an Affected Person

City of Waco

30 TAC § 55.203(b) states that local governments with authority under state law over issues raised by the application may be considered affected persons. However, Waco has no authority to regulate dairies located outside its boundaries in another county. Also, Waco has no authority under state law over whether the dairies comply with 30 TAC Chapter 321, Subchapter B regulating CAFOs.

The ED considered the factors listed in 30 TAC § 55.203(c) to determine whether Waco is an affected person for purposes of this permit application. Waco has water rights in Lake Waco, approximately 82 miles downstream from the dairy to the surface water intake points on the lake. The distance from the Broumley Dairy to the City of Waco and Lake Waco weigh heavily against Waco's claim it is an affected person for purposes of this particular permit application.

The draft permit would only authorize a discharge from the RCSs in the event of a rainfall event that exceeds the 25-year, 10-day storm event for this area. Additionally, runoff from LMUs and third party fields are considered non-point source runoff and exempt agricultural runoff, not regulated under the Clean Water Act as long as waste is land applied at agronomic rates and in compliance with TCEQ's CAFO rules.

A discharge from this particular dairy is unlikely to impact the health and safety of persons who drink Waco's water or to impact the use of the waters of Lake Waco. At 75 miles upstream of the point where the North Bosque enters Lake Waco and another 6.8 miles across Lake Waco to reach the point where Waco extracts drinking water from the lake the distance is such that if there is a discharge from the facility, assimilation and dilution would occur long before the water reaches Lake Waco. *See* Attachment A. Therefore, Waco's interest is common to members of the general public and does not qualify as a personal justiciable interest. Through consideration of the factors in 30 TAC § 55.203(c) the ED recommends finding that Waco is not an affected person with regards to this dairy operation.

The ED recommends that the Commission find that Waco is not an affected person in regards to this permit application and deny the hearing request.

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

As noted above, the ED recommends the Commission not find Waco affected in this matter. However, in the event the Commission determines that Waco is affected, the ED analyzed the issues raised. First, on a global basis, Waco characterizes all of the issues it raised as issues of law, which are not referable to SOAH. Waco asks the Commission to affirm that determination and grant their Request for Reconsideration or, if the Commission determines that Waco is raising issues of fact, to refer the application to SOAH for a CCH. The issues raised are all characterized by Waco as taking issue with the ED's interpretation of applicable rules and regulations, the TMDL, and case law. Use of the CCH process to settle disputed issues of law with TCEQ violates 30 TAC § 50.115(c) that only disputed issues of fact may be referred to SOAH. Since Waco acknowledges it is raising these issues as questions of law, then they are not referable to SOAH. Therefore, even if the Commission finds that Waco is an affected party in this case, the ED recommends denial of the hearing request because issues of law as raised by Waco are not referable to SOAH.

Waco also attached its original comment letter to the filing with a statement in the body of the CCH Request/RFR on page 7 that said:

> In order to avoid unnecessary repetition of arguments made in the Public Comment letter that it filed on September 10, 2007, the City will adopt herein by reference certain legal arguments made therein without restating them at length.

Based on this explanation, the ED's understanding is that Waco attached the public comment letter to re-state their legal arguments with respect to the issues raised in the RFR. The ED does not interpret Waco's request as incorporating all of the issues raised in the public comment letter. The ED analyzed only those issues actually raised in the CCH and RFR.

The ED also considered Waco's issues 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, unless otherwise noted. None of the issues were withdrawn. All identified issues in the response are considered disputed, unless otherwise noted.

1. Whether this facility is a "new source" under federal law and if it is, whether it meets the requirements of 40 CFR § 122.4(i). (RTC #1 and #2)

As raised by Waco, this issue is a matter of law. Waco states that it disputes the ED's legal interpretation of 40 C.F.R. § 122.2 and the ED's legal interpretation of the criteria in 40 C.F.R. § 122.29(b). 30 TAC § 50.115(c) requires that for an issue to be referred to SOAH it must raise factual, not legal issues. The ED recommends not referring this issue to SOAH.

