

DOCKET NUMBER 2008-0427-AGR

APPLICATION BY JIM 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

TEXAS  
COMMISSION  
ON  
ENVIRONMENTAL  
QUALITY  
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CHIEF CLERK'S OFFICE

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."<sup>1</sup> 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."<sup>2</sup> 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*<sup>3</sup> 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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<sup>3</sup> *Waterkeeper Alliance, Inc. v. Environmental Protection Agency*, 399 F.3<sup>rd</sup> 486 (2<sup>nd</sup> 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.<sup>4</sup> 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:

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<sup>4</sup> 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 Conservation 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*<sup>5</sup> case decided in 2003, the 9<sup>th</sup> 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

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<sup>5</sup> *Waterkeeper Alliance, Inc. v. Environmental Protection Agency*, 399 F.3<sup>rd</sup> 486 (2<sup>nd</sup> 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.”<sup>6</sup> 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.”<sup>7</sup> 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*<sup>8</sup> 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

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

7 *Id.* at 6692.

8 *Waterkeeper Alliance, Inc. v. Environmental Protection Agency*, 399 F.3<sup>rd</sup> 486 (2<sup>nd</sup> 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  
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.



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

CHIEF CLERKS OFFICE

2008 AUG 15 PM 3:55

TEXAS  
COMMISSION  
ON ENVIRONMENTAL  
QUALITY

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

FOR THE APPLICANT:

Rick Webb  
Enviro-Ag Engineering, Inc.  
19677 US Highway 377  
Dublin, Texas 76446

Norm Mullin  
Enviro-Ag Engineering, Inc.  
3404 Airway Boulevard  
Amarillo, Texas 79118-1538  
Fax: (806) 353-4132

FOR THE EXECUTIVE DIRECTOR:

Robert Brush  
Texas Commission on Environmental Quality  
Environmental Law Division MC-173  
P.O. Box 13087  
Austin, Texas 78711-3087

Charles Maguire  
James Moore  
Texas Commission on Environmental Quality  
Wastewater Permits Section, MC-150  
P.O. Box 13087  
Austin, Texas 78711-3087

FOR OFFICE OF PUBLIC ASSISTANCE:

Bridget Bohac  
Texas Commission on Environmental Quality  
Office of Public Assistance MC-108  
P.O. Box 13087  
Austin, Texas 78711-3087

FOR THE CHIEF CLERK:

LaDonna Castañuela  
Texas Commission on Environmental Quality  
Office of Chief Clerk MC-105  
P.O. Box 13087  
Austin, Texas 78711-3087

FOR ALTERNATIVE DISPUTE RESOLUTION

Kyle Lucas  
Texas Commission on Environmental Quality  
Alternative Dispute Resolution, MC-222  
P.O. Box 13087  
Austin, Texas 78711-3087

OFFICE OF PUBLIC INTEREST COUNCIL

Christina Mann  
Texas Commission on Environmental Quality  
Office of Public Interest, MC-103  
P.O. Box 13087  
Austin, Texas 78711-3087  
Fax: (512) 239-6377

FOR THE REQUESTOR

Kerry L. Halliburton  
Naman, Howell, Smith & Lee, LLP  
P.O. Box 1470  
Waco, Texas 76703-1470  
Fax: (254) 754-6331

# ATTACHMENT

A

# Broumley Dairy

Protecting Texas by  
Reducing and  
Preventing Pollution



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

April 30, 2008

0 2.5 5 10 Miles  
Projection: Texas Statewide Mapping System  
(TSMS)  
Scale 1:460,000

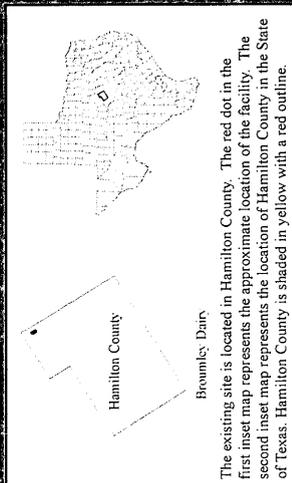
## Legend

- Water Intake
- Facility Boundary
- City
- Major River
- County Boundary

Source: This map was requested by TCEQ's Office of Legal Services (OLS). The location of the facility was provided by OLS. The property boundaries depicted were manually digitized and approximated (survey data not available) using paper maps provided by OLS. Hearing Requestor addresses (if shown) were provided by OLS and geocoded using Tele Atlas Streets 2006-2007 geodatabase technology. Un-matched addresses are manually plotted based on Google Maps and Map Quest Internet site locators. PO Boxes cannot be located and are not plotted.

The DOQQ (Digital Orthophoto Quarter Quadrangle) aerial imagery was obtained from the USDA Farm Service Agency's National Agriculture Imagery Program (NAIP). The 2004 imagery is color infrared (CIR) at one-meter resolution.

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



# ATTACHMENT

B

## FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Permit No.: WQ0003395000

Owner: Jim Broumley and Keith Broumley

Regulated Activity: Concentrated Animal Feeding Operation; Dairy

Type of Application: Major Amendment

Request: Air & 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; Section 382.051 of the Texas Clean Air Act 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 Registration No. WQ0003395000 for a Concentrated Animal Feeding Operation (CAFO) to authorize the permittee to expand an existing dairy facility from 990 head to a maximum of 1,499 head of which 1,100 head are milking, with no increase in waste production from the previous permit by changing to the smaller Jersey cow breed. The authorization type is being converted from a Registration to an Individual Permit, as required by 30 Texas Administrative Code Chapter 321, Subchapter B.

### **III. PROJECT DESCRIPTION AND LOCATION**

Maximum Capacity: 1,499 total head of which 1,100 head are milking (Jersey cows).  
Land Management Units (LMUs) (acres): LMU#1- 8, LMU#1a - 51, LMU#2- 27.5, LMU#3- 12, LMU#4 - 70, LMU#5 - 32, LMU#6 - 29

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

The digester system and RCS #1 act in-series.

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	23.72	4.52	0	12.88	8.13	49.24
RCS #2	1.86	8.13	0	1.67	8.14	19.81
RCS #3	7.72	0	0	0.51	1.18	9.40

The volume allocations are determined using Natural Resource Conservation Service standards, Midwest Plan Service (Iowa State University) standards, and/or site specific data submitted in the permit application.

The Design Rainfall Event is the volume of runoff from the 25-year, 10-day storm event. The RCS is required to include adequate capacity to contain this amount of runoff as a margin of safety to protect against discharges during rainfall events that may exceed the average monthly values used to design the 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 RCS 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 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 the RCSs. 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 30 day period or greater.

The covered anaerobic digester system installed at this facility meets the minimum treatment volume requirements under 30 TAC, §321.43(j)(3)(B)(iii), thus no treatment volumes are included in the RCS sizing requirements.

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 from 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 all RCSs. Design sludge volumes in this permit reflect 5 year accumulation for RCSs 1 and 3. Since RCS 2 functions as an irrigation/surge pond and receives no runoff, sludge accumulation is considered negligible.

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 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. Latitude: 31° 58' 11"N Longitude: 98° 00' 03"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 authorization type is being converted from a Registration to an Individual Permit, as required by 30 Texas Administrative Code Chapter 321, Subchapter B. The permittee is requesting to increase from 990 head to 1499 head of which 1,100 head are milking, and a reduction of the land application acreage from 434 acres to 229.5 acres. The proposed permit requires an increase in RCS capacity from 45.63 acre-feet to 78.45 acre-feet

to accommodate the required margin of safety. Furthermore, land application of wastewater must be in accordance with a phosphorus based 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 990 head to 1499 head, with no increase in waste production from the previous permit by changing to the smaller Jersey cow breed, 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 (12.2 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 30.1 (includes process water and water balance figures) 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 all RCSs 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 all RCSs be measured at least annually beginning in year three of the permit.
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 LMU. The proposed permit requires a nutrient management plan to be implemented upon issuance of this permit. This plan involves a site specific evaluation of the land management unit to include soils, crops, nutrient needs and includes the phosphorus index tool. The phosphorus index is a site specific evaluation of the risk potential for phosphorus movement into watercourses. The risk potential is determined by site characteristics such as soil phosphorus level, proposed phosphorus application rate, application method and timing, proximity of the nearest field edge to a named stream or lake, 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. The nutrient need is based on the most

limiting nutrient which is phosphorus; thus a phosphorus application rate will be established for each individual LMU. This proposed permit requires 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 manure and sludge management).

This plan determines the application rate based on phosphorus, whereas the previous land application rates were based on the nitrogen requirement of the crop. In general, when calculating the application rate for coastal bermuda grass, if all variables remain unchanged except the crop nutrient requirement, the phosphorus application rate will be approximately 40% less than the nitrogen application rate. This reduced application rate will lower the potential for land applied nutrients to enter surface water and increase the amount of excess waste to be managed off-site. 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 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. The permittee has voluntarily agreed to only land apply wastewater to permitted LMUs at this CAFO. All generated manure and sludge will be composted on-site within the drainage area of the RCSs. Finished compost may be used on-site as animal bedding, but will not be land applied on-site. Any excess compost and any uncomposted manure or sludge must be delivered to a composting facility authorized by the executive directory, delivered to a permitted landfill, beneficially used by land application to land located outside of the major sole source impairment zone, or provided to operators of third-party fields for beneficial use subject to specified land application requirements and testing. By requiring specific outlets for manure and sludge, this permit provision limits unregulated use of manure within the watershed. Offsite use requires additional record-keeping to document how manure and sludge are used and provides a mechanism to track each permittee's contribution toward the

50% voluntary removal goal in the Bosque River Total Maximum Daily Load (TMDL).

4. Additional conservation practices have been imposed on LMUs adjacent to water in the state. These conservation practices include a 100 foot vegetative buffer, filter strips, vegetative barrier, and/or contour buffer strips. Site specific conditions and NRCS practice standards specify which conservation practices, in addition to the required 100 foot vegetative buffer, must be implemented. The conservation practices reduce erosion, suspended solids and nutrients in runoff from LMUs. This will improve the quality of stormwater runoff prior to entering water in the state.

The table below shows the additional conservation practices for this CAFO.

LMU#	Land Use	Vegetative Buffer setback (feet)	Additional Buffer Setback NRCS Code 393 Filter Strip flow length (feet)
1	Tifton Bermudagrass	100	24
1a	Tifton Bermudagrass	0	N/A
2	Coastal Bermudagrass	100	24
3	Coastal Bermudagrass	100	24
4	Hybrid Bermudagrass	100	24
5	Hybrid Bermudagrass	100	24
6	Common Bermudagrass	100	24

5. The table below illustrates numbers from the permittee's NMP to compare the crop requirement for Phosphorus versus the actual pounds applied. The plan is based on a goal of maintaining soil test P levels below 200 ppm, which results in a planned application amount, for all LMUs collectively, that is less than the maximum allowed under the East Texas Phosphorus Index. NMPs are routinely updated and the values shown below are subject to change. LMU 1 was reconfigured to create LMU 1 and LMU 1a. LMU 2 was reconfigured to create LMU 2 and LMU 3. Soil test phosphorus reported for the new LMUs are based on soil test results for the original LMU configuration during the previous year.

LMU #	Soil Test P (ppm)	Max Annual P2O5 (pounds/ac.)	Pounds Applied P2O5 (pounds/ac.)	Percentage of Maximum Allowable
1	178	207	66	32
1a	178	207	66	32
2	48	207	170	82
3	48	207	170	82
4	142	83	61	73
5	96	83	62	75
6	58	108	70	65

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 990 head to 1499 head, the conditions being proposed in this permit are anticipated to significantly reduce pollutants entering receiving waters. These reductions are from a combination of 1) changing the milk cow herd from Holstein to Jersey cows, which is a smaller breed that produces less waste; 2) operating the anaerobic digester system, which is expected to reduce the overall P concentration of the wastewater to be land applied; and 3) implementing on-site composting of manure, sludge and digester solids, which reduces the overall waste volume to be exported from the facility. These voluntary changes, along with the regulatory requirements limiting the potential for RCS overflows and better managing land application of nutrient to LMUs make it feasible to allow the increase in headcount. This permit requires all exported manure, sludge, and wastewater that cannot be land applied in accordance with the nutrient management plan to be exported from the facility (i.e. composting, landfill, outside of the watershed, or third-party fields). The wastewater generated by the facility is retained and managed in 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 RCS 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 or sludge to LMUs; voluntarily implementing efforts to reduce the amount of phosphorus in dairy cow diets; and removing significant quantities of dairy-generated manure from the watershed for the production of compost, beneficial use on crops, or disposal. The permit application includes a nutrient management plan, which allocates the amount of nutrients to each LMU based on cropping patterns. The proposed permit requires a nutrient management plan to be implemented upon issuance of the permit. All generated manure, sludge and excess wastewater must be delivered to a composting facility authorized by the executive director, 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. 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 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. The permittee must implement the nutrient management submitted with the permit application and all subsequent updates.

These nutrient plans determine the nutrient application rate based on phosphorus, whereas the current authorization allows land application rates based on the nitrogen requirement of the crop. In general, the phosphorus application rate will be approximately 40% less than the prior nitrogen based application rates. These reduced application rates, based on phosphorus requirement of the crop or crop removal rates, will lower the potential for land applied nutrients to enter surface water and increase the amount of excess waste 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 increments from the bottom of the RCS to the top of the embankment or spillway,
3. a RCS management plan detailing procedures for proper operation and management of wastewater levels based on design and assumptions of monthly expected operating levels,
4. daily monitoring records of wastewater levels,
5. notification of discharges within one hour,
6. discharge sample analyses 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 is being from retention facilities." Although not directly quantifiable, it is expected that a significant phosphorus load reduction will occur as a result of these enhanced design standards. Not only will the increased capacity requirements result in load reductions, but the additional operation, maintenance, recordkeeping and reporting requirements will aid in achieving the water quality target for the North Bosque River.

