Administrative Package Cover Page

This file contains the following documents:

1. Summary of application (in plain language)
2. First Notice (NORI-Notice of Receipt of Application and Intent to Obtain a Permit)
3. Application Materials

ENGLISH LANGUAGE TEMPLATE FOR CAFO PERMIT APPLICATIONS

The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by the TCEQ Public Participation Plan and Language Access Plan. The information provided in this summary may change during the technical review of the application and is not a federal enforceable representation of the permit application.

1) Applicant's Name: Oene Keuning
2) Enter Customer Number: CN602622854
3) Name of facility: Okee Dairy
4) Enter Regulated Entity Number: RN102004272
5) Provide your permit Number: WQ0004108000
6) Facility Business: The facility confines 2,000 head of cattle in which 1,500 are milking. The facility has six (6) land management units (LMUs) with the following acreages: LMU #1 - 46, LMU #2 - 26, LMU#3 - 45, LMU #4 - 72, LMU #5 - 24 and LMU #6 - 100 acres. Two (2) retention control structures (RCSs), one (1) slurry pit and two (2) settling ponds. The required capacities are: RCS #1 - 9.19 ac-ft and RCS #2 - 26.46 ac-ft. There are nine (9) onsite wells of which three are plugged. The facility is located in the North Bosque River in Segment No. 1226 of the Brazos River Basin.
7) Facility Location: The facility is located at 4745 County Road 207, Hico, Hamilton County, Texas.
8) Application Type: Individual Permit Major Amendment
9) Description of your request: Reconfigure LMUs, addition of land, addition of new LMUs, reconfigure the drainage area, addition of a freestall barn, remove the slurry pit, expansion of the hospital barn, addition of a pen located to the East of the freestall barn and addition of Wells #10, #11 and #12.
10) Potential pollutant sources at the facility include (list the pollutant sources): Manure, manure stockpiles, wastewater, sludge, slurry, compost, feed & bedding, silage stockpiles, dead animals, dust, lubricants, parlor chemicals, pesticides and fuel storage tanks.
11) The following best management practices will be implemented at the site to manage pollutants from the listed pollutant sources (describe the best management practices that are used): stormwater is stored in the lagoon (RCS) until land applied through irrigation and manure and sludge are stockpiled in the drainage area of the RCS until land applied or hauled offsite for beneficial use. Manure and sludge generated by the CAFO will be retained and used in an appropriate and beneficial manner in accordance with a certified site-specific nutrient management plan. Wastewater will be contained in the RCS properly designed ((25-year frequency 10-day duration (25 year/10 day), constructed, operated and maintained according to the provision of the permit. Maintain 100-foot buffer for all irrigation wells or 150-foot for all supply wells. Dust - control speed and regular pen maintenance. Fertilizers - store under roof and handle according to specified label directions. Fuel Tanks - provide secondary containment and prevent overfills/spills. Dead

animals - dispose by a third-party rendering service, buried on-site or compost on-site. Collected within 24 hours of death and disposed within three days.

12) Unless otherwise limited, manure, sludge, or wastewater will not be discharged from a land management unit (LMU) or a retention control structure (RCS) into or adjacent to water in the state from a CAFO except resulting from any of the following conditions:

1) a discharge of manure, sludge, or wastewater that the permittee cannot reasonably prevent or control resulting from a catastrophic condition other than a rainfall event;

2) overflow of manure, sludge, or wastewater from a RCS resulting from a chronic/catastrophic rainfall event; or

3) a chronic/catastrophic rainfall discharge from a LMU that occurs because the permittee takes measures to de-water the RCS if the RCS is in danger of imminent overflow.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