2. **Whether there has been a sufficient remaining load allocation for phosphorus in the North Bosque River to allow for discharges from the expansion of the dairy or whether existing dischargers have been subject to compliance schedules as required by 40 CFR § 122.4(i). (RTC #2)**

As raised by Waco, this issue is a matter of law. The ED's legal interpretation is that the dairy is not a "new source." 40 CFR § 122.4(i) only applies if the Commission were considering issuing an authorization to discharge to a "new source" (or "new discharger," which is not alleged by Waco). The ED recommends not referring this issue to SOAH.

3. **Whether the draft permit is in compliance with the Total Maximum Daily Load (TMDL) and TMDL implementation plan (TMDL I-Plan) for the North Bosque River. (RTC #3)**

As raised by Waco, this issue is one of law. Waco makes it clear that what it disputes in regards to the TMDL and TMDL I-Plan is TCEQ's legal interpretation in issuing CAFO dairy permits in the North Bosque watershed. Waco does not raise any factual arguments with regard to this specific permit application. 30 TAC § 50.115(c) requires that for an issue to be referred to SOAH it must raise factual, not legal issues. The ED recommends not referring this issue to SOAH.

4. **Whether the ED failed to make a best professional judgment (BPJ) determination that the best conventional pollutant control technology for the control of pathogens was used as required by 40 CFR § 125.3(d)(2). (RTC #6)**

As raised by Waco, this issue is one of law. Waco takes issue with the ED's interpretation of how he is complying with this particular federal requirement and not with any factual issue related to the permit application. Therefore, this legal issue is not a referable issue to SOAH. The ED recommends not referring this issue to SOAH.

5. **Whether third party fields should be considered land management units. (RTC #7)**

This issue is a question of law. 30 TAC § 321.42(j)(3) was specifically worded to reflect that "LMUs are not associated with third party fields."[1] To qualify as third party fields under the rules, the CAFO operator does not control the third party field, but it is used for land application under contract with the CAFO. Application on third party fields is optional and represents "excess capacity to provide for more sound waste management by existing dairy CAFOs."[2] As raised by Waco, this issue takes exception to the CAFO rules and acknowledges in the request that there is "no factual dispute on this issue." 30 TAC § 50.115(c) requires that for an issue to be referred to SOAH, the issue must raise factual, not legal issues. The ED recommends not referring this issue to SOAH.

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1 29 TexReg 6652, 6658 (July 9, 2004).

2 *Id.* at 6692.

6. **Whether the ED must evaluate each of the following plans prior to permitting and make them available to the public throughout the public comment period due to the holding in the *Waterkeeper*[3] case: comprehensive nutrient management plans (CNMPs), nutrient utilization plans (NUPs), RCS management plans, and pollution prevention plans (PPPs). (RTC #8)**

This issue is a question of law regarding the interpretation of certain aspects of the *Waterkeeper* decision on CAFO permitting. The *Waterkeeper* decision found that NMPs were the equivalent of effluent limitations that should be incorporated into the permits. The ED is requiring individual CAFO permit applicants in the Bosque watershed to submit NMPs with the permit application. The NMPs are also subject to review and public scrutiny.

The *Waterkeeper* case did not express an opinion on whether CNMPs, NUPs, RCS management plans, and PPPs must be incorporated into the permit. Such incorporation is not required by the current version of the CAFO rules. Therefore, Waco is raising concerns regarding legal interpretations of judicial opinions and the adequacy of the current CAFO rules. 30 TAC § 50.115(c) requires that for an issue to be referred to SOAH it must raise factual, not legal issues. The ED recommends not referring this issue to SOAH.

VI. Analysis of the Request for Reconsideration

Waco states in its RFR that the Commission should reconsider the ED's decision because each of the identified issues involves errors of law on the part of the ED.

1. **Whether this facility is a "new source" under federal law and if it is, whether it meets the requirements of 40 CFR § 122.4(i). (RTC #1 and #2)**

Waco asserts that the ED failed to respond to Waco's argument that the dairy is a "new source" if it was built after February 14, 1974. Waco also challenges the ED's interpretation of the definition in 40 CFR § 122.2 and of the criteria in 40 CFR § 122.29(b). Waco treats these as separate issues, but the federal rules state, a "new source" is one who meets the definition in 40 CFR § 122.2 ***and*** satisfies the criteria in 40 CFR § 122.29(b).