The TMDL Implementation Plan includes a recommendation that the CAFO rule making consider whether additional limitations or requirements are needed for runoff control and whether additional irrigation management is needed to prevent excessive runoff. In response, the proposed permit includes the requirement for a CNMP (mentioned above), and when required a 100-foot wide vegetative buffer plus a 24-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 application received on 1/27/2004 and subsequent revisions
2. TPDES Registration No. WQ0003395000 issued 5/15/03
3. Interoffice Memorandum from the Water Quality Assessment Team, Water Quality Assessment Section, Water Quality Division, 2/6/07
4. Interoffice Memorandum from the Water Quality Standards Team, Water Quality Assessment Section, Water Quality Division, dated 1/5/07
5. TCEQ rules

6. Bosque River TMDL Implementation Plan
7. NRCS Animal Waste Management Field Handbook, Nutrient Management Practice Standard Code 590, the Field Office Technical Guidance for Texas, and ASABE Standards
8. Environmental Protection Agency rules

Wastewater 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 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 RCS in accordance with the individual permit, relating to imminent overflow.

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

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

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

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

3. dilution of the effluent in the receiving water.

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

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

1. The approved recharge feature certification dated December 8, 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
By: Bunyan	Flooding	No land application during periods of inundation
ReD: Real-Doss complex	Depth to Bedrock, Droughty	Land application not to exceed agronomic rates and soil infiltration rates. Maintain cover crop in LMUs

Soils in the slope range indicated in the recharge feature evaluation have been identified by the NRCS as highly erodible land (HEL). If erosion is detected, the LMUs will be protected with the following NRCS conservation farming practices:

1. Maintenance of perennial vegetation
2. Seeding/Sprigging of exposed areas
3. Rip-rap, vegetation or proper maintenance practices for all berms
4. Construction of terraces and berms: and
5. Covering erosive areas with road surfacing materials

The USGS topographic map of the area shows the Bosque River located along the western and southern property boundaries, and an intermittent tributary bisecting the property. These areas will be protected by buffer zones and filter strips as indicated in the map for the land application areas.

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	Additional BMPs*
2	Producing	Additional BMPs*
3	Producing	Additional BMPs*
4	Producing	Additional BMPs*
5	Abandoned	150 ft buffer
Off Site 1	Unkown	> 150 ft from LMU
Off Site 2	Unkown	> 150 ft from LMU

\*Additional BMPs include wellhead enclosed in buildings and surface gradient sloping away from the wellhead.

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. The data in the following table is for existing RCSs. The RCSs in the application will be renumbered and modified.

RCS No.	Construction Date	Liner Certification Date
1	Approximately 1997	September 25, 1997
2	Approximately 1997	September 25, 1997
3	Approximately 1999	November 22, 1999
4	Approximately 2001	May 22, 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.
4. New and 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 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 depth, the

permittee must submit a nutrient utilization plan based on crop removal. At the discretion of the certified nutrient management specialist, the nutrient utilization plan may also include a phosphorus reduction component. This nutrient utilization plan must be submitted to the TCEQ for review and approval. The nutrient utilization plan is a revised nutrient management plan developed utilizing the same NRCS 590 Practice Standard tool to evaluate the site specific elements in the LMU such as slope and distance to water courses, the rates, methods, schedules of wastewater 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 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 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 judgement.

40 Code of Federal Regulations §122.42(e)(1) specifies that a nutrient management plan must be developed and implemented by July 31, 2007. 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 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 that have been

identified in the PPP. The permittee must have a contract with the operator of the third-party fields. The written contract must require all transferred manure, 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 equal to or 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.

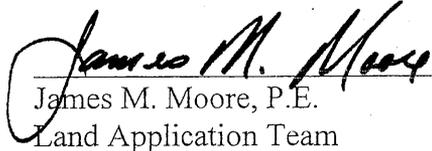
If the Executive Director calls a public meeting or the Commission grants a contested case hearing as described above, the Commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the Commission will consider all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

Fact Sheet and Executive Director's Preliminary Decision

Jim Broumley and Keith Broumley

TPDES Permit No. WQ0003395000

For additional information about this application, contact James Moore at 512-239-0171.

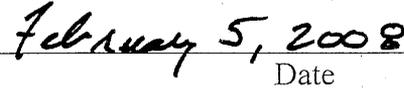
  
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James M. Moore, P.E.

Land Application Team

Water Quality Assessment and Standards Section

Water Quality Division

  
\_\_\_\_\_

Date

## Attachment 1

	Existing Authorization #3395 issued 5/15/03	Proposed permit
Head Count	990 (Holstein)	1499 (Jersey)
Animal Weight	1,400 pounds average	950 pounds average
Manure Production	3,614 ton per year (dry)	3,613 ton per year (dry)
RCS Required Capacity (acre-feet)	17.36	78.45
RCS Actual Capacity (acre-feet)	45.63	TBD
additional capacity (acre-feet)	28.27	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 RCS 1 and 3. 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	Prohibited in this permit
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 level exceeds 200 ppm	in accordance with a phosphorus based nutrient management plan, unless soil phosphorus levels exceed 200 ppm for wastewater only. Manure application is prohibited
phosphorus index risk assessment	not required	required
additional manure removed from the facility	unlimited options for final disposition	compost facility, landfill 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 (24 additional feet)
nighttime land application	allowed	prohibited between 12 am and 4 am

soil sampling	permittee collects annually	CNMS collects annually
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## Attachment 2

Permit Provision	Purpose
25 year/24 hour rainfall event to 25 year/10 day rainfall event	<ul style="list-style-type: none"> <li>• 60% increase to the storage capacity reserved for chronic rainfall</li> <li>• an additional portion of the structure above the 25 year/24 hour marker will also remain dry, except during chronic or catastrophic rainfall events</li> <li>• will reduce overflow frequency</li> </ul>
RCS management plan	<ul style="list-style-type: none"> <li>• predicts expected end of the month water storage volumes for each RCS</li> <li>• requires permittee to manage water level accordingly</li> <li>• requires permittee to maintain minimum wastewater volume</li> <li>• will reduce overflow frequency</li> </ul>
monitor and record RCS wastewater level daily	<ul style="list-style-type: none"> <li>• provides visual indication of compliance</li> </ul>
One foot increments on pond marker	<ul style="list-style-type: none"> <li>• identifies the level of wastewater storage to assist the permittee in the implementation of RCS management plan</li> <li>• enforcement tool</li> </ul>
maintain RCS sludge volume at or below designed sludge volume	<ul style="list-style-type: none"> <li>• requires sludge removal to maintain the required wastewater storage capacity</li> <li>• will reduce overflows associated with insufficient wastewater storage capacity</li> </ul>

<p>Land application prohibited 12 am to 4 am</p>	<ul style="list-style-type: none"> <li>• reduces the potential of irrigation related discharges associated with equipment malfunctions</li> </ul>
<p>Nutrient Management Plan (based on crop requirement rate)</p>	<ul style="list-style-type: none"> <li>• 40 % reduction in land application rate by going from N rate to P rate</li> <li>• establishes the annual application rate based on annual soil analyses, phosphorus index, and management practices used at the facility</li> <li>• based on NRCS Practice Standard 590</li> </ul>
<p>Nutrient Utilization Plan (based on crop removal rate)</p>	<ul style="list-style-type: none"> <li>• 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</li> </ul>
<p>CNMP</p>	<ul style="list-style-type: none"> <li>• whole farm mass balance of nutrients which considers all inputs, onsite use and treatment, outputs, and losses.</li> <li>• Inputs include animal feed, purchased animals, fertilizer</li> <li>• Outputs include animals sold, harvested crops removed from facility, and manure removed from the facility</li> <li>• Losses include volatilization, runoff, and leaching</li> </ul>
<p>Excess manure must go to compost, landfill, outside of watershed, or third-party fields</p>	<ul style="list-style-type: none"> <li>• limits unregulated use of manure within the watershed</li> <li>• offsite use incurs additional record-keeping to document how excess manure is used.</li> <li>• provides mechanism to track 50% voluntary removal goal in TMDL</li> </ul>
<p>chronic discharge determination</p>	<ul style="list-style-type: none"> <li>• discharges resulting from chronic conditions are more closely scrutinized by TCEQ Regional Office</li> <li>• validates chronic conditions claim</li> </ul>

	<ul style="list-style-type: none"> <li>provides documentation to TCEQ for enforcement of unauthorized discharge</li> </ul>
soil sampling notification	<ul style="list-style-type: none"> <li>allows the TCEQ to observe sample collection and/or obtain split samples for duplicate analysis</li> <li>assures data collected is credible to support application rates in nutrient management plan</li> </ul>
soil sampling by technical service provider	<ul style="list-style-type: none"> <li>ensures that samples are collected by unbiased individuals who are knowledgeable about soil sampling techniques and sample preservation</li> </ul>
Conservation Practices for LMUs adjacent to water of the state (100 foot vegetative buffer, filter strips, vegetative barrier, contour buffer strips)	<ul style="list-style-type: none"> <li>reduce erosion, suspended solids and nutrients in runoff from LMUs.</li> <li>site specific conditions and NRCS practice standards specifies which Conservation Practices must be implemented</li> </ul>

# ATTACHMENT

C



TPDES Permit No. WQ0003395000  
This Permit supersedes and replaces Registration  
No. WQ0003395000 issued on May 15, 2003.  
[For TCEQ use only EPA ID No. TX0121720]

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

TPDES PERMIT FOR CONCENTRATED ANIMAL FEEDING OPERATIONS

under provisions of  
Section 402 of the Clean Water Act  
Chapter 26 of the Texas Water Code and  
Section 382.051 of the Texas Clean Air Act

- I. Permittee:
- |                  |  |
|------------------|--|
| A. Owner         | Jim Broumley and Keith Broumley          |
| B. Business Name | Broumley Dairy                           |
| C. Operator      | Keith Broumley                           |
| D. Owner Address | 360 County Road 240<br>Hico, Texas 76401 |
- II. Type of Permit: Major Amendment, Air & Water Quality
- III. Nature of Business Producing Waste: Concentrated Animal Feeding Operation (CAFO); Dairy; SIC No. 0241
- IV. General Description and Location of Waste Disposal System:
- Maximum Capacity: 1,499 total head of which 1,100 are milking (Jersey cows)  
Site Plan: See Attachment A.  
Retention Control Structures (RCS) total required capacities without freeboard (acre-feet):  
RCS #1-49.24, RCS #2-19.81, RCS #3-9.40; RCS #1 acts in-series with the anaerobic digester system.  
Land Management Units (LMUs) (acres): LMU#1-8, LMU#1a-51, LMU#2-27.5, LMU#3-12, LMU#4-70, LMU#5-32, LMU#6-29; See Attachment B for locations.  
Location: 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. Latitude: 31° 58' 11"N Longitude: 98° 00' 03"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:

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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.** The permittee shall comply with the requirements listed in Section VII.D. of this permit and shall:

1. maintain the cover of the main digester cell to capture odors in lieu of the minimum treatment capacity volume in an RCS;
2. identify the maximum sludge volume on the permanent pond marker in RCS #1, and RCS #3; and
3. maintain a copy of the odor control plan in the Pollution Prevention Plan.

**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; areas used for composting; RCSs or other control facilities; LMUs 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.
  - (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 December 8, 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 <sub>5</sub>	Grab	1/day <sup>1</sup>
Total Coliform	Grab	1/day <sup>1</sup>
Fecal Coliform	Grab	1/day <sup>1</sup>
Total Dissolved Solids (TDS)	Grab	1/day <sup>1</sup>
Total Suspended Solids (TSS)	Grab	1/day <sup>1</sup>
Nitrate (N)	Grab	1/day <sup>1</sup>
Total Phosphorus	Grab	1/day <sup>1</sup>
Ammonia Nitrogen	Grab	1/day <sup>1</sup>
Pesticides <sup>2</sup>	Grab	1/day <sup>1</sup>

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

<sup>2</sup> 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 RCSs and the anaerobic digester system (See Special Provision X.A) are certified by a licensed Texas Professional Engineer. 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 is complete, new capacity and liner certifications for RCSs 1 and 3 will be provided. Upon issuance of this permit, a new liner certification will be provided for the re-named RCS 2. The table below shows liner and current capacity certifications provided in the permit application. Liner certifications for new settling basins will be provided when construction is complete. RCS volume requirements in the existing authorization should be maintained until the design and construction of the modified RCSs have been completed and certified.

RCS	Construction date	Liner certification date	Volume
1	1997	1997	3.18
2	1997	1997	15.04
3	1999	1999	7.60
4	2001	2001	19.81

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

- (d) RCS Sizing.
- (1) The design plan must include documentation describing the sources of information, assumptions and calculations used in determining the appropriate volume capacity and structural features of 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 12.2 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. Beginning in year three (3) and annually thereafter, the sludge accumulation volume in RCSs 1 and 3 will be measured and recorded in the PPP.
- (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 RCS is considered to be designed with an embankment. The PPP shall include a description of the design specifications for the RCS embankments. The following design specifications are required for any structural modification of a 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 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 or a licensed Texas professional geoscientist as meeting a permeability equal to, or less than,  $1 \times 10^{-7}$  cm/sec over a thickness of 18 inches or its equivalency in other materials.