NOTICE OF RECEIPT OF APPLICATION AND INTENT TO OBTAIN WATER QUALITY PERMIT AMENDMENT

PERMIT NO. WQ0004108000

APPLICATION. Oene Keuning, 4745 County Road 207, Hico, Texas 76457, who owns a dairy cattle facility, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Wastewater Permit No. WQ0004108000 (EPA I.D. No. TX0128619) for a Concentrated Animal Feeding Operation (CAFO) to authorize reconfiguring the LMUs, adding land, adding new LMUs, reconfiguring the drainage area, adding a freestall barn, removing the slurry pit, expansion of the hospital barn, adding a pen located to the East of the freestall barn and adding wells #10, #11, & #12. The facility is located at 4745 County Road 207, near the city of Hico, in Hamilton County, Texas 76457. TCEQ received this application on July 8, 2025. The permit application will be available for viewing and copying at Hamilton County Ag Extension Office, 101 East Henry Street, Hamilton, Texas prior to the date this notice is published in the newspaper. The application, including any updates, and associated notices are available electronically at the following webpage: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/cafo-applications. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For the exact location, refer to the application.

https://gisweb.tceq.texas.gov/LocationMapper/?marker=-98.031944,31.881388&level=18

ADDITIONAL NOTICE. TCEQ's Executive Director has determined the application is administratively complete and will conduct a technical review of the application. After technical review of the application is complete, the Executive Director may prepare a draft permit and will issue a preliminary decision on the application. **Notice of the Application and Preliminary Decision will be published and mailed to those who are on the county-wide mailing list and to those who are on the mailing list for this application. That notice will contain the deadline for submitting public comments.**

PUBLIC COMMENT / PUBLIC MEETING. You may submit public comments or request a public meeting on this application. The purpose of a public meeting is to provide the opportunity to submit comments or to ask questions about the application. TCEQ will hold a public meeting if the Executive Director determines that there is a significant degree of public interest in the application or if requested by a local legislator. A public meeting is not a contested case hearing.

OPPORTUNITY FOR A CONTESTED CASE HEARING. After the deadline for submitting public comments, the Executive Director will consider all timely comments and prepare a response to all relevant and material, or significant public comments. **Unless the application is directly referred for a contested case hearing, the response to comments, and the Executive Director's decision on the application, will be mailed to everyone who submitted public comments and to those persons who are on the mailing list for this application. If comments are received, the mailing will also provide instructions for requesting reconsideration of the Executive Director's decision and for requesting a contested case hearing.** A contested case hearing is a legal proceeding similar to a civil trial in state district court.

TO REQUEST A CONTESTED CASE HEARING, YOU MUST INCLUDE THE FOLLOWING ITEMS IN YOUR REQUEST: your name, address, phone number; applicant's name and proposed permit number; the location and distance of your property/activities relative to the proposed facility; a specific description of how you would be adversely affected by the facility in a way not common to the general public; a list of all disputed issues of fact that you submit during the comment period and, the statement "[I/we] request a contested case hearing." If the request for contested case hearing is filed on behalf of a group or association, the request must designate the group's representative for receiving future correspondence; identify by name and physical address an individual member of the group who would be adversely affected by the proposed facility or activity; provide the information discussed above regarding the affected member's location and distance from the facility or activity; explain how and why the member would be affected; and explain how the interests the group seeks to protect are relevant to the group's purpose.

Following the close of all applicable comment and request periods, the Executive Director will forward the application and any requests for reconsideration or for a contested case hearing to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

The Commission may only grant a request for a contested case hearing on issues the requestor submitted in their timely comments that were not subsequently withdrawn. **If a hearing is granted, the subject of a hearing will be limited to disputed issues of fact or mixed questions of fact and law relating to relevant and material water quality concerns submitted during the comment period.**

MAILING LIST. If you submit public comments, a request for a contested case hearing or a reconsideration of the Executive Director's decision, you will be added to the mailing list for this specific application to receive future public notices mailed by the Office of the Chief Clerk. In addition, you may request to be placed on: (1) the permanent mailing list for a specific applicant name and permit number; and/or (2) the mailing list for a specific county. If you wish to be placed on the permanent and/or the county mailing list, clearly specify which list(s) and send your request to TCEQ Office of the Chief Clerk at the address below.