"New source" is defined in the federal rules at 40 CFR § 122.2. The definition states that a "new source" is:

> Any building structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced: (A) after promulgation of standards of performance under CWA, § 306, or (B) after proposal of standards of performance in accordance with CWA, § 306, which are applicable to such source, but only if the standards are promulgated in accordance with § 306 within 120 days of their proposal.

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3 *Waterkeeper Alliance, Inc. v. Environmental Protection Agency*, 399 F.3rd 486 (2nd Cir. 2005).

According to 40 CFR § 122.29(b)(1), an applicant is a "new source" if it meets the above definition ***and*** meets the criteria included in this rule. The complete text of 40 CFR § 122.29(b)(1) follows:

> (b) *Criteria for new source determination.* (1) Except as otherwise provided in the applicable new source performance standard, a source is a "new source" if it meets the definition of "new source" in 122.29, and
>
> (i) It is constructed at a site where no other source is located;
> (ii) It totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or
> (iii) Its processes are substantially independent of an existing source at the same site. In determining whether these processes are substantially independent, the Director shall consider such factors as the extent to which the new facility is integrated with the existing plant; and the extent to which the new facility is engaged in the same general type of activity as the existing source., factors to consider include to the extent the new facility is integrated with the existing facility and to the extent the new facility is engaged in the same general activity as the existing source).

The ED would agree that when a dairy operation was originally constructed on the site it would have met the definition of a "new source." Waco interprets the rule so that regardless of how much time has passed, if it was constructed after February 14, 1974 it is and will always be defined as a "new source" as long as it has never been required to meet the requirements of a "new source' in the federal regulations. Such an interpretation that once a "new source" always a "new source" renders application of the factors in 40 CFR § 122.29(b) meaningless. If you accept Waco's interpretation of the definition of "new source," when the Applicant sought to renew its CAFO permit in February, 2074 it would still be a "new source" despite 100 years of activity at the site, unless it at some time in the past been required to comply with the Clean Water Act "new source" requirements.

However, a more logical interpretation of the "new source" requirements is that once an applicant received authorization to operate a dairy operation at a site, it ceased to be a "new source" for purposes of future permitting actions, unless what they were proposing an activity that met one or more of the criteria in 40 CFR § 122.29(b). According to the database maintained by the Office of the Chief Clerk, the Applicant has been permitted by the Commission (or its predecessor agencies) to operate a CAFO under permit number WQ0003395000 since October, 1996.

The Applicant is seeking an expansion of an existing dairy along with the expansion of RCS capacity. The Applicant is not proposing to replace the existing process. The expansion of the RCSs to meet the new 2004 CAFO rule requirements does not meet any of the criteria outlined in 40 CFR § 122.29(b), but simply expands an existing part of the facility to comply with new regulations. The

dairy expansion would be integrated with the existing facility. Therefore, the facility is not a new source.

Additionally, EPA did not have a problem with the ED issuing this draft permit and sent TCEQ a "no objection" letter dated September 25, 2007. *See* Attachment F.

2. Whether there has been a sufficient remaining load allocation for phosphorus in the North Bosque River to allow for discharges from the expansion of the dairy or whether existing dischargers have been subject to compliance schedules as required by 40 CFR § 122.4(i). (RTC #2)

This issue presumes that the dairy is a "new source" under the federal regulations. For the reasons indicated in the previous discussion, the ED disagrees that the Applicant, permitted for as a CAFO for at least 12 years, is a "new source" as defined in the federal regulations. If the facility is not a "new source," then 40 CFR § 122.4(i) does not apply. 40 CFR § 122.4(i) reads as follows:

> To a new source or a new discharger, if the discharge from its construction or operation will cause or contribute to the violation of water quality standards. [Sentence fragment is the actual wording of the rule.] The owner or operator of a new source or new discharger proposing to discharge into a water segment which does not meet applicable water quality standards or is not expected to meet those standards even after the application of the effluent limitations required by sections 301(b)(1)(A) and 301(b)(1)(B) of CWA, and for which the State or interstate agency has performed a pollutant load allocation for the pollutant to be discharged, must demonstrate, before the close of the public comment period, that:
>
> (1) There are sufficient remaining pollutant load allocations to allow the discharge; and
> (2) The existing dischargers into that segment are subject to compliance schedules designed to bring the segment into compliance with applicable water quality standards. The Director may waive the submission of information by the new source or new discharger required by paragraph (i) of this section if the Director determines that the Director already has adequate information to evaluate the request....