- (5) Spillway or Equivalent Protection. The modified RCSs, 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 during 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 RCS; or that any leakage from the RCS 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 RCS or that any leakage from the RCS 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  $1 \times 10^{-7}$  centimeters per second (cm/sec), 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 (see special provision X.K). 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 RCS, 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 RCS must be certified by a licensed professional Texas engineer as providing protection equivalent to the requirements of this permit.
5. Operation and Maintenance of RCS
- (a) RCS Operation and Maintenance
    - (1) The permittee must operate and maintain a margin of safety in the RCS to contain the volume of runoff and direct precipitation from the 25 year/10 day rainfall event.
    - (2) The permittee shall implement an RCS management plan incorporating the margin of safety developed by a licensed Texas professional engineer (See Special provision X.A.3). The management plan shall become a component of the PPP, shall be developed for the RCS 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 RCS consistent with the system design;
      - (iii) the appropriateness and priorities of any controls reflecting the identified sources of pollutants at the facility;
      - (iv) a stage/storage table for 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 RCS shall be maintained at or below the maximum operating level expected during that month, according to the design of the RCS. When rainfall volumes exceed average rainfall data used in design calculations planned end of month storage volumes may encroach into the design storm event storage provided that documentation is available to support that the design parameters have been exceeded and that the RCS is otherwise being managed according to the RCS Management Plan criteria. In circumstances where the RCS has a water level exceeding the expected end of the month depth, the permittee shall document in the PPP why the level of water in the structure is not at or below the expected depth. Also, if the water level in the RCS encroaches into the storage volume reserved for the design rainfall event, the permittee must document, in the PPP, the conditions that resulted in this occurrence. As soon as irrigation is feasible and not prohibited by Section VII.A.8.f. and g., the permittee shall irrigate until the RCS water level is at or below the maximum operating level expected during that month.
- (4) Imminent Overflow. If 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 RCS. If irrigation results in a discharge from the LMU, the permittee shall collect samples from the drainage pathway at the point of the discharge from the edge of the LMU where the discharge occurs, analyze the samples for the parameters listed in Section VII. A.2.(b), and provide the appropriate notifications as required by Section VIII.B of this permit and 30 TAC §321.44.
- (5) Permanent Pond Marker. The permittee shall install and maintain a permanent pond marker (measuring device) in each RCS, visible from the top of the levee to show the following:
- (i) the volume for the design rainfall event;
  - (ii) one-foot increments beginning from the bottom of the RCS to the top of the embankment or spillway; and
  - (iii) design volume levels for maximum sludge accumulation and

- operating volume (calculated process generated wastewater plus rainfall runoff minus evaporation) must be identifiable on the maker.
- (6) Rain Gauge. A rain gauge capable of measuring the design rainfall event shall be kept on site and properly maintained.
  - (7) Sludge Removal. The permittee shall monitor sludge accumulation and depth, based upon the design sludge storage volume in the RCS. Monitoring should be performed as necessary, but not less than annually for all RCSs beginning in year three (3) from the date of the permit issuance. Sludge shall be removed from the RCS in accordance with the design schedule for cleanout in the RCS management plan to prevent the accumulation of sludge from exceeding the designed sludge volume of the structure. Removal of sludge shall be conducted during favorable wind conditions that carry odors away from nearby receptors. 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;
    - (iii) beneficially utilized by land application to land located outside of the major sole source impairment zone;
    - (iv) composted onsite but not land applied to LMUs;
    - (v) applied to 3<sup>rd</sup> party fields; or
    - (vi) put to another beneficial use approved by the executive director.
  - (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 an RCS will no longer be used and/or when the CAFO ceases or plans to cease operation. The closure plan shall be submitted to the appropriate regional office and the 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 an RCS must, at a minimum, be developed using standards contained in the NRCS Practice Standard Code 360 (Closures of Waste Impoundments), as amended, and using the guidelines contained in the Texas 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).
- (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.P 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 RCS and accounted for in the design calculations of an RCS.
  - (3) Manure or sludge stored for more than thirty (30) days must be stored within the drainage area of an 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 LMUs or an 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 shall be performed in accordance with 30 TAC Chapter 332 (relating to Composting). The permittee may compost waste generated on site, including manure, sludge, bedding, feed, and dead animals. The permittee may add agricultural products to provide an additional carbon source or bulking agent to aid in the composting process.

7. Well Protection Requirements.

- (a) The permittee shall not locate or operate a new 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 RCS located within the required well buffer zones provided they are in accordance with the facility's approved recharge feature evaluation and certification. Buffer zone variance documentation must be kept on-site and made available to TCEQ personnel upon request.

The table presented below lists the wells on this CAFO, their current status and the Best Management Practices used to protect groundwater.

Well (Map Number*)	Status	BMPs
1	Producing	Additional BMPs*
2	Producing	Additional BMPs*
3	Producing	Additional BMPs*
4	Producing	Additional BMPs*
5	Abandoned	150 ft buffer
Off Site 1	Unkown	> 150 ft from LMU
Off Site 2	Unkown	> 150 ft from LMU

\*Additional BMPs include wellhead enclosed in buildings and surface gradient sloping away from the wellhead.

## 8. Land Application

- (a) Nutrient Management Plan (NMP) Required. The certified NMP dated July 18, 2007 shall be implemented upon issuance of this permit. The plan shall be kept in the PPP and updated as appropriate or at a minimum annually 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 and updated in accordance with NRCS guidance.
- (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; 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.
  - (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 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 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. Vegetative buffers shall be maintained in accordance with NRCS Field Office Technical Guidance. The permittee shall not apply wastewater closer than 100 feet to any water in the state. Additionally, the permittee shall install and maintain a filter strip (according to NRCS Code 393) or vegetative barrier (according to NRCS Code 601), between the vegetative buffer and the land application area; and 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 filter strip or vegetative barrier. See Attachment B for map. See special provision X G. for specific buffers on each LMU.
  - (2) Water wells. The permittee shall comply with the well protection requirements listed in Section VII.A.7.
- (e) Exported 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 nitrogen application 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) 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 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 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 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) depth is greater than 150 ppm 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 annually 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 equal to or greater than 200 ppm or after becoming aware that the third-party operator is not following appropriate provisions of 30 TAC §321.36, §321.40 and/or the contract.
- (iii) The permittee will be subject to enforcement action for violations of the land application requirements on any third-party field under contract.
- (iv) The permittee shall submit records to the appropriate regional office quarterly that contain the name, locations, and amounts of 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 drainage of 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 manure, sludge or wastewater application to LMUs or 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

(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 RCS.

(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 manure 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 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 and appropriate updates;
  - (c) a copy of the comprehensive nutrient management plan, nutrient management plan, nutrient utilization plan, and appropriate updates 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 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 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.

**D. Air Standard Permit Requirements**

1. Air emission limitations.
  - (a) Facilities shall be operated in such a manner as to prevent the creation of a nuisance as defined by Texas Health and Safety Code, 30 TAC §§341.011 and 321.32(32), and as prohibited by 30 TAC §101.4. Facilities shall be operated in such a manner as to prevent a condition of air pollution as defined by Texas Health and Safety Code, 30 TAC §382.003(3).
  - (b) The permittee shall take necessary action to identify any nuisance condition that occurs. The permittee shall take action to abate any nuisance condition as soon as practicable or as specified by the executive director.
2. Wastewater treatment. The permittee shall design and operate RCSs to minimize odors in accordance with accepted engineering practices. Each system shall be operated in accordance with the design and an operation and maintenance plan that minimizes odors.
  - (a) Accepted engineering practices to minimize odors include anaerobic treatment lagoons, aerobic treatment lagoons, or other equivalent technology.
  - (b) Accepted design standards and requirements for each of these methods of treatment are:
    - (1) an anaerobic treatment lagoon shall be designed in accordance with American National Standards Institute/American Society of Agricultural Engineers EP403.3 July 1999 (or subsequent updates); NRCS Field Office Technical Guidance, Practice Standard 359, Waste Treatment Lagoon, or the equivalent for the control of odors. The primary lagoon in a multi-stage lagoon system shall be designed with a minimum treatment volume so that the lagoon maintains a constant level at all times unless prohibited by climatic conditions. A multi-stage lagoon system shall be designed to minimize the amount of contaminated storm water runoff entering the primary lagoon by routing the contaminated storm water runoff into a secondary RCS;
    - (2) aerobic treatment lagoons shall be designed in accordance with NRCS, Field Office Technical Guidance, Practice Standard 359, Waste Treatment Lagoon; or technical requirements for sizing the aeration portion of the system located in 30 TAC Chapter 317; and
    - (3) equivalent technology or design standards shall indicate how the design of the RCS minimizes odors equivalent to an aerobic or anaerobic lagoon. These designs shall be developed and certified by a licensed Texas professional engineer. An "as-built" certification in letter form shall be completed by a licensed Texas professional engineer before operation of the RCSs.
  - (c) This permit authorizes the use of a covered anaerobic digester system.
3. Dust control. To minimize dust emissions, the CAFO shall be operated and maintained as follows.
  - (a) Fugitive emissions from all grain receiving pits, where a pit is used, shall be

- minimized through the use of "choke feeding" or through an equivalent method of control. If choke feeding is used, operation of conveyors associated with receiving shall not commence until the receiving pits are full.
- (b) As necessary, emissions from all in-plant roads, truck loading and unloading areas, parking areas, and other traffic areas shall be controlled with one or more of the following methods to minimize nuisance conditions and maintain compliance with all applicable commission requirements:
    - (1) sprinkled with water;
    - (2) treated with effective dust suppressant(s); or
    - (3) paved with a cohesive hard surface and cleaned.
  - (c) All non-vehicular external conveyors or other external conveying systems associated with the feedmill shall be enclosed.
  - (d) On-site feed milling operations with processing equipment using a pneumatic conveying system (which may include, but are not limited to, pellet mill/pellet cooler systems, flaker systems, grinders, and roller-mills) shall vent the exhaust air through a properly-sized high efficiency cyclone collector or an equivalent control device before releasing the exhaust air to the atmosphere. This requirement does not include cyclones used as product separators.
  - (e) If the executive director determines that the implementation and employment of these practices is not effective in controlling dust, the permittee shall implement any necessary additional abatement measures to control and minimize this contaminant within the time period specified by the executive director.
4. Maintenance and housekeeping. The permittee shall comply with the following to help prevent nuisance conditions.
- (a) The premises shall be maintained to prevent the occurrence of nuisance conditions from odors and dust. Spillage of any raw products or waste products causing a nuisance condition shall be picked up and properly disposed of daily.
  - (b) Proper pen drainage shall be maintained at all times. Earthen pen areas shall be maintained by scraping uncompacted manure and shaping pen surfaces as necessary to minimize odors and ponding.

### VIII. Recordkeeping, Reporting, and Notification Requirements

- A. **Recordkeeping.** The permittee shall keep records on site for a minimum of five (5) years from the date the record was created and shall submit them within five (5) days of a written request by the executive director.
- 1. The permittee shall update records daily to include:
    - (a) all measurable rainfall events; and
    - (b) the wastewater levels in the RCS, as shown on the depth marker. In circumstances where the RCS has a water level exceeding the expected end of the month depth, the permittee shall document in the PPP why the level of water in the structure is not at or below the expected depth.

2. The permittee shall update records weekly to include:
  - (a) records of all 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) basis for and the total amount of nitrogen and phosphorus applied per acre to each LMU including sources of nutrients other than wastewater; and
    - (v) weather conditions, such as temperature, precipitation, and cloud cover, during the land application and twenty-four(24) hours before and after the land application.
  - (d) monitoring of leak detection system (see special provision X.K)
4. The permittee shall update records annually to include:
  - (a) annual nutrient analysis for at least one representative sample of wastewater and one representative sample of manure for total nitrogen, total phosphorus, and total potassium;
  - (b) any initial and annual soil analysis reports;
  - (c) the annual site inspection report;
  - (d) percent moisture content of the manure and wastewater; and
  - (e) actual annual yield of each harvested crop for each LMU.
5. The Five Year Evaluation report must be updated every five (5) years.
6. The permittee shall keep the following records on-site:
  - (a) a list of any significant spills of potential pollutants at the CAFO that have a significant potential to reach water in the state;
  - (b) documentation of liner maintenance by an NRCS engineer, a licensed Texas professional engineer or a licensed Texas professional geoscientist;
  - (c) RCS design calculations and as built capacity certification;
  - (d) embankment certification;
  - (e) liner certification;
  - (f) a copy of current and amended site plans; and
  - (g) copies of all notifications to the executive director, including any made to a regional office.

**B. Reporting and Notifications**

1. The permittee shall provide written notice to the appropriate TCEQ regional office as soon as an 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 the digester solids removal, solid separators or settling basins that are functioning as solid separators.
2. The permittee shall notify the appropriate TCEQ regional office in writing or by electronic mail with the date, time, and location at least ten(10) working days before collecting soil samples from current and historical LMUs; and third party fields.
3. Discharge notification. If for any reason there is a discharge of manure, sludge or wastewater into water in the state, the permittee shall notify the appropriate TCEQ regional office orally within one (1) hour of discovery; unless it is not reasonably possible to do so in which event the discharge shall be reported as soon as reasonably possible, but in no event later than twenty-four (24) hours from when the discharge occurred. The permittee shall also submit written notice, within fourteen (14) working days of the discharge to the Office of Compliance and Enforcement, Enforcement Division (MC 224). In addition, the permittee shall document the following information, keep the information on site, and submit the information to the appropriate regional office within fourteen (14) working days of becoming aware of such discharge. The written notification must include:
  - (a) A description and cause of the discharge, including a description of the flow path to the receiving water body and an estimation of the volume discharged.
  - (b) The period of discharge, including exact dates and times, and, if not corrected, the anticipated time the discharge is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the discharge.
  - (c) If caused by a precipitation event(s), the date(s) of the event(s) and the rainfall amount(s) recorded from an on-site rain gauge.
  - (d) Discharge monitoring analyses required by this permit.
4. In the event of a discharge of wastewater from an RCS or LMU during a chronic or catastrophic rainfall event or resulting from catastrophic conditions, the permittee shall orally notify the appropriate TCEQ regional office within one (1) hour of the discovery of the discharge. The permittee shall send written notification to the appropriate regional office within fourteen (14) working days.
5. Chronic Rainfall Discharge. In the event of a discharge of wastewater from an RCS or LMU due to chronic rainfall, the permittee shall submit a report to the appropriate TCEQ regional office showing the CAFO records that substantiates that the overflow was a result of cumulative rainfall that exceeded the design rainfall event without the opportunity for dewatering, and was beyond the control of the permittee. After review of the report, if required by the executive director, the permittee shall have an engineering evaluation by a licensed Texas professional engineer developed and submitted to the executive director. This requirement is in addition to the discharge

notification requirement in this permit.