INFORMATION AVAILABLE ONLINE. For details about the status of the application, visit the Commissioners' Integrated Database at www.tceq.texas.gov/goto/cid. Search the database using the permit number for this application, which is provided at the top of this notice.

AGENCY CONTACTS AND INFORMATION. All public comments and requests must be submitted either electronically at **https://www14.tceq.texas.gov/epic/eComment/**, or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105,

P.O. Box 13087, Austin, Texas 78711-3087. Please be aware that any contact information you provide, including your name, phone number, email address and physical address will become part of the agency's public record. For more information about this permit application or the permitting process, please call the TCEQ Public Education Program, Toll Free, at 1-800-687-4040 or visit their website at www.tceq.texas.gov/goto/pep. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from Oene Keuning at the address stated above or by calling Mr. Oene Keuning, Owner, at 254-796-4991.

Issuance Date: August 1, 2025

Abesha Michael

From: Jourdan Mullin <jmullin@enviroag.com>
Sent: Monday, July 14, 2025 1:43 PM
To: Abesha Michael
Cc: Corey Mullin
Subject: RE: Application to Amend Permit No. WQ0004108000 - Notice of Deficiency Letter

Follow Up Flag: Follow up
Flag Status: Flagged

Good Afternoon Abesha,

I have reviewed the attached NORI and everything looks correct as shown.

Respectfully,

Jourdan Mullin

Enviro-Ag Engineering, Inc.
9855 FM 847
Dublin, TX 76446

254/965-3500 – Work
806/679-5570 - Mobile

From: Corey Mullin <cmullin@enviroag.com>
Sent: Friday, July 11, 2025 7:22 PM
To: Jourdan Mullin <jmullin@enviroag.com>
Subject: Fw: Application to Amend Permit No. WQ0004108000 - Notice of Deficiency Letter

Sent via the Samsung Galaxy S25+, an AT&T 5G smartphone
Get Outlook for Android

From: Abesha Michael <Abesha.Michael@tceq.texas.gov>
Sent: Friday, July 11, 2025 6:39:26 PM
To: Corey Mullin <cmullin@enviroag.com>
Subject: Application to Amend Permit No. WQ0004108000 - Notice of Deficiency Letter

Dear Mr. Mullin:

The attached Notice of Deficiency letter sent on July 11, 2025, requests additional information needed to declare the application administratively complete. Please send the complete response to my attention by July 25, 2025.

Thank you,

Abesha H. Michael
Applications Review & Processing Team
Water Quality Division Support Section
Water Quality Division, MC 148
PO Box 13087
Austin, Texas 78711
Phone: o: 512-239-4912
Email: abesha.michael@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

ENVIRO-AG ENGINEERING, INC.
EAE
AMARILLO · STEPHENVILLE · ARTESIA

Corporate Office:
3404 Airway Blvd.
Amarillo TX 79118

Central Texas:
9855 FM 847
Dublin TX 76446

New Mexico:
203 East Main Street
Artesia NM 88210

July 2, 2025

TCEQ
Registration, Review and Reporting Division
Permits Administration Review Section
Water Quality Applications Team, MC-148
12100 Park 35 Circle
Austin, TX 78753

Re: Okee Dairy – Permit No. WQ0004108000
Hamilton County, Texas.

Dear Administrative Review Section,

Enclosed please find the Major Amendment application for the above-mentioned facility. The $350 application fee was paid electronically, and the voucher is attached. Should you have any questions please do not hesitate to contact me.

Respectfully Submitted,

Jourdan Mullin
Enviro-Ag Engineering, Inc.