As can be seen from the actual text of the rule, the determinations and compliance schedules Waco maintains are required in order to authorize this dairy only apply when a state is authorizing a "new source" or "new discharger." If the facility is not a "new source" or "new discharger" then 40 CFR § 122.4(i) does not apply.

TCEQ established rules to implement the TMDL I-Plan and Waco makes no argument in the RFR that the draft permit is not consistent with those rules, but that what the ED is proposing does not go far enough to protect water quality. TCEQ rules and permit requirements are consistent with or more stringent than the federal rules and national guidance. TCEQ has performed TMDL evaluations sufficient to satisfy federal requirements and to justify implementing the new CAFO

regulations. The draft permit is consistent with the Bosque TMDL, TMDL I-Plan, and CAFO rules in 30 TAC, Chapter 321.

Also, as previously noted, EPA submitted a "no objection" letter to TCEQ on the draft permit on September 25, 2007. *See* Attachment F.

3. Whether the draft permit is in compliance with the Total Maximum Daily Load (TMDL) and TMDL implementation plan (TMDL I-Plan) for the North Bosque River. (RTC #3)

Waco contends that issuing the draft permit undermines the following key modeling assumptions for the TMDLs for phosphorus on Segments 1226 and 1255 of the North Bosque River and thus, is not in compliance with the TMDL or TMDL I-Plan.

A) 40,450 dairy cows in the watershed;
B) 50% of solid manure from 40,450 dairy cows would be removed from the watershed;
C) Phosphorus in the diet of permitted cows would be limited to 0.4%; and
D) Waste application rates would be limited to the phosphorus needs of the crop.

A) Cows in the Watershed. (Corresponds to RTC Response #3A)

As stated in the RTC, The North Bosque River TMDL for phosphorus is based on narrative water quality criteria and uses best management practices (BMPs) to protect water quality. The TMDL does not limit the number of dairy cows in the watershed. However, the CAFO permits that are issued in the North Bosque watershed must be consistent with the TMDL.

The Applicant will be required to construct RCSs that are designed to hold a 25-year, 10-day rainfall event. This will increase the retention control structure (RCS) capacity by approximately 60% over the previous standard that applied in earlier versions of the CAFO rules. It is also anticipated that phosphorus loading will be reduced in the North Bosque River due to the emphasis the new CAFO rules place on phosphorus levels in soil application areas.

An adaptive management approach is an appropriate means to manage phosphorus loading in the Bosque. The TMDL I-Plan emphasized this approach to achieve the phosphorus reductions targeted in the TMDL. The CAFO rules in 30 TAC Chapter 321 reflect the necessary adjustments to management practices necessary to, over time, reach the TMDL in-stream water quality goals. Accordingly, the TMDL is not directly tied to the number of animals permitted in the watershed. It is instead tied to BMPs, including the land application of the nutrients, consistent with management practices that ensure appropriate utilization by the crops.

The model used in the TMDL demonstrated that water quality conditions would improve significantly even with many more dairy cattle in the watershed provided that management practices were improved. The new CAFO rules incorporated more stringent BMPs in the watershed in order

to address phosphorus loading. Regardless of the number of dairy cattle, the in-stream water quality goals remain as they were established in the TMDL.