6. Impacts to Human Health or Safety, or the Environment. The permittee shall provide the following noncompliance notifications:
  - (a) Any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally, e-mail, or electronic facsimile transmission (FAX) to the TCEQ regional office within twenty four (24) hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the TCEQ regional office and the Enforcement Division (MC 224) within five (5) days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times. If the noncompliance has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance and to mitigate its adverse effects.
  - (b) In the event the permittee discharges manure, sludge or wastewater other than as authorized in the permit, the permittee shall give twenty four (24) hour oral, email, or fax notice and five (5) day written notice to TCEQ as required by paragraph (a) above.
7. The permittee shall submit an annual report to the appropriate regional office and the Enforcement Division (MC 224) by February 15 of each year for the reporting period of January 1 to December 31 of the previous year. The report shall be submitted on forms prescribed by the executive director to include, but not limited to:
  - (a) number and type of animals, whether in open confinement or housed under roof;
  - (b) estimated total manure, sludge and wastewater generated during the reporting period;
  - (c) total wastewater 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 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);
  - (k) monitoring of leak detection systems; and
  - (l) 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 existing RCS #2 and combine current RCS #1 and RCS #2, forming new RCS #1. Existing RCS #4 will be renamed RCS #2 and will function as an irrigation pond. A settling basin will be constructed to remove solids in the drainage area above RCS #3. Other components of the waste management system are a covered anaerobic digester, high-rate oxidation raceway, recirculation basin, and a methane generation system. All components are necessary 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	23.72	4.52	0	12.88	8.13	49.24	TBD
2	1.86	8.13	0	1.67	8.14	19.81	19.81
3	7.72	0	0	0.51	1.18	9.40	TBD

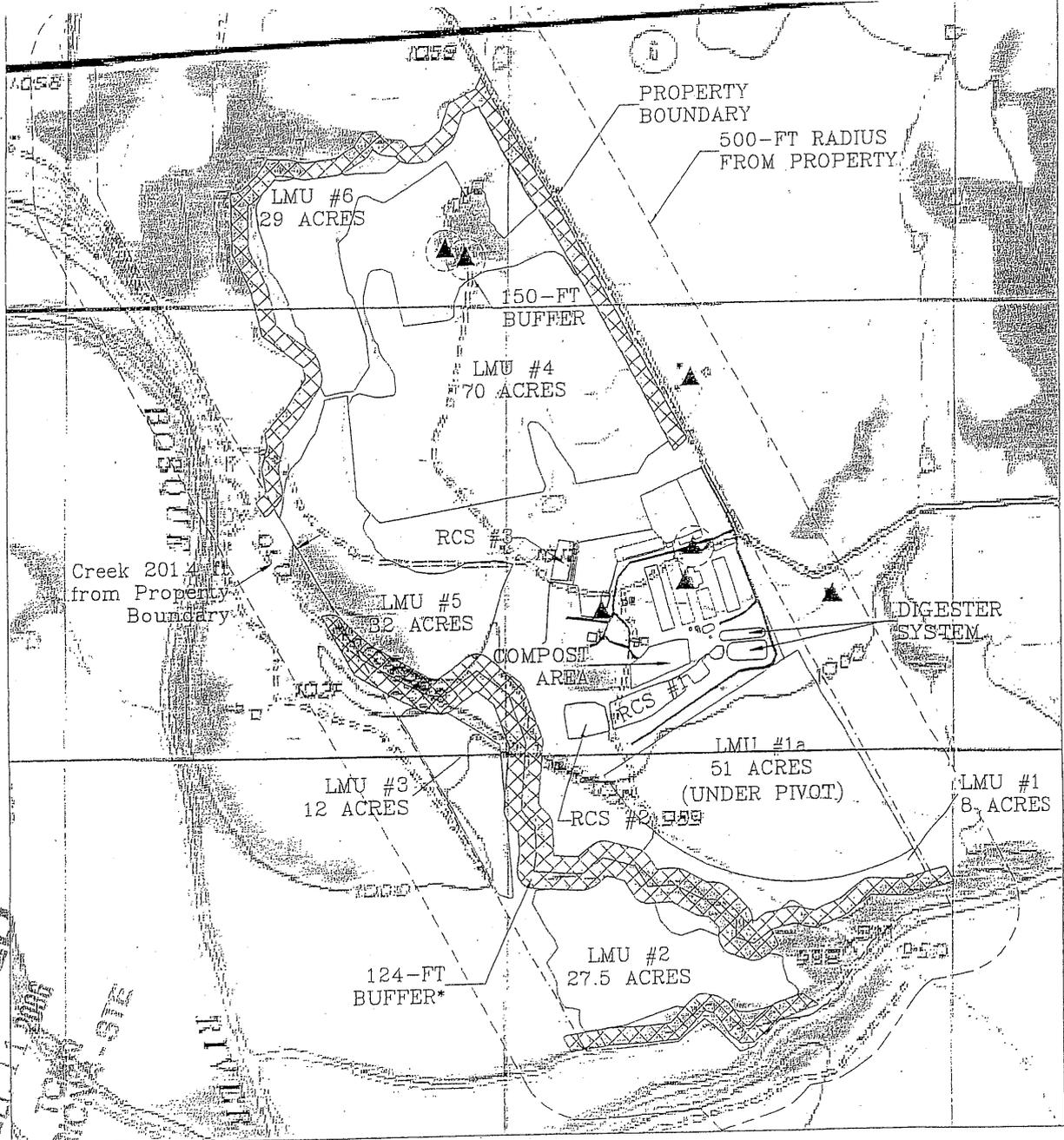
- 2. Compliance Schedule. All RCS modifications and new construction required by this permit shall be completed within 180 days after the issuance date of this permit and prior to exceeding 990 head. Upon written request to the TCEQ Regional Office, the Executive Director may grant an extension to the 180 day requirement. However, all modifications and construction must be completed prior to exceeding 990 head.
- 3. Once modifications of new RCS 1 and new RCS 2 are completed, and the new settling basin is constructed, an RCS management plan will be developed 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;
  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 manure, and wastewater for total nitrogen, total phosphorus, and total potassium.
- D. Manure includes slurry from freestall barns, solids from open lots, settling basin solids, digester solids, bedding, compost, feed, and other raw materials commingled with feces and/or urine. Annual samples of each form (including sludge) are required prior to off site land application including 3<sup>rd</sup> party fields.
- E. Slurry removed from freestall barns cannot be applied to permitted LMUs. If it is stored, the storage area must be within the drainage area of an RCS, and 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 permittee is prohibited from land application of manure and sludge on permitted LMUs.
- G. 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. Changes in land use can result in changes in buffer requirements. All buffers in LMUs will be completed and compliant with NRCS Code standards upon issuance of this permit. No application of wastewater can take place on an LMU unless buffer requirements are met.

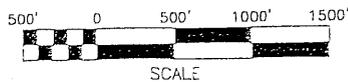
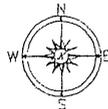
LMU#	Land Use	Vegatative Buffer setback (feet)	Additional Buffer Setback NRCS Code 393 Filter Strip flow length (feet)
1	Tifton Bermudagrass	100	24
1a	Tifton Bermudagrass	0	0
2	Coastal Bermudagrass	100	24
3	Hybrid Bermudagrass	100	24
4	Hybrid Bermudagrass	100	24
5	Hybrid Bermudagrass	100	24
6	Common Bermudagrass	100	24

- H. There will be no grazing of livestock on the LMUs for this CAFO unless the NMP is amended to reflect grazing and the grazing practices mentioned in NRCS Practice Code 393, Filter Strip, are implemented to protect buffers.
- I. The sludge volume in all RCSs will be measured and recorded in the PPP as necessary, but at least annually beginning in year three (3) of the permit. Sludge will be removed when it exceeds the volume allocated.
- J. All runoff from silage, commodity, and hay storage outside the RCS drainage area will be contained. Appropriate provisions for that containment will be stated in the PPP upon issuance of the permit. This permit does not authorize any discharge from the silage, commodity, or hay storage areas located outside the drainage area of the RCSs.
- K. The permittee shall install an underdrain leak detection system for the synthetically-lined oxidation pond and monitor on a monthly basis. Any accumulated water noted in the under drain leak detection system shall be sampled and analyzed, at a minimum, for fecal coliform, nitrate (as nitrogen), ammonia nitrogen (as nitrogen), total phosphorus, and total dissolved solids. The observation of the water in the leak detection system, the estimated volume of the water, as well as data related to sampling and analysis, shall be recorded in the PPP and notification shall be provided to the regional office within 30 days. The recirculation basin and anaerobic digester shall be certified in accordance with 30 TAC §321.38(g)(3).
- L. The waste calculations for the facility are based on mature Jersey cows with an average weight of 950 pounds. The permittee shall obtain a major amendment before changing the breed of any confined cattle.
- M. Calculations for RCS 3 are based on a proposed freestall barn using dry or vacuum scrape for manure removal. The permittee shall obtain a permit amendment prior to a change in the manure removal system.
- O. The permittee shall obtain a major amendment prior to discontinuing use of the digester system.
- P. Storage of slurry removed from freestall barns must be stored within the drainage area of an RCS, and the storage area must be large enough to prevent overflow into settling basins and/or RCSs. Any overflow of these storage basins shall be recorded in the PPP and notification shall be provided to the regional office within 30 days. Based on review of the information this permit may be formally amended to require additional controls or other requirements.

ATTACHMENT A  
SITE MAP



RECEIVED  
DEC 1 2006  
TCEQ - STX



\*NOTE: BUFFER ZONE BASED ON 100-FT MINIMUM PLUS NRCS CODE 393, APPENDIX 3 DISTANCE. BUFFERS AND LMU BOUNDARIES APPROVED BY TCEQ ON APRIL 19, 2006.

SOURCE: TOPO! NATIONAL GEOGRAPHIC SEAMLESS TOPOGRAPHIC MAPS, 2001. FIELDS MAPPED BY EAE USING AGGPS, 2004.

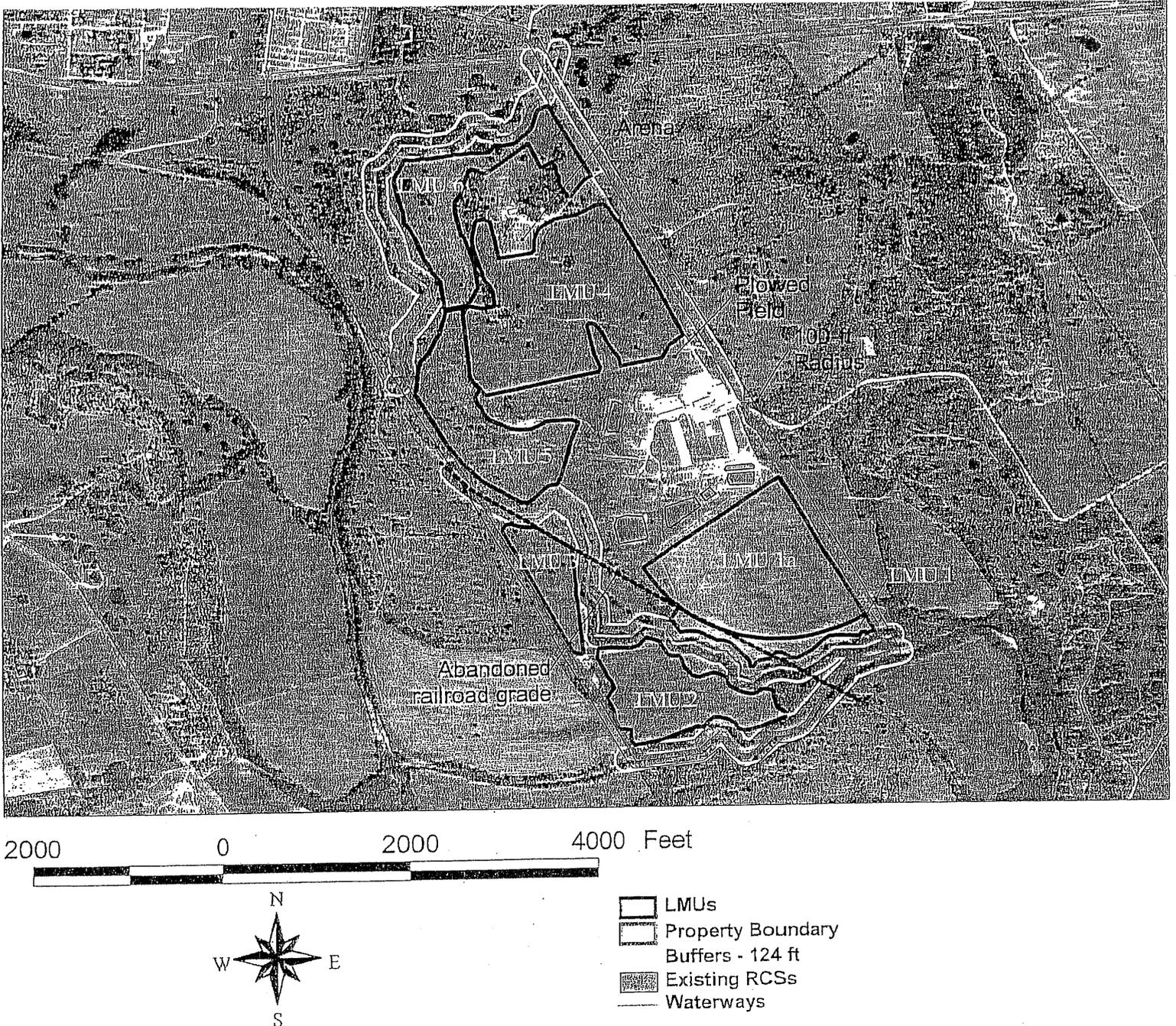
BROUMLEY DAIRY  
HICO, TEXAS  
HAMILTON COUNTY

PROPOSED SITE MAP  
FIGURE 4.3  
PAGE 4 REVISED 12/4/06



Enviro-Ag Engineering, Inc.  
ENGINEERING CONSULTANTS  
702 QUAIL CREEK DRIVE  
AMARILLO, TEXAS 79124  
TEL (806) 353-8123 FAX (806) 353-4132