Cc: TCEQ Region 4, Stephenville
Okee Dairy
EAE file

30 TAC 321, SUBCHAPTER B APPLICATION, POLLUTION PREVENTION PLAN & CNMP

Okee Dairy

Major Amendment

Prepared For:

Oene Keuning

4745 County Road 207

Hico, TX 76457

June 18, 2025

Prepared By:

ENVIRO-AG ENGINEERING, INC.
EAE
AMARILLO - STEPHENVILLE - ARTESIA

9855 FM 847 ♦ Dublin, TX 76446 ♦ Tel 254/965-3500 ♦ Fax 254/965-8000

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

ELECTRONIC WAIVER REQUEST FOR A CONCENTRATED ANIMAL FEEDING OPERATION (CAFO)

A Large CAFO, as defined in the CAFO rules at 30 TAC 321.32(14)(A), must request a waiver from e-reporting requirements codified in 40 Code of Federal Regulations §127.15 OR be required to submit CAFO annual reports electronically.

Are you requesting a waiver from e-reporting requirements?

☒ Yes, Indicate the type of waiver below.

☒ Temporary Waiver

☐ Permanent Waiver (available to facilities and entities owned or operated by members of religious communities that choose not to use certain modern technologies (e.g., computers, electricity))

☐ No, you must submit your application electronically through TCEQ ePermits system (STEERS) at https://www3.tceq.texas.gov/steers/index.cfm. Check How to Apply through STEERS.

If an electronic waiver request is granted, the Applicant(s) seeking authorization, or an authorized permittee(s) may continue to submit CAFO annual reports to TCEQ in a paper format.

Note:

- An approved waiver is not transferrable.
- Each Owner or Operator must request his own waiver.
- Temporary waiver will not extend beyond five years. However, permittees may re-apply for a new temporary waiver, if needed.

State Only CAFOs are exempt from this requirement.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDIVIDUAL PERMIT APPLICATION FOR A CONCENTRATED ANIMAL FEEDING OPERATION (CAFO)

If you have questions about completing this form, please contact the Applications Review and Processing Team at 512-239-4671.

SECTION 1. APPLICATION FEE

Minor Amendment - $150.00
Renewal - $315.00
New or Major Amendment - $350.00

Mailed	Check/Money Order Number:	
	Check/Money Order Amount:	
	Name Printed on Check:	
EPAY	Voucher Number: 773604 & 773605	
	Copy of Payment Voucher enclosed?	Yes ☒

SECTION 2. TYPE OF APPLICATION

A. Coverage: State Only ☐ TPDES ☒

B. Media Type: Water Quality ☐ Air and Water Quality ☒

C. Application Type: New ☐ Major Amendment ☒
Renewal ☐ Minor Amendment ☐

D. For amendments, describe the proposed changes: Reconfigure LMUs, addition of land, addition of new LMUs, reconfigure the drainage area, addition of a freestall barn, remove the slurry pit, expansion of the hospital barn, addition of a pen located to the East of the freestall barn and addition of Wells #10, #11, & #12.

E. For existing permits:
What is the permit number? WQ0004108000
What is the EPA I.D. Number? TX 0128619

SECTION 3. FACILITY OWNER (APPLICANT) INFORMATION

A. What is the legal name of the facility owner?
Oene Keuning

Print this voucher for your records. If you are sending the TCEQ hardcopy documents related to this payment, include a copy of this voucher.

Transaction Information

Voucher Number:	773604
Trace Number:	582EA000675011
Date:	07/03/2025 09:29 AM
Payment Method:	CC - Authorization 000007993G
Voucher Amount:	$300.00
Fee Type:	CAFO PERMIT - NEW OR MAJOR AMENDMENT
ePay Actor:	JOURDAN MULLIN
Actor Email:	jmullin@enviroag.com
IP:	156.146.244.233

Payment Contact Information

Name:	JOURDAN MULLIN
Company:	ENVIRO-AG ENGINEERING INC
Address:	3404 AIRWAY BLVD, AMARILLO, TX 79118
Phone:	806-679-5570

Site Information

Site Name:	OKEE DAIRY
Site Location:	4745 CR 207 HICO TX 76457

Customer Information

Customer Name:	OENE KEUNING
Customer Address:	4745 CR 207, HICO, TX 76457

Close

Print this voucher for your records. If you are sending the TCEQ hardcopy documents related to this payment, include a copy of this voucher.