The TMDL I-Plan recognizes that new dairies may begin operating or existing dairies may expand in the watershed.[4] New or expanding operations are required to meet all the new management practices found in the Chapter 321, Subchapter B CAFO rules, which were approved by EPA as meeting all federal requirements for the protection of water quality. The focus of the rules was to reduce nutrient loading by requiring BMPs designed to significantly decrease the potential for discharges. Special provisions were designed and adopted to specifically address the TMDL requirements to reduce phosphorus loadings. These special provisions, applicable to the North Bosque watershed, were not in the previous version of the CAFO rules. The operational and management strategies in the rules and draft permit are designed to reduce nutrient loading and be consistent with the North Bosque River TMDL.

B) 50% Removal of Solid Manure from the Watershed. (Corresponds to RTC Response #3B)

Waco continues to equate the removal of 50% of the solid manure from the watershed as a requirement rather than a goal. 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, not by capping the number of head or acres of land. Neither the TCEQ rules nor the TMDL I-Plan requires a 50% haul-out of collectible manure. New or existing CAFOs who seek to add head in the watershed are given five options for dealing with 100% of the collectible manure. The options are found in TWC § 26.503(b)(2) and are:

(A) Disposed of or used outside of the watershed;
(B) Delivered to a composting facility approved by the ED;
(C) Applied as directed by the commission to a waste application field owned or controlled by the owner of the CAFO if the field is not a historical waste application field;
(D) Put to another beneficial use approved by the ED; or
(E) Applied to a historical waste application field that is owned or operated by the owner or operator of the CAFO only if:
  (i) Results of representative composite soil sampling conducted at the waste application field and filed with the commission show that the waste application field contains 200 or fewer ppm of extractable phosphorus; or
  (ii) The manure is applied with commission approval, in accordance with a detailed nutrient utilization plan approved by the commission that is developed by:

4 See "An Implementation Plan for Soluble Reactive Phosphorus in the North Bosque Watershed," December, 2002, page 26: "New or expanding dairy CAFOs will be required to demonstrate through the application process that they will operate under the nutrient management practices as stipulated in Chapter 321 rules pertinent to a major sole source impairment zone." (Emphasis added.)

(a) An employee of the United States Department of Agriculture's Natural Resources Conservation Service;
(b) A nutrient management specialist certified by the United States Department of Agriculture's Natural Resources Conservation Service;
(c) The State Soil and Water Conversation Board;
(d) The Texas Agricultural Extension Service;
(e) An agronomist or soil scientist on the full-time staff of an accredited university located in the state; or

(f) A professional agronomist or soil scientist certified by the American Society of Agronomy.

The NMP submitted with the application reflects that the present intent of the Applicant is to route manure off-site. However, the other disposal methods allowed by TWC § 26.503(b)(2) remain available to the Applicant, subject to modification of their NMP.

C) Phosphorus Limit in Diet to 0.4%. (Corresponds to RTC Response #3C)

The TMDL I-Plan states that dairy operators will receive training related to diet control but does not mandate lower phosphorus content in feed. There is no TCEQ rule related to requiring reduced phosphorus content in feed rations. The nutrient content in the annual wastewater and manure samples should reflect the Applicant's efforts to lower phosphorus content in feed rations if the Applicant pursues this BMP in an effort to manage nutrients.

The Applicant is required to implement a comprehensive nutrient management plan (CNMP) and one aspect of that planning process is the consideration for reduced phosphorus in the feed. The Applicant may consider the nutritional needs of his herd in implementing a CNMP.

D) Application Limited to the Phosphorus Needs of the Crop. (Corresponds to RTC Response #3E)

As noted in the RTC, the model used for the TMDL simulated land application rates at the "phosphorus agronomic rate" recommended by U.S. Department of Agriculture and others. Recommended agronomic rates account for some soil storage of phosphorus and may not be identical to the crop phosphorus "need only" application rate. The NMP provided by the Applicant addresses application limitations based on the agronomic needs of the crop. If phosphorus levels rise beyond 200 ppm on LMUs, a NUP must be implemented that will require phosphorus application based on crop removal levels, rather than on the agronomic needs of the crop. This is consistent with the TCEQ CAFO rules and the North Bosque TMDL.