ATTACHMENT B  
LAND APPLICATION AREAS

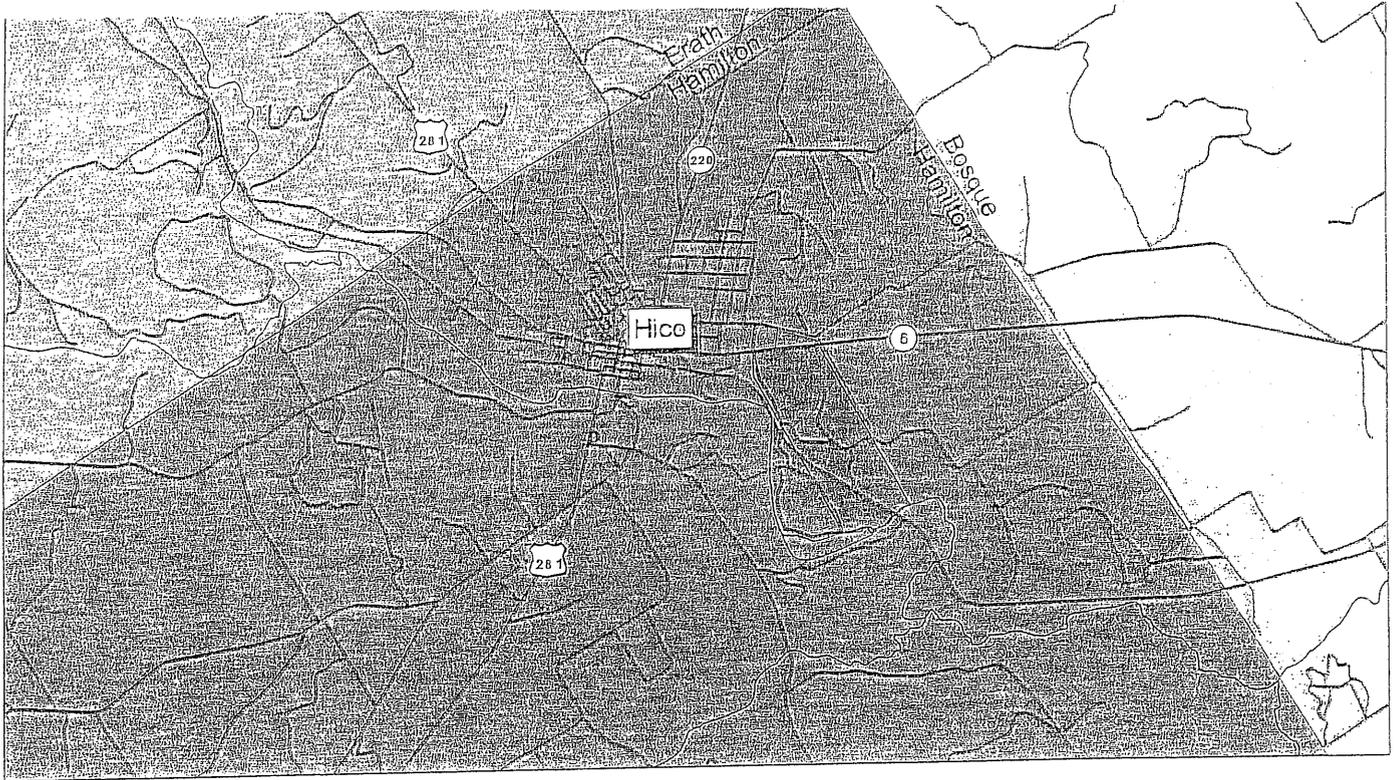


Base Map: 2004 USDA Aerial Photograph - Hamilton County.

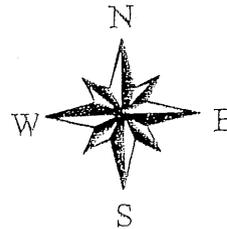
Notes:

1. Waterways and county road have 124-ft buffer as shown.
2. Interior roads are flat, two-track roads or driveways and have no adjacent ditches.
3. Abandoned railroad grade in LMU 1 is actively farmed - no adjacent ditches.
4. No land application proposed in north part of property, adjacent to the highway.
5. Pond shown on USGS map north of RCS #3 is no longer in service and will be filled in.
6. No buffers necessary on Arena and plowed field.
7. Intermittent creek off-site to west of LMU 5 is >124 ft from property boundary.

ATTACHMENT C  
VICINITY MAP



- Rivers
- Roads
- Broumley Dairy



# ATTACHMENT

D

TPDES PERMIT NO. WQ0003395000

2008 FEB -4 PM 4: 51

APPLICATION BY §  
JIM BROUMLEY AND KEITH §  
BROUMLEY, DBA BROUMLEY §  
DAIRY §

BEFORE THE  
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
CHIEF CLERKS OFFICE

**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 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. 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 public comments. The Office of the Chief Clerk received timely public comments from the City of Waco, represented by Brown McCarroll L.L.P. (Waco), and Doug and Linda Anderson. The Office of the Chief Clerk also received timely public comment in support of the issuing the major amendment to this permit from John Cowan, the Texas Association of Dairies, the Dairy Farmers of America, and Mac Rickels.

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](http://www.tceq.state.tx.us).

**BACKGROUND**

Description of 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.

Procedural Background

The permit application was received on January 27, 2004 and 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. This application is subject to House Bill 801, 76th Legislature, 1999.

**COMMENTS AND RESPONSES**

**Comment 1:**

Waco comments that the dairy 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(23). Therefore, the dairy should be classified as a "new source" subjecting it to the review required by 40 CFR § 122.2(i). 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.

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 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. The dairy expansion would be integrated with the existing 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."<sup>1</sup> 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 September 25, 2007.

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<sup>1</sup> WAFs stand for waste application fields.

**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.<sup>2</sup> New or expanding operations are required to meet all the new management

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<sup>2</sup> 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 Conservation 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. Sludge may be beneficially utilized by land application to third party fields in accordance with Section VII.A.8.(e)(5) of the permit. Alternatively, Section VII.A.5.(a)(7) of the permit allows manure and sludge to be disposed by the following methods:

- 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.

Also, the rules and the draft permit cap land application on third party fields when they reach 200 ppm of phosphorus, which is consistent with the rule. The draft permit also sets a tiered application rate based on soil test results consistent with the NRCS Practice Standard Code 590.

**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 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*<sup>3</sup> 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

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

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.

In the regulation of CAFOs, it is infeasible to develop and apply numeric limitations to infrequent, highly variable potential discharges that may occur at CAFOs. The *Waterkeeper* case found that the NMPs developed by applicants were the equivalent of effluent limitations. However, the *Waterkeeper* court did not find that BMPs could not substitute for numeric effluent limitations in the regulation of CAFOs.

**Comment 7:** ✓

Waco comments that third party fields planned by use of the Applicant are not identified and should be regulated as LMUs.

**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.”<sup>4</sup> The

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<sup>4</sup> 29 TexReg 6652, 6658 (July 9, 2004).

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."<sup>5</sup> 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.

**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 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

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<sup>5</sup> *Id.* at 6692.

§ 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 49.24 acre-feet. The operating volume for RCS #2 is 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; 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 comments that the application fails to account for management of all phosphorus production.

**Response 9:**

It is projected that 1,499 cows will generate 246 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 NRCS 590 Standard does not require that all LMUs be limited to the phosphorus removal rate of application. If the soil test levels for phosphorus are below 200 ppm, the crop nitrogen recommendation or some multiple of the crop phosphorus recommendation is the allowable rate. Only when the soil test levels exceed 200 ppm is the crop phosphorus removal rate of application a requirement.

**Comment 10:**

Waco comments that the Applicant has failed to use the correct CN values to calculate runoff in pen areas and notes discrepancies in the CN values in different parts of the application.

**Response 10:**

Pen areas, as referred to in Section 5.3 of the permit application, are the typical denuded and trampled areas seen as open lots on many CAFOs. A runoff curve number (CN) of 90 is typically used to estimate the runoff from such areas. The calf pen area shown on the runoff control map is not typical, but is a grassed area where calves are kept. It is typical of areas referred to as "Adjacent Areas" in runoff calculations. A CN of 85 is used in the calculation of runoff from this area. This value is on the high range of CN numbers used for adjacent areas. It is on the high range because it is reflective of the calf hutches present in the area. A CN of 85 is acceptable for the area and results in a conservative estimate of runoff from the area.

**Comment 11:**

Waco comments that the design of the facility allows uncontaminated storm water to enter the RCSs. Waco notes that 30 TAC § 321.38(e)(1) states that the design of a control facility must include measures to minimize the entry of uncontaminated runoff into the RCSs.

**Response 11:**

30 TAC § 321.38(e)(1) states that: "The design of a control facility shall include measures that will be used to minimize entry of uncontaminated runoff into RCSs." It does not prohibit the entry of uncontaminated runoff. It is appropriate to minimize the amount of runoff entering the system, but not a requirement to eliminate it completely.

**Comment 12:**

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 12:**

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 13:**

Waco comments that conflicts between the water balance and the recharge feature certification (RFC) have not been resolved. Waco notes that the water balance estimates only 58.5% of rainfall on the pens and 18.0% of the rainfall on the adjacent areas run into the RCS leaving 41.5% and 82.0%, respectively, to migrate to the subsurface. According to Waco, this contradicts the RFC, which states there is limited infiltration. Waco contends that both of these positions cannot be true.

**Response 13:**

The runoff curve numbers used to compute runoff into the RCS from the pens and adjacent areas in the water balance are conservative numbers and represent runoff from soils with low infiltration rates and low rates of water transmission. These numbers accurately reflect the characteristics of the soils above the RCS. The rainfall/runoff process involves more than the runoff limited absorption by soil and percolation to groundwater. Processes such as retention by the drainage area and evaporation play major roles in the process. These factors are all accounted for in the runoff curve number approach to estimating runoff.

A certain minimal amount of rainfall must fall in each rainfall event for any runoff to occur. This minimal amount, normally termed the "initial abstraction," is absorbed by the ground surface until the surface becomes saturated enough for runoff to begin. The initial abstraction rate is affected by the characteristics of the surface (vegetation or lack thereof, soil type, etc.). After runoff begins, only

a portion of the rainfall will become runoff. The portion of rainfall that becomes runoff is affected by the same conditions that affect the initial abstraction (vegetative conditions and soil type). The runoff curve number is reflective of these conditions. Some rainfall events will produce no runoff because the rainfall amount is less than the initial abstraction.

For a CN of 90, the initial abstraction rate of a rainfall event that will produce runoff was calculated to be 0.6 inches or greater. The calculations in the water balance for this facility are based on the average monthly rainfall in the area of the facility. For example, the January monthly average is 1.9 inches of rainfall. Based on the average rainfall and the selected runoff curve numbers, the monthly amount of rainfall runoff is computed to be 0.4 inches or approximately 20% of the monthly rainfall. For May, the average monthly rainfall amount is 4.2 inches. However, the initial abstraction rate remains 0.6 inches. Therefore, the calculated runoff for May is 2.0 inches or 48% of the monthly rainfall.

Also, there is no contradiction between the water balance and RFC as noted by Waco because rainfall that does not runoff does not necessarily reach groundwater. For example, a 0.25 inch rainfall event in July is unlikely to produce either runoff or the recharge of groundwater. Based on the ED's review, there is no evidence that the water balance and the RFC do not accurately reflect conditions at the facility.

**Comment 14:**

Waco states that the RFC is not properly sealed by a professional engineer. Waco notes that the certification page of the RFC has a sealed date of April 28, 2006, but there appear to be unsealed pages that were revised after that date, so that there is no way to determine if the pages were reviewed by a professional engineer.

**Response 14:**

Changes were made to pages 34, 35, and 37 of the RFC on September 7, 2006 that were initially unsealed by the professional engineer. Revisions to those same pages (pp. 34, 35, and 37) were sealed, signed, and dated on December 8, 2006 and were included in the permit file. Because the revised pages were sealed by a professional engineer, TCEQ accepts that a professional engineer has reviewed and certified all pages in the RFC. Therefore, all RFC pages in the permit file are now considered to be properly sealed.

**Comment 15:**

Waco comments that the Applicant has not properly calculated the RCS sludge accumulation volume. Waco comments that the Applicant's calculation used 25% of the runoff from the 25-year, 10-day rainfall event and that there is no technical or historical basis to justify this value.

**Response 15:**

Sludge accumulation volume requirements for sludge accumulation from runoff were 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.

**Comment 16:**

Waco comments that the liner certifications for RCS #1 and #2 show sample locations only in the sides of the embankment and not on the bottom, which is inappropriate.

**Response 16:**

The new RCS #1 will be a combination of the existing RCS #1 and RCS #2. The draft permit requires a new liner certification for the new RCS #1, which will be made up of the existing RCS #1 and RCS #2. While new liner certifications will be required by the draft permit, TCEQ rules do not specify the location(s) where the liner samples are to be taken, as long as the sample is representative of the liner.

**Comment 17:**

Waco comments that the labeling of the certification data is inadequate. Waco states that from the data sheets it is impossible to know if the data is actually from the RCS that it claims to represent.

**Response 17:**

Based on information submitted by the Applicant, the ED determined that the liner certification dated September 2, 1997 and labeled Sediment Pond and the certification sealed on July 13, 2005 and labeled as settling basin both apply to the settling basin as represented on the runoff control map submitted with the application. The certification sealed on July 13, 2005 and labeled polishing pond represents what is now part of the new RCS #1; the certification dated September 25, 1997 and labeled Pond No. 2 represents what is part of the new RCS #1; the certification dated October 22, 1999 and labeled Pond #3 represents the new RCS #3; and the certification dated May 28, 2001 labeled Irrigation Storage Pond represents the new RCS #2. The draft permit was modified to require new liner certifications for all RCSs and Section VII.A.3.(a)(2) now reads:

- (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 is complete, new capacity and liner certifications for RCSs 1 and 3 will be provided. Upon issuance of this permit, a new liner certification will be provided for the re-named RCS 2. RCS volume requirements in the existing authorization should be

maintained until the design and construction of the modified RCSs have been completed and certified.

RCS	Construction date	Liner certification date	Volume
1	1997	1997	3.18
2	1997	1997	15.04
3	1999	1999	7.60
4	2001	2001	19.81

**Comment 18:**

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 to 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. Waco notes that nutrients in biosolids are not fundamentally different from dairy waste, so there is no reason the ED should calculate the agronomic rate differently.

**Response 18:**

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 19:**

Waco comments that the NMP does not utilize the most current soil test data. Waco notes that the NMP uses soil test data collected in August, 2005 and not more recent data collected in August, 2006. The more recent data show increases in soil phosphorus in the 0-6 inch soil depth in several of the LMUs, which should trigger a NUP. Additionally, LMU #3T was sampled in 2006, but is not found in the application as required for a historical application field and LMU #7, which is a historical field (in the existing permit) was not sampled and is not included in the application as required.