Transaction Information

Voucher Number:	773605
Trace Number:	582EA000675011
Date:	07/03/2025 09:29 AM
Payment Method:	CC - Authorization 000007993G
Voucher Amount:	$50.00
Fee Type:	30 TAC 305.53B WQ NOTIFICATION FEE
ePay Actor:	JOURDAN MULLIN
Actor Email:	jmullin@enviroag.com
IP:	156.146.244.233

Payment Contact Information

Name:	JOURDAN MULLIN
Company:	ENVIRO-AG ENGINEERING INC
Address:	3404 AIRWAY BLVD, AMARILLO, TX 79118
Phone:	806-679-5570

Close

B. If the applicant is an existing TCEQ customer, provide the Customer Number (CN) issued to this entity? CN 602622854

C. What is the contact information for the owner?

Mailing Address: 4745 CR 207

City, State and Zip Code: Hico, TX 76457

Phone Number: 254/796-4991 Fax Number: n/a

E-mail Address: n/a

D. Indicate the type of customer:

- ☒ Individual
- ☐ Limited Partnership
- ☐ General Partnership
- ☐ Trust
- ☐ Sole Proprietorship (D.B.A.)
- ☐ Corporation
- ☐ Estate
- ☐ Federal Government
- ☐ County Government
- ☐ State Government
- ☐ City Government
- ☐ Other Government
- ☐ Other, specify: Click here to enter text.

E. If the customer type is individual, complete Attachment 1.

F. Is this customer an independent entity?

☒ Yes ☐ No government, subsidiary, or part of a larger corporation

G. Number of employees:

☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 or higher

H. For Corporations and Limited Partnerships:

What is the Tax Identification Number issued by the State Comptroller: Click here to enter text.

What is the Charter Filing Number issued by the Texas Secretary of State: Click here to enter text.

SECTION 4. CO-APPLICANT INFORMATION

Complete this section only if another person or entity is required to apply as a co-permittee.

A. What is the legal name of the co-applicant?

Click here to enter text.

B. If the applicant is an existing TCEQ customer, provide the Customer Number (CN) issued to this entity? CN Click here to enter text.

C. What is the contact information for the co-applicant?

Mailing Address: Click here to enter text.

City, State and Zip Code: Click here to enter text.

Phone Number: Fax Number: Click here to enter text.

E-mail Address: Click here to enter text.

D. Indicate the type of customer:

- ☐ Inividual
- ☐ Limited Partnership
- ☐ General Partnership
- ☐ Trust
- ☐ Sole Proprietorship (D.B.A.)
- ☐ Corporation
- ☐ Estate
- ☐ Federal Government
- ☐ County Government
- ☐ State Government
- ☐ City Government
- ☐ Other Government
- ☐ Other, specify: Click here to enter text.

E. If the customer type is individual, complete Attachment 1.

F. Is this customer an independent entity?

☐ Yes ☐ No government, subsidiary, or part of a larger corporation

G. Number of employees:

☐ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 or higher

H. For Corporations and Limited Partnerships:

What is the Tax Identification Number issued by the State Comptroller: Click here to enter text.

What is the Charter Filing Number issued by the Texas Secretary of State: Click here to enter text.

SECTION 5. APPLICATION CONTACT INFORMATION

This is the person TCEQ will contact if additional information is needed about this application.

Prefix (Mr., Ms., Miss): Mr.

Application Contact First and Last Name: Corey Mullin

Title: Consultant Credentials: Click here to enter text

Company Name: Enviro-Ag Engineering, Inc.