4. Whether the ED failed to make a best professional judgment (BPJ) determination that the best conventional pollutant control technology (BCT) for the control of pathogens was used as required by 40 CFR § 125.3(d)(2). (RTC #6)

In the *Waterkeeper*[5] case decided in 2003, the 9th Circuit invalidated the BCT standard for pathogens because EPA did not make an affirmative finding that the BCT effluent limitation guidelines adopted in the federal CAFO rules do, in fact, represent the BCT for reducing pathogens. The court noted that it may well be the case that the effluent limitation guidelines adopted by EPA's CAFO rules, after consideration of the appropriate factors, will directly and not just indirectly reduce pathogens, but that EPA must say so explicitly. To date, EPA has not promulgated new effluent limitation guidelines for pathogens or affirmed that the previous guidelines would reduce pathogens. Without effluent limitation guidelines for pathogens, a BPJ determination as contemplated by 40 CFR § 125.3(d)(2) cannot be made.

However, to the extent 40 CFR § 125.3(d)(2) can be followed, absent any additional effluent limitation guidelines, the ED believes the draft permit meets the requirements of 40 CFR § 125.3 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 obtain and protect designated uses. The management measures for controlling phosphorus loading will also have a 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 are directed at reducing and minimizing all pollutants, including pathogens and bacteria, that are potential constituents of animal wastes. These provisions 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 P-Index approach reduces allowable application of nutrients to levels that are appropriate for reducing and minimizing all pollutants that are constituents of animal wastes.

5. Whether third party fields should be considered land management units. (RTC #7)

As noted in the RTC, the statute and rules make a clear distinction between LMUs and third party fields. TWC § 26.503 provides for disposal practices for dairy CAFOs, which include allowing

5 *Waterkeeper Alliance, Inc. v. Environmental Protection Agency*, 399 F.3rd 486 (2nd Cir. 2005).

manure to be put to other beneficial uses, such as land application on third party fields. 30 TAC § 321.42(j)(3) was specifically worded to reflect that "LMUs are not associated with third party fields."[6] The CAFO operator does not control the third party fields under contract with the CAFO. Application on third party fields is optional and represents "excess capacity to provide for more sound waste management by existing dairy CAFOs."[7] Even though an applicant does not control third party fields, the rules provide that an applicant is responsible for any non-compliance with the permit or TCEQ rules on such fields. Third party fields also have a 200 ppm cap on phosphorus. Once a third party field is found to contain soil phosphorus concentrations in excess of 200 ppm, land application must cease.

Additionally, rates of application are set based on annual soil test levels as long as they are below 200 ppm. The ED requires the North Bosque dairies to submit their NMPs with their permit application. In this case, the Applicant's NMP was technically reviewed and available to the public for review during the public comment period.

6. Whether the ED must evaluate each of the following plans prior to permitting and make them available to the public throughout the public comment period due to the holding in the *Waterkeeper*[8] case: comprehensive nutrient management plans (CNMPs), nutrient utilization plans (NUPs), RCS management plans, and pollution prevention plans (PPPs). (RTC #8)

The *Waterkeeper* holding found that NMPs were the equivalent of effluent limitations in CAFO permitting and that NMPs should be incorporated into CAFO permits as if they were effluent limitations. The ED is requiring all North Bosque dairies to submit their NMP with their permit application and the NMPs are technically reviewed and available to the public during the public comment period. EPA has established nine critical elements to be considered as part of the NMP. Included with the permit application is a table that lists the nine elements and the location of those elements in the file reviewed by the ED and made available to the public.

A CNMP is not required by the Clean Water Act and is not addressed in the *Waterkeeper* case. TCEQ rules at 30 TAC § 321.42(s) require all dairy CAFOs in a major sole-source impairment zone to operate under a CNMP approved by the Texas State Soil and Water Conservation Board. Bosque dairy permits required implementation of the CNMP by December 31, 2006, and the Applicant is required to maintain a copy of the CNMP as part of their PPP. However, the rules do not require the submission of the CNMP to TCEQ and the review of that document is not part of the CAFO permitting process. Furthermore, the CNMPs are confidential under state law as part of the local soil and water conservation district's files, unless the Applicant chooses to make the information available to the public. *See* Texas Agriculture Code § 201.006. However, most of the

6 29 TexReg 6652, 6658 (July 9, 2004).