**Response 19:**

The updated Technical Information Packet is dated May 2006 and contains soil analysis results with a report date of August 25, 2005. The soil analysis results used in the NMP submitted with the initial application are within one year of the updated Technical Information Packet dated May, 2006 and are valid for use in the NMP contained in the application. The use of the August, 2005 soil

analysis results in the NMP contained in the application does not by itself make this NMP incorrect. If the draft permit is issued, the NMP will be kept current based on annual monitoring requirements. LMU #3 and LMU #7 are not proposed to be used as LMUs in the application. Therefore, soil test results are not needed for the NMP submitted with the application. This permit, when issued will require annual sampling of historic waste application fields (See Response #46).

**Comment 20:**

Waco comments that the NMP is improperly dated and that it impossible to properly review without being assured that all representations are based on the most current information.

**Response 20:**

The file in the Chief Clerk's Office contains a complete NMP dated July 18, 2007. Section VII.A.8.(a) of the draft permit specifies that the NMP dated July 18, 2007 will be implemented upon issuance of this permit.

**Comment 21:**

Waco comments that the Applicant has re-numbered the LMUs and RCSs. Waco states that this creates a nightmare when trying to track what has happened historically at the facility. Waco states there is no reason to re-number and that doing so can lead to confusion in the future and is nothing more than an attempt to disguise the history of these units at the facility.

**Response 21:**

There is no requirement that applicants maintain consistent numbering of LMUs and RCSs throughout the life of a facility. Reconfiguration of LMUs for the application consists of boundary changes for most LMUs, elimination of application on the existing LMU #3 and existing LMU #7, and renumbering the northern portion of existing LMU #2 as LMU #3. The Regional Field Investigators use the historical permit to make a proper assessment of the site and should therefore be able to recognize historic waste application fields.

**Comment 22:**

Waco comments that the Applicant has failed to provide certification of equivalent technology for odor control. Waco notes that 30 TAC § 321.43(j)(3)(B)(iii) requires that when equivalent technology is being used to satisfy the requirements of 30 TAC § 321.43(j)(3) it must be certified as being equivalent by a professional engineer. Waco states that Section 9.2 of the application states that the anaerobic digester is designed to meet these requirements, but is not certified as required.

**Response 22:**

30 TAC § 321.43(j)(3)(B)(iii) requires that the information be included in the PPP, but not in the permit application. 30 TAC § 321.43(j)(3)(B)(iii) states:

(iii) equivalent technology or design standards shall indicate how the design of the AFO minimizes odors equivalent to an aerobic or anaerobic lagoon. These designs shall be developed and certified by a licensed Texas professional engineer. An "as-built" certification in letter form shall be completed by licensed Texas professional engineer before operation of the AFO. These documents shall be maintained on site and made available within the time period specified by the executive director.

**Comment 23:**

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. Waco notes that as a practical matter, there is not adequate time for inspectors in the field to properly evaluate the validity of such a plan.

**Response 23:**

This permit requires that the Applicant implement an RCS management plan and maintain a copy in the PPP as required by 30 TAC § 321.42(g). 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 24:**

Waco comments that the water balance must be prepared in conjunction with an associated RCS management plan or it is meaningless. Waco states that the water balance must consider not only monthly rainfall runoff, but the storage requirements necessary to enable supplying sufficient water to the crops during the high water demand months of summer.

**Response 24:**

The water balance accurately reflects average climatic conditions and demonstrates there is adequate storage for operating volumes during critical high rainfall months. It is reasonable that during low rainfall months minimal withdrawals are needed to maintain adequate volumes for normal operations and the design storm event. Withdrawals might be more or less depending on the actual climatic conditions. The RCS management plan is developed when construction of the RCS system is complete and will provide additional information on how the operating volume will be managed. As long as the actual RCS capacity can contain the 25-year, 10-day storm event volume, the monthly

inflows can be stored from month-to-month instead of being pumped out each month as indicated in the water balance.

Additionally, as noted in the previous response, the RCS management plan cannot be developed until expansion and modification of the RCS system is complete.

**Comment 25:**

Waco comments that the Applicant is not required to certify the existing RCS capacity and sludge volume capacity based on the current accumulation in the RCSs. Waco comments that many dairies over the years have allowed sludge accumulation beyond the sludge design capacity. Waco states that the only way to verify that the dairy is in compliance is to require formal certification that the design sludge volume is currently not being exceeded. Waco notes that RCS #1 and #3 will be re-certified after the expansion, but that RCS #2 (formerly RCS #4), which is being converted into a surge basin, will not require re-certification. Waco states that TCEQ cannot issue this permit, unless there is a provision requiring certification of the existing volume in RCS #2 and a demonstration made that there is no sludge accumulation in RCS #2. Waco comments that a claim has been made that no sludge accumulates in RCS #2. Waco does not believe that is the case because solids can carry over during the transfer process. Waco comments that the Applicant has not given any design information or sampling data to indicate this transfer process would not result in solids being transferred with the water from RCS #1 to RCS #2. Finally, Waco notes that Section VII.A.3.(a)(2) of the draft permit only addresses total capacity of the RCS; and states all capacity certifications should require total as-built capacity and the volume of sludge accumulation.

**Response 25:**

The ED agrees that RCS #2 should have a sludge volume allocation and modifies Section IV of the draft permit as follows:

IV. General Description and Location of Waste Disposal System:

Maximum Capacity: 1,499 total head of which 1,100 are milking (Jersey cows)

Site Plan: See Attachment A.

Retention Control Structures (RCS) total required capacities without freeboard (acre-feet): RCS #1-49.24, RCS #2-19.81, RCS #3-9.40; RCS #1 acts in-series with the anaerobic digester system.

Land Management Units (LMUs) (acres): LMU#1-8, LMU#1a-51, LMU#2-27.5, LMU#3-12, LMU#4-70, LMU#5-32, LMU#6-29; See Attachment B for locations.

Location: 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. Latitude: 31° 58' 11"N Longitude: 98° 00' 03"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.

Section VII.A.5.(a)(5) was modified to read as follows:

- (5) Permanent Pond Marker. The permittee shall install and maintain a permanent pond marker (measuring device) in each RCS, visible from the top of the levee to show the following:
- (i) the volume for the design rainfall event;
  - (ii) one-foot increments beginning from the bottom of the RCS to the top of the embankment or spillway; and
  - (iii) design volume levels for maximum sludge accumulation and operating volume (calculated process generated wastewater plus rainfall runoff minus evaporation) must be identifiable on the marker.

Additionally, Section X.A.1. was modified to read as follows:

A. RCS Modifications.

1. The permittee shall increase the size of existing RCS #2 and combine current RCS #1 and RCS #2, forming new RCS #1. Existing RCS #4 will be renamed RCS #2 and will function as an irrigation pond. A settling basin will be constructed to remove solids in the drainage area above RCS #3. Other components of the waste management system are a covered anaerobic digester, high-rate oxidation raceway, recirculation basin, and a methane generation system. All components are necessary 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	23.72	4.52	0	12.88	8.13	49.24	TBD
2	1.86	8.13	0	1.67	8.14	19.81	19.81
3	7.72	0	0	0.51	1.18	9.40	TBD

Additionally, Section X.I. was modified to read as follows:

- I. The sludge volume in all RCSs will be measured and recorded in the PPP as necessary, but at least annually beginning in year three (3) of the permit. Sludge will be removed when it exceeds the volume allocated.

**Comment 26:**

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 fix, the draft permit should require sludge measurement in the RCSs annually rather than three years after the permit is issued.

Additionally, Waco comments that Section VII.A.5.(a)(7) of the draft permit does not require the Applicant to monitor the sludge volume in RCS #2.

**Response 26:**

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.

The ED agrees that sludge should be monitored in RCS #2 and modifies Section VII.A.5.(a)(7) of the draft permit as follows:

(7) Sludge Removal. The permittee shall monitor sludge accumulation and depth, based upon the design sludge storage volume in the RCSs. Monitoring should be performed as necessary, but not less than annually for all RCSs beginning in year three (3) from the date of the permit issuance. Sludge shall be removed from the RCS in accordance with the design schedule for cleanout in the RCS management plan to prevent the accumulation of sludge from exceeding the designed sludge volume of the structure. Removal of sludge shall be conducted during favorable wind conditions that carry odors away from nearby receptors. 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;
- (iii) beneficially utilized by land application to land located outside of the major sole source impairment zone;
- (iv) composted onsite but not land applied to LMUs;
- (v) applied to 3<sup>rd</sup> party fields; or
- (vi) put to another beneficial use approved by the executive director.

**Comment 27:**

Waco comments that the permit does not identify all liner design specifications required by 30 TAC § 321.38(g). Waco states that while some of this information is provided in Section VII.A.3.(f) of the permit, it is inadequate. Waco comments that the permit should include or refer to information similar what is found in 30 TAC § 330.339(c), particularly with respect to guidelines concerning testing frequencies.

**Response 27:**

30 TAC § 321.38(g)(1) states that the design specifications must describe standards "for the quality of soils used, lift thickness and density at optimum moisture content, procedures and minimum requirements for liner and embankment compaction testing, and spillway construction." Compaction testing relative to liner certifications is included in Section VII.3.(f)(4) of the draft permit. More specific liner requirements are included in 30 TAC § 321.38(g)(3). The draft permit covers these additional requirements in Section VII.3.(g). There are many ways to satisfactorily provide for a liner that meets these requirements. 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,  $1 \times 10^{-7}$  cm/sec over a thickness of 18 inches or its equivalency in other materials.

The soil requirements and other construction related requirements are inherent to achieving the hydraulic conductivity requirements that must be certified by a licensed Texas professional engineer.

**Comment 28:**

Waco comments that the Applicant has not addressed the process it will use to enlarge RCS #1 and RCS #3 to meet the requirements of the 25-year, 10-day design rainfall event or its operational plan while doing so. Waco states the permit should specifically indicate TCEQ is not granting approval of any construction activity that would allow process wastewater or contaminated runoff to flow into an RCS that partially unlined, even temporarily.

**Response 28:**

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. to 3. of the draft permit requires the Applicant to increase the capacity of the RCS 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.

**Comment 29:**

Waco is concerned that the NMP is allowed to be based on a single annual sample of wastewater and manure. Waco is concerned that single samples are not representative for evaluating the

characteristics of the wastewater and is likely to underestimate the concentrations of phosphorus. Waco recommends that samples of wastewater being land applied should be taken at least once during every irrigation event and should also be obtained from the irrigation pipeline following the pump rather than from the surface of the RCS.

**Response 29:**

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. Sampling and updating of the NMP after every irrigation event would not be practical and is not required under the current version of the CAFO rules.

**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 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 if not prohibited, 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 the 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.

The table below illustrates numbers from the Applicant's NMP to compare the crop requirement for phosphorus versus the actual pounds applied. The plan is based on a goal of maintaining soil test phosphorus levels below 200 ppm, which results in a planned application amount that is less than the maximum allowed under the East Texas Phosphorus Index (application on all LMUs, collectively). NMPs are routinely updated and the values shown below are subject to change. In every LMU the Applicant is planning to land apply effluent at significantly less amounts than the maximum allowable.

Nutrient Application

LMU #	Soil Test P (ppm)	Max Annual P2O5 (pounds/ac.)	Pounds Applied P2O5 (pounds/ac.)	Percentage of Maximum Allowable
1	178	207	66	32
1a	178	207	66	32
2	48	207	170	82
3	48	207	170	82
4	142	83	61	73
5	96	83	62	75
6	58	108	70	65

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.<sup>6</sup> 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.

<sup>6</sup> See "An Implementation Plan for Soluble Reactive Phosphorus in the North Bosque Watershed," December, 2002, page 39:

**Comment 32:**

Waco notes that Section 9 in the TMDL Assessment portion of the permit application, the Applicant states that he will implement a NUP that incorporates a phosphorus reduction component on fields over 200 ppm. However, Section VII.A.8.(c)(1)(ii) of the draft permit allows a NUP to be prepared that does not contain a phosphorus reduction component between 200 and 500 ppm. To be consistent with the Applicant's representations, the paragraph in Section VII.A.8.(c)(1)(ii) should be deleted.

**Response 32:**

It is permissible for a permitted facility to establish goals more restrictive than permit or rule requirements. The goal presented by the Applicant in 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.

**Comment 33:**

Waco states that Section VII.A.8.(e)(5)(i)(F) of the draft permit requires soil tests on third party fields after waste is applied. However, it does not require initial sampling prior to applying waste. Therefore, one-time application of wastes can occur on third party fields with no way to determine if the application rates are within the required limits.

**Response 33:**

This issue was identified in previous CAFO draft permits and the draft permit was modified in Section VII.A.9.(b)(1) to require initial testing prior to any land application on any third party fields.

**Comment 34:**

Waco states the meaning of the phrase "not exceed the nitrogen application rate" at paragraph VII.A.8(e)(5)(i)(C) of the draft permit is ambiguous at best. To impose the appropriate limitation and to make the permit consistent with the remainder of the permit, Waco recommends this phrase be replaced with "not to exceed the nitrogen crop removal rate."

**Response 34:**

The ED declines to make this change. Unless otherwise limited, the nitrogen application rate will be limited to the crop nitrogen requirement expressed in the NRCS guidelines found in the S-Table.

**Comment 35:**

Waco requests revision to the provisions applicable to third party fields at paragraphs VII.A.8(e)(5)(i)(D) and (E) to ensure protections apply when the measured soil phosphorus levels

equals values of 50, 51, 150, and 151 ppm. Waco comments that the ED should include language that makes it clear that requirements apply when a value is less than or equal to each of these values.

**Response 35:**

The ED partially agrees with the comment. Section VII.A.8(e)(5)(i)(C) in the draft permit currently contains the requested language. Sections VII.A.8(e)(5)(i)(D) and (E) have been modified to clarify which sections apply to 150 and 200 ppm. See Response #36.