Mailing Address: 9855 FM 847

City, State and Zip Code: Dublin, TX 76446

Phone Number: 254/965-3500 Fax Number: 254/965-8000

E-mail Address: cmullin@enviroag.com

SECTION 6. PERMIT CONTACT INFORMATION

Provide two names of individuals that TCEQ can contact during the term of the permit.

A. Prefix (Mr., Ms., Miss): Mr.

Permit Contact First and Last Name: Corey Mullin

Title: Consultant Credentials: Click here to enter text.

Company Name: Enviro-Ag Engineering, Inc.

Mailing Address: 9855 FM 847

City, State and Zip Code: Dublin, TX 76446

Phone Number: 254/965-3500 Fax Number: 254/965-8000 E-mail Address: cmullin@enviroag.com

B. Prefix (Mr., Ms., Miss): Mr.

Permit Contact First and Last Name: Oene Keuning

Title: Owner Credentials: Click here to enter text.

Company Name: Okee Dairy

Mailing Address: 4745 CR 207

City, State and Zip Code: Hico, TX 76457

Phone Number: 254/796-4991 Fax Number: n/a E-mail Address: n/a

SECTION 7. ANNUAL BILLING CONTACT INFORMATION

Please identify the individual for receiving the annual fee invoices.

Is the billing contact and contact information the same as the Owner or the Co-Applicant identified in Section 3) or Section 4) above?

☒ Yes, specify which applicant on the line below and go to Section 8)

Owner, Oene Keuning

☐ No, complete this section

Prefix (Mr., Ms., Miss): Click here to enter text.

First and Last Name: Click here to enter text.

Title: Click here to enter text. Credentials: Click here to enter text.

Company Name: Click here to enter text.

Mailing Address: Click here to enter text.

City, State and Zip Code: Click here to enter text.

Phone Number: Click here to enter text. Fax Number: Click here to enter text. E-mail

Address: Click here to enter text.

SECTION 8. LANDOWNER INFORMATION

A. Landowner where the production area is or will be located

Landowner Name: Oene Keuning

B. Landowner of the land management units (LMUs)

Landowner Name: Oene Keuning

SECTION 9. PUBLIC NOTICE INFORMATION

A. Individual responsible for publishing the notices in the newspaper

Prefix (Mr., Ms., Miss): Mrs. First and Last Name: Jourdan Mullin

Title: Consultant Credentials: Click here to enter text.

Company Name: Enviro-Ag Engineering, Inc.

Mailing Address: 9855 FM 847

City, State and Zip Code: Dublin, TX 76446

Phone Number: 254/965-3500 Fax Number: 254/965-8000 E-mail Address: jmullin@enviroag.com

B. Method for receiving the notice package for the Notice of Receipt and Intent

☒ E-mail: jmullin@enviroag.com

☐ Fax Number: Click here to enter text.

☒ Regular Mail:

Mailing Address: 9855 FM 847

City, State and Zip Code: Dublin, TX 76446

C. Contact person to be listed in the notice

Prefix (Mr., Ms., Miss): Mr.

First and Last Name: Oene Keuning

Title: Owner Credentials: Click here to enter text.

Company Name: Okee Dairy

Phone Number: 254/796-4991

D. Public viewing location

If the facility is located in more than one county, a public viewing location for each county must be provided.

Public Building Name: Hamilton County Ag Extension Office

Physical Address of Building: 101 E Henry St.

City: Hamilton County: Hamilton County

Phone Number: 254/386-3919

E. Bilingual Notice Requirement

For new, major amendment, and renewal applications. This information can be obtained by contacting the bilingual/ESL coordinator at the nearest elementary or middle school.

1. Is a bilingual education program required by the Texas Education Code at the nearest elementary or middle school to the facility or proposed facility?
Yes ☐ No ☒

(If No, alternative language notice publication is not required; skip to Section 10. Regulated Entity (Site) Information.)