7 *Id.* at 6692.

8 *Waterkeeper Alliance, Inc. v. Environmental Protection Agency*, 399 F.3rd 486 (2nd Cir. 2005).

information contained in the CNMP is part of the permit technical information packet and available in that form to the public.

NUPs are NMPs that utilizes a crop removal application rate. However, NUPs are not required until annual testing of LMUs indicates soil phosphorus levels in excess of 200 ppm. Based on statutes and rules, the NUP is not considered part of the permit, but may be changed to address changing conditions. TWC § 26.504 requires testing every 12 months to determine whether phosphorus levels exceed 200 ppm. Reaching the 200 ppm level triggers the requirement to develop and implement a NUP. TWC § 26.504(c) states "the operator shall file with the commission a new or amended nutrient utilization plan with a phosphorus reduction component. . . ." The statute does not require the NUP to be a part of the permit or permit application. 30 TAC § 321.40 tracks the statute, but also states that land application can begin under a NUP 30 days after the NUP is filed with the ED, unless the ED has returned the NUP for not meeting rule requirements. This requirement is also an indication that the NUP is not intended to be part of the permit.

The draft permit and CAFO rules at 30 TAC § 321.42(g) require that the Applicant implement an RCS management plan and maintain a copy in the PPP. TCEQ rules do not require review of RCS management plans prior to issuing the permit. The RCS management plan must establish expected end of the month water storage volumes for each RCS. These maximum levels are based on the design assumptions used to determine the required size of the RCSs. This plan assures that the Applicant will maintain wastewater volumes within the design capacity of the structures. The Applicant must document and provide an explanation for all occasions when 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 or discharge during smaller rainfall events. This has resulted in an increased operating volume in the RCSs at the dairy. The operating volume in RCS #1 would be 49.24 acre-feet. The operating volume for RCS #2 would be 18.14 acre-feet and 9.40 acre-feet for RCS #3. Until the actual expansion of the RCS system is completed and volumes certified, the RCS management plan cannot be completed and implemented.

The draft permit lists the requirements for what to include in the PPP. A permittee is required to have documentation for all of the following as part of their PPP: Copy of the CNMP, NMP, NUP (if required), RCS liner certifications, the RCS operation and management plan; and the capacity of each RCS, as certified by a licensed Texas professional engineer. The draft permit would specifically allow the Applicant to amend the PPP and lists specific instances when it must be amended. One of those instances being within 90 days of receiving written notification from the ED that the plan does not meet permit requirements.

The PPP is not part of the permit review process, but the information contained in the application, technical information packet, and the NMP make up the core content of the PPP. The other items contained in the PPP are not subject to TCEQ review except during site investigations.

7. Additional information submitted in Waco's RFR.

Waco's filing included an affidavit from Bruce Wiland, P.E., a consulting expert, who states that his opinions are based on his professional experience and review of studies related to nutrient loading in the North Bosque. His opinion on the Broumley Dairy as expressed in the affidavit is as follows:

> If the problems with the draft permit and incorporated application for Broumley Dairy that are identified in Waco's public comment letter are not addressed, corrected, and remedied to any greater extent than described today in the Executive Director's Response to Comments, Lake Waco will be adversely affected by the issuance of the proposed permit to Broumley Dairy and its authorized increase in herd size from 990 to 1499 cows, in that the amounts of phosphorus and pathogens transported from Broumley Dairy and its waste application fields (including third party fields) down the North Bosque River to Lake Waco will increase.

Also, regarding the distance from the dairy to Lake Waco, Mr. Wiland's affidavit expresses his opinion that:

> The distance of Broumley Dairy from Lake Waco does not eliminate these adverse effects because the primary mechanism for transport of these pollutants to Lake Waco is the very heavy rainstorms that occur in the North Bosque River watershed, and that wash the phosphorus and bacteria off the fields on which dairy waste and wastewater are applied, and that can transport these pollutants to Lake Waco in anywhere from a matter of hours to a few days.

Waco attached to their RFR a number of the documents that Mr. Wiland states in his affidavit that he reviewed in reaching his conclusions regarding the impact of issuing the draft permit to the Broumley Dairy. The documents all relate to the nutrient issue in the North Bosque watershed, the causes, the contributors, etc.