**Comment 36:**

Waco requests the language in Sections VII.A.8.(e)(5)(i)(D-E) of the draft permit include a statement that the application rate is not to exceed the annual nitrogen crop removal rate if it its more restrictive.

**Response 36:**

The ED partially agrees with the comment and modifies the following sections to better define the nitrogen application rate. Section VII.A.8.(e)(5)(i)(D) of the draft permit now reads:

Land application rates shall not exceed two times the phosphorus crop removal rate, not to exceed the crop nitrogen requirement, 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) depth is greater than 50 ppm phosphorus and less than or equal to 150 ppm phosphorus.

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

Land application rates shall not exceed one times the phosphorus crop removal rate, not to exceed the crop nitrogen requirement, 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) depth is greater than 150 ppm and less than 200 ppm phosphorus.

**Comment 37:**

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.

**Response 37:**

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. When a third party field tests 200 ppm or higher for phosphorus, all land application on that field must cease.

**Comment 38:**

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 that an NMP should be required for third party fields. Waco comments that NUPs (when soil phosphorus exceeds 200 ppm) and NMPs should be required for each third party fields and submitted and reviewed during the permit application process.

**Response 38:**

The draft permit limits application on third party fields based on soil test phosphorus levels. A NUP would not be required for a third party field that reaches or exceeds 200 ppm or more of phosphorus because at that level land application must cease. The application limitations on third party fields are based on soil test phosphorus levels instead of the Phosphorus Risk Index. The restrictions are more conservative than the rules require. Similar to an NMP, as soil phosphorus levels increase on third party fields, the Applicant will have to reduce waste application rates in order to continue land applying on those fields and to prevent those fields from exceeding 200 ppm of phosphorus.

**Comment 39:**

Waco requests that Section VII.8.(e)(5) of the draft permit be revised to include a requirement that records of crops and crop yields be submitted to TCEQ. Otherwise, the phosphorus crop removal rates cannot be calculated and compliance with the phosphorus application rate limitations cannot be determined.

**Response 39:**

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 40:**

Waco comments that the NMP only addresses the first year of the permit term and states that the NMP should be prepared so that it shows the impact of all nutrient management issues over the five-year term and whether the operation is sustainable.

**Response 40:**

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 is updated, the new version should be kept with their PPP documentation and available to TCEQ personnel during field investigations. Long term sustainability of a field may be a planning consideration, but there are no rule requirements regarding sustainability.

**Comment 41:**

Waco notes that Section X.G. 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.” Therefore, TCEQ should include a definition for “vegetative buffers” in the permit or require that they meet the same standard as “filter strips” in NRCS Code 393.

**Response 41:**

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 42:**

Waco comments that it is not clear where the measurement of the vegetative buffers and filter strips begin in relation to the stream bed. Waco states that the language should specify that measurement is from the banks of the stream, not the centerline; and the Applicant should be required to mark the boundary between the application area and the buffer in order to allow adequate enforcement.

**Response 42:**

The ED agrees that the measurement of the vegetative buffers and filter strips should be done from the banks of a stream, not from the center of the stream. Filter strips,<sup>7</sup> vegetative buffers, and

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<sup>7</sup> Filter strips are an area of herbaceous vegetation.

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.<sup>8</sup> 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 43:**

Waco states that Section VIII.B.4. of the draft permit modifies the requirement to orally notify TCEQ within one hour of a discharge under certain conditions. Waco states that 30 TAC § 321.42(t) does not provide for this exception and neither should the draft permit.

**Response 43:**

The ED agrees with the comment and modifies Section VIII.B.4. of the draft permit to conform to 30 TAC § 321.42(t):

In the event of a discharge from the RCS or an LMU during a chronic or catastrophic rainfall event or resulting from catastrophic conditions, the permittee shall orally notify the appropriate TCEQ regional office within one hour of the discovery of the discharge. The permittee shall send written notification to the appropriate regional office within 14 working days.

**Comment 44:**

Waco comments that Section VIII.B.2. requires the Applicant to notify TCEQ prior to taking soil samples only when sampling LMUs. Waco states that 30 TAC § 321.42(l) does not provide for this limitation and that the soil sample notification requirement should also apply to third party fields.

**Response 44:**

The ED agrees with the comment and modifies Section VIII.B.2. of the draft permit as follows:

The permittee shall notify the appropriate TCEQ regional office in writing or by electronic mail with the date, time, and location at least ten working days before collecting soil samples from current and historical LMUs; and third party fields.

**Comment 45:**

Waco comments that the Applicant has at least one and maybe more historical waste fields on the site. Waco states that previous LMU #6 has been removed from the permit and it unclear what

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<sup>8</sup> Per Practice Standard Code 391.

happened to LMU #4 or where it might have been located. Waco notes that 30 TAC § 321.42(k) requires that historical waste fields continue to be sampled. Therefore, those fields should remain in the permit for monitoring purposes even though no waste is being applied to them. Otherwise, it is unlikely that TCEQ inspectors will be aware of their status and the requirement that they must be sampled.

**Response 45:**

The ED believes Waco's comment refers to LMU #3 and LMU #7 in the Broumley application rather than LMU #4 and LMU #6. Reconfiguration of LMUs for the Broumley application consists of boundary changes for most LMUs, elimination of application on the existing LMU #3, and existing LMU #7; and renumbering of the northern portion of existing LMU #2 as LMU #3. The Regional Field Investigators use the historical permit and the existing permit to make a proper assessment of the site and should therefore be able to recognize historic waste application fields.

**Comment 46:**

Waco comments that Section VII.A.9.(b)(1) and (2) of the draft permit does not require the Applicant to collect soil samples on all current and historical LMUs every year. In some cases it allows exceptions, which are generally allowed under 30 TAC § 321.36(g), but are not allowed in major sole-source impairment zones. See 30 TAC § 321.42(k).

**Response 46:**

The ED agrees with the comment and modifies Section VII.A.9.(b)(1) and (2) of the draft permit as follows:

- (1) Initial Sampling. Before commencing manure, sludge, or wastewater application to LMUs or 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.

**Comment 47:**

Waco comments that Section VII.A.3.(a)(2) of the draft permit cites certified volumes for the RCSs. Waco notes that two of the RCSs have volumes listed as "TBD" and that this is unacceptable. At minimum, the facility should be required to meet the volume requirements in the existing permit. If there are plans for increased capacity, there should be interim and final requirements. The volume in the permit should indicate the minimum volume required. Certification of this minimum volume should be submitted to TCEQ, but minimum volume should be in the permit even if it has not been constructed.

**Response 47:**

Existing RCS volume requirements are contained in the existing authorization, and are enforced under that authorization by TCEQ Field Investigators. When this permit is issued, the new volume allocation requirements will take effect and construction will be required to meet those allocations within 180 days; and must be completed before exceeding 990 head. The required minimum volume allocations are shown in X.A.1. Section VII.A.3.(a) of the draft permit requires that after completion, liner and capacity certifications for new construction be maintained in the PPP.

The ED does agree that the volume requirements in the existing permit should be maintained until the modifications required by this draft permit have been completed and certified. Section VII.A.3.(a)(2) of the draft permit was changed to show the RCS volumes certified in the existing permit and now states that the volume requirements in the existing permit should be maintained until the design and construction of the modified RCSs is completed and certified. Also, see Response #17.

**Comment 48:**

Waco comments that Section X.A.3. implies that RCS #2 has not been completed and that there is no indication in the draft permit that anything is being done to this RCS, other than renumbering it from #4 to #2. Waco states that this provision does not mention RCS #3, which the draft permit seems to indicate will be enlarged.

**Response 48:**

The ED agrees with the comment and modified Section X.A.3. of the draft permit as follows:

3. Once modifications of new RCS 1 and new RCS 3 are completed, and the new settling basin is constructed, a RCS management plan will be developed to reflect the new volumes and implemented within thirty (30) days.

**Comment 49:**

Waco comments that Section X.E. of the draft permit provides requirements for slurry storage areas/basins. However, the locations of these areas/basins were not on any application maps or discussed in the narrative. Waco comments that Section X.E. should state that no slurry storage areas/basins may be constructed without amending the permit and certification of the liners.

**Response 49:**

TCEQ CAFO rules do not require a permit amendment to construct slurry storage areas. Section X.E. requires that any storage of slurry be in the drainage area of the RCSs. If slurry storage areas are constructed, liner certifications will be required and will have to be kept in the PPP.

**Comment 50:**

Waco comments that Section X.K. of the draft permit requires the Applicant to analyze certain parameters in any accumulated water detected in the underdrain leak detection system. Waco notes that phosphorus is not one of the parameters; and since phosphorus is a major concern in the watershed, it should be included as one of the parameters sampled.

**Response 50:**

TCEQ agrees with Waco's comment to include phosphorus in the sampling for the underdrain leak detection system for the pond and modifies Section X.K. as follows:

K. The permittee shall install an underdrain leak detection system for the synthetically-lined oxidation pond and monitor on a monthly basis. Any accumulated water noted in the underdrain leak detection system shall be sampled and analyzed, at a minimum, for fecal coliform, nitrate (as nitrogen), ammonia nitrogen (as nitrogen), total phosphorus, and total dissolved solids. The observation of the water in the leak detection system, the estimated volume of the water, as well as data related to sampling and analysis, shall be recorded in the PPP and notification shall be provided to the regional office within 30 days. The recirculation basin and anaerobic digester shall be certified in accordance with 30 TAC §321.38(g)(3).

**Comment 51:**

Waco comments that Section X.L. requires a major amendment to the permit before the Applicant can change the breed of the milking herd. Waco comments that the last sentence of this provision should apply to all cows, not just the milking herd, since waste production calculations are based on the dry cows and calves being Jersey cows. Additionally, since the waste production was based on a mature Jersey cow with average weight of 950 pounds, the phrase "or if the actual average weight of the mature Jersey cows exceed 950 pounds" should be appended to the last sentence of this provision.

**Response 51:**

The ED agrees with the comment and modifies Section X.L. of the draft permit as follows:

L. The waste calculations for the facility are based on mature Jersey cows with an average weight of 950 pounds. The permittee shall obtain a major amendment before changing the breed of any confined cattle.

**Comment 52:**

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, sludge accumulation, or available capacity above the sludge and the permit should clearly reflect that all capacity certifications require both as-built capacity and the volume of sludge accumulation.

**Response 52:**

RCS capacity certifications may or may not include sludge accumulations. However, all RCSs have a volume allocated to sludge. 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 in year three with the measurements, the operator has time to complete new construction and develop and implement an RCS management plan to appropriately manage the sludge volume in the ponds. Furthermore, daily pond marker readings should assist in determining excessive sludge accumulation in any RCS.

**Comment 53:**

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 RCS is based on the surface area of the RCS. 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 53:**

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

The surface area used in the RCS design and water balance inflow for the 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. Actual stage-storage data will not be available until the RCS expansion is complete.

**Comment 54:**

Doug and Linda Anderson comment that they are concerned about odor and state that increasing the dairy size will only increase the odor.

**Response 54:**

There are a number of requirements in 30 TAC Chapter 321, Subchapter B rules and the proposed permit for this facility designed to address the potential for nuisance odors or a condition of air pollution. 30 TAC § 321.43(j)(1)(A) requires that CAFO facilities “shall be operated in such a manner as to prevent the creation of a nuisance or a condition of air pollution as defined by Texas Health and Safety Code, § 341.011 and § 321.32(32) of this title (relating to Definitions), and as prohibited by § 101.4 of this title (relating to nuisance). The rule also requires facilities to operate in such a manner as to prevent a condition of air pollution as defined by Texas Health and Safety Code, 30 TAC § 382.003(3). Additionally, the rule requires an operator to take necessary action to identify any nuisance condition that occurs and take action to abate such condition as soon as practicable or as specified by the ED.

30 TAC § 321.32(32) defines “nuisance” as:

Any discharge of air contaminant(s), including but not limited to odors, of sufficient concentration and duration that are or may tend to be injurious to or that adversely affects human health or welfare, animal life, vegetation or property, or that interferes with the normal use and enjoyment of animal life, vegetation, or property.

The draft permit requires the Applicant to design and operate RCSs to minimize odors in accordance with accepted engineering practices. This permit authorizes the use of a covered anaerobic digester system. Each system must be operated in accordance with its design requirements and a RCS management plan that minimizes odors. Additionally, storage and land application of wastewater may not cause nuisance conditions. The solids must be cleaned out of the RCSs to prevent the accumulation of solids from exceeding the sludge volume designed for the structure. Removal should be conducted during favorable wind conditions that carry odors away from nearby receptors. Dead animals must be properly disposed of within three days unless otherwise provided by the ED and the animals must be disposed of to prevent nuisance conditions. Earthen pen areas must be maintained by scraping un-compacted manure and shaping pen surfaces, as necessary, to minimize odors and ponding.

Additionally, the facility must meet the requirements of 30 TAC § 321.43 in order to obtain an air standard authorization. The facility will implement an odor control plan under option #2 in 30 TAC § 321.43(j)(2) for expansion of existing facilities.

If concerned about potential violations, the public may contact TCEQ's Dallas/Fort Worth Region Office at 817-588-5800, TCEQ's Stephenville Special Project Office at 800-687-7078, or the statewide toll-free number at 1-888-777-3186. Additionally, you may file a complaint on line at <http://www2.tnrc.state.tx.us/complaints/index.cfm>. TCEQ's regional staff investigates public complaints and the agency takes appropriate enforcement action if the investigator documents a violation.

Finally, the draft permit does not limit the ability to use common law remedies for trespass, nuisance, or other causes of action in response to activities that may or actually do result in injury or adverse effects on human health or welfare, animal life, vegetation, or property, or that may or actually do interfere with the normal use and enjoyment of animal life, vegetation, or property.

**Comment 55:**

Doug and Linda Anderson comment that they are concerned about the impact the enlarged facility will have on the quality of there drinking water and impact on the Bosque River.

**Response 55:**

Although the proposed permit authorizes an expansion from 990 head to 1499 head, the conditions being proposed in this permit are anticipated to significantly reduce pollutants entering receiving waters. These reductions are from a combination of:

- 1) Changing the milk cow herd from Holstein to Jersey cows, a smaller breed that produces less waste;
- 2) Operating the anaerobic digester system, which is expected to reduce the overall P concentration of the wastewater to be land applied; and
- 3) Implementing on-site composting of manure, sludge and digester solids, which reduces the overall waste volume to be exported from the facility.