2. Are the students who attend either the elementary school or the middle school enrolled in a bilingual education program at that school?
Yes ☐ No ☐

3. Do the students at these schools attend a bilingual education program at another location?
Yes ☐ No ☐

4. Would the school be required to provide a bilingual education program but the school has waived out of this requirement under 19 TAC §89.1205(g)?
Yes ☐ No ☐

5. If the answer is yes to 1, 2, 3, or 4, public notice in an alternative language is required. Which language is required by the bilingual program?

6. Complete the CAFO Plain Language Summary Template (English) for CAFO Permit Applications for a new, renewal, major or minor amendment and submit with this application.

If a bilingual education program is required by the Texas Education Code at the nearest elementary or middle school to the facility or proposed facility, also complete the CAFO Plain Language Summary Template (Spanish) or provide a translated copy of the completed English plain language summary in the appropriate alternative language if different from Spanish.

F. Public Involvement Plan Form

Complete and attach one Public Involvement Plan (PIP) Form (TCEQ Form 20960) for each application for a new permit or major amendment to a permit.

SECTION 10. REGULATED ENTITY (SITE) INFORMATION

A. Site Name as known by the local community: Okee Dairy

B. If this is an existing permitted site, provide the Regulated Entity Number (RN) issued to this site? RN 102004272

C. Site Address/Location:

If the site has a physical address such as 12100 Park 35 Circle, Austin, TX 78753, complete Item 1.

ENGLISH LANGUAGE TEMPLATE FOR CAFO PERMIT APPLICATIONS

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12) Unless otherwise limited, manure, sludge, or wastewater will not be discharged from a land management unit (LMU) or a retention control structure (RCS) into or adjacent to water in the state from a CAFO except resulting from any of the following conditions:

1) a discharge of manure, sludge, or wastewater that the permittee cannot reasonably prevent or control resulting from a catastrophic condition other than a rainfall event;

2) overflow of manure, sludge, or wastewater from a RCS resulting from a chronic/catastrophic rainfall event; or

3) a chronic/catastrophic rainfall discharge from a LMU that occurs because the permittee takes measures to de-water the RCS if the RCS is in danger of imminent overflow.

Texas Commission on Environmental Quality

Public Involvement Plan Form for Permit and Registration Applications

The Public Involvement Plan is intended to provide applicants and the agency with information about how public outreach will be accomplished for certain types of applications in certain geographical areas of the state. It is intended to apply to new activities; major changes at existing plants, facilities, and processes; and to activities which are likely to have significant interest from the public. This preliminary screening is designed to identify applications that will benefit from an initial assessment of the need for enhanced public outreach.

All applicable sections of this form should be completed and submitted with the permit or registration application. For instructions on how to complete this form, see TCEQ-20960-inst.

Section 1. Preliminary Screening

☐ New Permit or Registration Application

☒ New Activity - modification, registration, amendment, facility, etc. (see instructions)

If neither of the above boxes are checked, completion of the form is not required and does not need to be submitted.

Section 2. Secondary Screening

☒ Requires public notice,

☐ Considered to have significant public interest, **and**

☐ Located within any of the following geographical locations:

- Austin
- Dallas
- Fort Worth
- Houston
- San Antonio
- West Texas
- Texas Panhandle
- Along the Texas/Mexico Border
- Other geographical locations should be decided on a case-by-case basis

If all the above boxes are not checked, a Public Involvement Plan is not necessary. Stop after Section 2 and submit the form.

☐ Public Involvement Plan not applicable to this application. Provide **brief** explanation.

Section 3. Application Information

Type of Application (check all that apply):

Air ☐ Initial ☐ Federal ☐ Amendment ☐ Standard Permit ☐ Title V

Waste ☐ Municipal Solid Waste ☐ Industrial and Hazardous Waste ☐ Scrap Tire
☐ Radioactive Material Licensing ☐ Underground Injection Control

Water Quality

☒ Texas Pollutant Discharge Elimination System (TPDES)

☐ Texas Land Application Permit (TLAP)

☒ State Only Concentrated Animal Feeding Operation (CAFO)

☐ Water Treatment Plant Residuals Disposal Permit

☐ Class B Biosolids Land Application Permit

☐ Domestic Septage Land Application Registration

Water Rights New Permit

☐ New Appropriation of Water

☐ New or existing reservoir

Amendment to an Existing Water Right

☐ Add a New Appropriation of Water

☐ Add a New or Existing Reservoir

☐ Major Amendment that could affect other water rights or the environment

Section 4. Plain Language Summary

Okee Dairy is a dairy milking facility.