The ED does not dispute there is an issue with nutrients in the North Bosque watershed. That conclusion is supported by the exhibits to Waco's RFR. However, neither Mr. Wiland, in his affidavit, or Waco, in their RFR, cite any specific reference from those documents that support Mr. Wiland's conclusions that the issuance of *this* permit to *this* dairy will have *any* impact on the cumulative nutrient issue in the North Bosque watershed. In fact, the ED did not find *any* reference to this specific dairy operation in *any* of the hundreds of pages of reports and studies Waco included with their RFR. Without evidence specific to this dairy, Mr. Wiland's legal conclusions regarding the impact of the operation of the Broumley Dairy on the North Bosque watershed have no evidentiary basis and are, therefore, not legally supportable.

For the reasons indicated in the discussion of #1-#7 of the RFR, the ED has not identified any new issues or new information that would cause him to change his recommendation regarding issuing the draft permit. Therefore, the ED recommends denial of the RFR.

VII. 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 contested case hearing on this matter of nine months from the preliminary hearing to the presentation of a proposal for decision before the commission.

VIII. Executive Director's Recommendation

The ED recommends the following actions by the Commission:

1. Find that Waco is not an affected person and deny the hearing request because the dairy is located approximately 82 upstream miles from Waco's surface water intake for their drinking water. Due to distance, assimilation and dilution should occur long before any discharge from this dairy reach Waco's drink water intakes. Therefore, a discharge from this particular dairy is unlikely to impact the health and safety of persons who drink Waco's water or to impact the use of the waters of Lake Waco.

2. If the Commission finds that Waco is an affected person, deny the hearing request because Waco has only raised issues of law and there are no issues of fact referable to SOAH for a CCH.

3. Deny the RFR because Waco does not raise any new issues or present any new information that would cause the ED to change his recommendation regarding this permit application.

4. Should the Commission determine a CCH should be held, the ED recommends a hearing duration of nine months from the date of the preliminary hearing to when the Administrative Law Judge issues a proposal for decision.

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

P.O. Box 13087, MC-173
Austin, Texas 78711-3087
(512) 239-5600
(512) 239-0606 (Fax)

CERTIFICATE OF SERVICE

I hereby certify that on August 15, 2008 the original and eleven true and correct copies of the "Executive Director's Response to Hearing Request" relating to the application of Jim Broumley and Keith Broumley dba Broumley Dairy for Permit No. WQ0003395000 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.

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

MAILING LIST
FOR PERMIT NO. WQ0003395000
Jim Broumley and Keith Broumley dba Broumley Dairy

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Attachment

H

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

October 30, 2007

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (7007 0710 0002 1385 5352)

Mr. Charles Maguire, Manager
Water Quality Assessment and Standards Section (MC-150)
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
2007 NOV -7 AM 8:10
CHIEF CLERKS OFFICE

Re: No Objection
TPDES Permit No. TX0126471
Texas State Permit No. 03675
Peter Henry Schouten
Hico, TX 76457

Dear Mr. Maguire:

Thank you for the opportunity to review the draft proposed permit transmitted in the letter from your office to Ms. Evelyn Rosborough (EPA) dated September 13, 2007, and received on September 19, 2007. As a result of our review, we conclude that the draft proposed permit appears to conform to the guidelines and requirements of the Clean Water Act. Therefore, EPA has no objection to this draft permit.

Thank you for your cooperation. If I may be of assistance in helping your office achieve its permitting goals, please call me at 214-665-7170 or have your staff contact Kilty Baskin at VOICE:214-665-7500, FAX:214-665-2191, or EMAIL:baskin.kilty@epa.gov.

Sincerely yours,

SIGNED BY

Claudia V. Hosch
Chief
NPDES Permits and TMDL Branch

cc: Mr. James M. Moore, P.E., CAFO Team
Water Quality Assessment Section (MC 150)
TCEQ

Mr. Chris Linendoll, Manager
Wastewater Permitting Section (MC 148)
TCEQ