These voluntary changes, along with the regulatory requirements limiting the potential for RCS overflows and better managing land application of nutrient to LMUs make it feasible to allow the increase in headcount. This permit requires all exported manure, sludge, and wastewater that cannot be land applied in accordance with the NMP or 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 RCS to remain dry (i.e. the distance between the normal wastewater operating level and the spillway). The draft permit would require 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. However, in the event of an overflow, the Applicant must provide records to TCEQ to show that the overflow was unavoidable and show that the RCSs were being operated properly or be subject to enforcement action.

TCEQ implements and enforces standards that are established to protect human health, safety, and the environment. TCEQ rules allow wastewater to be beneficially used by land application at agronomic rates. The Applicant must maintain information on the cover crop planted and harvested and information on the application rate for the LMUs in the PPP. As crops are removed by harvesting or grazing, the nutrients in them are removed from the soil.

Herbicides, pesticides, and other toxic chemicals that may be linked to cancer or other health problems are required to be stored, used, and disposed of in a manner that prevents significant pollutants from entering water in the state or creating a nuisance condition.

**Comment 56:**

Doug and Linda Anderson comment that they are concerned with an increase in traffic from the operation, which would increase the amount of dust from the unpaved county road. They are also concerned that the operation will negatively affect their quality of life and their property values.

**Response 56:**

The Texas Legislature has not authorized the TCEQ to address these issues when considering a CAFO permit application. The ED's review is limited to the issues set out in TWC, Chapter 26 of TCEQ is authorized to consider issues that directly affect water quality, but not to consider issues such as the traffic congestion, quality of life issues, or property values. However, the permit does not limit the ability to seek legal remedies against an applicant regarding any potential trespass, nuisance, or other causes of action in response to activities that may result in injury to human health or property or that interfere with the normal use and enjoyment of property.

Additionally, if nearby residents suspect incidents of noncompliance with the permit or TCEQ rules they may be reported to TCEQ by calling toll-free, (800) 777-3186 or calling the TCEQ Region 4 Office in Fort Worth at (817) 588-5800 or the Stephenville Special Project Office at (254) 965-9200 or toll-free at (800) 687-7078. Citizen complaints may also be filed on-line at <http://www.tnrcc.state.tx.us/cgi-bin/enforcement/complaints>. If the Applicant fails to comply with all requirements of the permit, it is subject to administrative enforcement action, fines, and penalties.

**Summary of changes to the draft permit as a result of public comment:**

Part IV of the draft permit now reads:

**IV. General Description and Location of Waste Disposal System:**

Maximum Capacity: 1,499 total head of which 1,100 are milking (Jersey cows)

Site Plan: See Attachment A.

Retention Control Structures (RCS) total required capacities without freeboard (acre-feet):  
RCS #1-49.24, RCS #2-19.81, RCS #3-9.40; RCS #1 acts in-series with the anaerobic

digester system.

Land Management Units (LMUs) (acres): LMU#1-8, LMU#1a-51, LMU#2-27.5, LMU#3-12, LMU#4-70, LMU#5-32, LMU#6-29; See Attachment B for locations.

Location: 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. Latitude: 31° 58' 11"N Longitude: 98° 00' 03"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.

Part VII.A.3.(a)(2) of the draft permit now reads:

- (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 is complete, new capacity and liner certifications for RCSs 1 and 3 will be provided. Upon issuance of this permit, a new liner certification will be provided for the re-named RCS 2. RCS volume requirements in the existing authorization should be maintained until the design and construction of the modified RCSs has been completed and certified.

RCS	Construction date	Liner certification date	Volume
1	1997	1997	3.18
2	1997	1997	15.04
3	1999	1999	7.60
4	2001	2001	19.81

Part VII.A.5.(a)(5) of the draft permit now reads:

- (5) Permanent Pond Marker. The permittee shall install and maintain a permanent pond marker (measuring device) in each RCS, visible from the top of the levee to show the following:
  - (i) the volume for the design rainfall event;
  - (ii) one-foot increments beginning from the bottom of the RCS to the top of the embankment or spillway; and
  - (iii) design volume levels for maximum sludge accumulation and operating volume (calculated process generated wastewater plus rainfall runoff minus evaporation) must be identifiable on the marker.

Part VII.A.5.(a)(7) of the draft permit now reads:

- (7) Sludge Removal. The permittee shall monitor sludge accumulation

and depth, based upon the design sludge storage volume in the RCSs. Monitoring should be performed as necessary, but not less than annually for all RCSs beginning in year three (3) from the date of the permit issuance. Sludge shall be removed from the RCS in accordance with the design schedule for cleanout in the RCS management plan to prevent the accumulation of sludge from exceeding the designed sludge volume of the structure. Removal of sludge shall be conducted during favorable wind conditions that carry odors away from nearby receptors. 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;
- (iii) beneficially utilized by land application to land located outside of the major sole source impairment zone;
- (iv) composted onsite but not land applied to LMUs;
- (v) applied to 3<sup>rd</sup> party fields; or
- (vi) put to another beneficial use approved by the executive director.

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

Land application rates shall not exceed two times the phosphorus crop removal rate, not to exceed the crop nitrogen requirement, 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) depth is greater than 50 ppm phosphorus and less than or equal to 150 ppm phosphorus.

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

Land application rates shall not exceed one times the phosphorus crop removal rate, not to exceed the crop nitrogen requirement, 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) depth is greater than 150 ppm and less than 200 ppm phosphorus.

Part VII.A.9(b)(1) and (2) of the draft permit now reads:

- (1) Initial Sampling. Before commencing manure, sludge, or wastewater application to LMUs or 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.

Part VIII.B.2. of the draft permit now reads:

The permittee shall notify the appropriate TCEQ regional office in writing or by electronic mail with the date, time, and location at least ten working days before collecting soil samples from current and historical LMUs; and third party fields.

Part VIII.B.4. of the draft permit now reads:

In the event of a discharge from the RCS or a LMU during a chronic or catastrophic rainfall event or resulting from catastrophic conditions, the permittee shall orally notify the appropriate TCEQ regional office within one hour of the discovery of the discharge. The permittee shall send written notification to the appropriate regional office within 14 working days.

Part X.A.1. of the draft permit now reads:

A. RCS Modifications.

1. The permittee shall increase the size of existing RCS #2 and combine current RCS #1 and RCS #2, forming new RCS #1. Existing RCS #4 will be renamed RCS #2 and will function as an irrigation pond. A settling basin will be constructed to remove solids in the drainage area above RCS #3. Other components of the waste management system are a covered anaerobic digester, high-rate oxidation raceway, recirculation basin, and a methane generation system. All components are necessary 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	23.72	4.52	0	12.88	8.13	49.24	TBD
2	1.86	8.13	0	1.67	8.14	19.81	19.81
3	7.72	0	0	0.51	1.18	9.40	TBD

Part X.A.3. of the draft permit now reads:

3. Once modifications of new RCS 1 and new RCS 3 are completed, and the new settling basin is constructed, a RCS management plan will be developed to reflect the new volumes and implemented within thirty (30) days.

Part X.K. of the draft permit now reads:

K. The permittee shall install an underdrain leak detection system for the synthetically-lined oxidation pond and monitor on a monthly basis. Any accumulated water noted in the underdrain leak detection system shall be sampled and analyzed, at a minimum, for fecal coliform, nitrate (as nitrogen), ammonia nitrogen (as nitrogen), total phosphorus, and total dissolved solids. The observation of the water in the leak detection system, the estimated volume of the water, as well as data related to sampling and analysis, shall be recorded in the PPP and notification shall be provided to the regional office within 30 days. The recirculation basin and anaerobic digester shall be certified in accordance with 30 TAC §321.38(g)(3).

Part X.L. of the draft permit now reads:

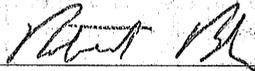
L. The waste calculations for the facility are based on mature Jersey cows with an average weight of 950 pounds. The permittee shall obtain a major amendment before changing the breed of any confined cattle.

Respectfully submitted,

Texas Commission on Environmental Quality

Glenn Shankle  
Executive Director

Robert Martinez, Director  
Environmental Law Division

By   
Robert Brush, Staff Attorney  
Environmental Law Division  
State Bar No. 00788772  
P.O. Box 13087, MC 173  
Austin, Texas 78711-3087  
Phone (512) 239-5600  
Fax: (512) 239-0606

REPRESENTING THE  
EXECUTIVE DIRECTOR OF THE  
TEXAS COMMISSION ON  
ENVIRONMENTAL QUALITY

**CERTIFICATE OF SERVICE**

I certify that on February 4, 2008 the "Executive Director's Response to Public Comments" for Permit No. WQ0003395000 was filed with the Texas Commission on Environmental Quality's Office of Chief Clerk.



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

TEXAS  
COMMISSION  
ON ENVIRONMENTAL  
QUALITY

2008 FEB -4 PM 4: 51

CHIEF CLERKS OFFICE

# Compliance History

Customer/Respondent/Owner-Operator:	CN602563488 BROUMLEY, JIM WHITLOCK	Classification: AVERAGE	Rating: 0.50
Regulated Entity:	RN101524577 BROUMLEY DAIRY FARM	Classification: AVERAGE	Site Rating: 0.50
ID Number(s):	WASTEWATER AGRICULTURE PERMIT		WQ0003395000
	WASTEWATER AGRICULTURE REGISTRATION		TXG015299
	WASTEWATER AGRICULTURE PERMIT		TX0121720
	WASTEWATER AGRICULTURE PERMIT		TX0121720
	AIR NEW SOURCE PERMITS PERMIT		73508
	AIR NEW SOURCE PERMITS REGISTRATION		73514
Location:	The facility is located on the W side of CR 240 approx one mile S of the intersection of CR 240 and HWY 6 in Hamilton Hamilton County	Rating Date: September 01 07	Repeat Violator: NO
TCEQ Region:	REGION 09 - WACO		
Date Compliance History Prepared:	August 04, 2008		
Agency Decision Requiring Compliance History:	Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.		
Compliance Period:	July 07, 2001 to August 01, 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? | 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 | 08/03/2001 | (39914)  |
| 2 | 05/08/2003 | (33553)  |
| 3 | 02/03/2004 | (259098) |
| 4 | 08/25/2005 | (406658) |
| 5 | 05/23/2006 | (467257) |
| 6 | 05/22/2007 | (561052) |
| 7 | 11/29/2007 | (609547) |
- E. Written notices of violations (NOV). (CCEDS Inv. Track. No.)
- |              |   |          |                          |
|--------------|---|----------|--------------------------|
| Date:        | 08/26/2005  | (406658) |                          |
| Self Report? | NO  |          | Classification: Minor    |
| Citation:    | 30 TAC Chapter 321, SubChapter B 321.39(f)(28)(C)   |          |                          |
| Description: | Failure to take soil samples from each land management unit owned, operated or controlled by this Regulated Entity and utilized for waste and/or wastewater application annually.                                 |          |                          |
| Self Report? | NO  |          | Classification: Moderate |
| Citation:    | 30 TAC Chapter 321, SubChapter B 321.39(f)(10)(C)   |          |                          |
| Description: | Failure to provide certification that the construction of the embankment of RCS #3 meets the design standards set by the NRCS, Corps of Engineers, Bureau of Reclamation, or American Society of Civil Engineers. |          |                          |

F. Environmental audits.

Notice of Intent Date: 05/15/2003 (61738)  
No DOV Associated

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

E

# Compliance History

Customer/Respondent/Owner-Operator:	CN602563488	BROUMLEY, JIM WHITLOCK	Classification: AVERAGE	Rating: 0.50
Regulated Entity:	RN101524577	BROUMLEY DAIRY FARM	Classification: AVERAGE	Site Rating: 0.50
ID Number(s):	WASTEWATER AGRICULTURE	PERMIT	WQ0003395000	
	WASTEWATER AGRICULTURE	REGISTRATION	TXG015299	
	WASTEWATER AGRICULTURE	PERMIT	TX0121720	
	WASTEWATER AGRICULTURE	PERMIT	TX0121720	
	AIR NEW SOURCE PERMITS	PERMIT	73508	
	AIR NEW SOURCE PERMITS	REGISTRATION	73514	
Location:	The facility is located on the W side of CR 240 approx one mile S of the intersection of CR 240 and HWY 6 in Hamilton Hamilton County		Rating Date: September 01 07	Repeat Violator: NO
TCEQ Region:	REGION 09 - WACO			
Date Compliance History Prepared:	August 04, 2008			
Agency Decision Requiring Compliance History:	Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.			
Compliance Period:	July 07, 2001 to August 01, 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? 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 08/03/2001 (39914)
  - 2 05/08/2003 (33553)
  - 3 02/03/2004 (259098)
  - 4 08/25/2005 (406658)
  - 5 05/23/2006 (467257)
  - 6 05/22/2007 (561052)
  - 7 11/29/2007 (609547)
- E. Written notices of violations (NOV). (CCEDS Inv. Track. No.)
 

Date: 08/26/2005 (406658)

Self Report? NO Classification: Minor

Citation: 30 TAC Chapter 321, SubChapter B 321.39(f)(28)(C)

Description: Failure to take soil samples from each land management unit owned, operated or controlled by this Regulated Entity and utilized for waste and/or wastewater application annually.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 321, SubChapter B 321.39(f)(10)(C)

Description: Failure to provide certification that the construction of the embankment of RCS #3 meets the design standards set by the NRCS, Corps of Engineers, Bureau of Reclamation, or American Society of Civil Engineers.

F. Environmental audits.  
Notice of Intent Date: 05/15/2003 (61738)  
No DOV Associated

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

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

SEP 25 2007

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (7007 0710 0002 1385 5239)

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

Re: No Objection  
TPDES Permit No. TX0121720  
Texas State Permit No. 03395  
Broumley Dairy  
Hico, TX 76401

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 August 8, 2007, and received on August 20, 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,

Claudia V. Hosch  
Chief  
NPDES Permits Branch

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

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