Section 5. Community and Demographic Information

Community information can be found using EPA's EJ Screen, U.S. Census Bureau information, or generally available demographic tools.

Information gathered in this section can assist with the determination of whether alternative language notice is necessary. Please provide the following information.

Hico
(City)

Hamilton
(County)

(Census Tract)
Please indicate which of these three is the level used for gathering the following information.

☐ City ☐ County ☒ Census Tract

(a) Percent of people over 25 years of age who at least graduated from high school

88.9%

(b) Per capita income for population near the specified location

$24,810

(c) Percent of minority population and percent of population by race within the specified location

White - 75.6%. Black or African American - 3.29%. Hispanic - 12.7%. Two or More Races - 2.11%. Other - 2.68%. Asian - 1.3%. Indian - 1.6%. Multiracial - 0.72%

(d) Percent of Linguistically Isolated Households by language within the specified location

0%

(e) Languages commonly spoken in area by percentage

English - 89.4%
Spanish - 10.6%

(f) Community and/or Stakeholder Groups

N/A

(g) Historic public interest or involvement

N/A

Section 6. Planned Public Outreach Activities

(a) Is this application subject to the public participation requirements of Title 30 Texas Administrative Code (30 TAC) Chapter 39?

[X] Yes [ ] No

(b) If yes, do you intend at this time to provide public outreach other than what is required by rule?

[ ] Yes [ ] No

If Yes, please describe.

If you answered "yes" that this application is subject to 30 TAC Chapter 39, answering the remaining questions in Section 6 is not required.

(c) Will you provide notice of this application in alternative languages?

[ ] Yes [ ] No

Please refer to Section 5. If more than 5% of the population potentially affected by your application is Limited English Proficient, then you are required to provide notice in the alternative language.

If yes, how will you provide notice in alternative languages?

- [ ] Publish in alternative language newspaper
- [ ] Posted on Commissioner's Integrated Database Website
- [ ] Mailed by TCEQ's Office of the Chief Clerk
- [ ] Other (specify)

(d) Is there an opportunity for some type of public meeting, including after notice?

[ ] Yes [ ] No

(e) If a public meeting is held, will a translator be provided if requested?

[ ] Yes [ ] No

(f) Hard copies of the application will be available at the following (check all that apply):

- [ ] TCEQ Regional Office
- [ ] TCEQ Central Office
- [ ] Public Place (specify)

Section 7. Voluntary Submittal

For applicants voluntarily providing this Public Involvement Plan, who are not subject to formal public participation requirements.

Will you provide notice of this application, including notice in alternative languages?

[ ] Yes [ ] No

What types of notice will be provided?

- [X] Publish in alternative language newspaper
- [ ] Posted on Commissioner's Integrated Database Website
- [ ] Mailed by TCEQ's Office of the Chief Clerk
- [ ] Other (specify)

If the site does not have a physical address, provide a location description in Item 2. Example: located on the north side of FM 123, 2 miles west of the intersection of FM 123 and Highway 1.

Item 1: Physical Address of Project or Site:

Street Number and Name: 4745 CR 207

City, State and Zip Code: Hico, TX 76457

Item 2: Site Location Description:

Location description: Click here to enter text.

City where the site is located or, if not in a city, what is the nearest city: Click here to enter text.

Zip Code where the site is located: Click here to enter text.

D. County or counties if more than 1: Hamilton

E. Latitude: 31 52' 52.81" N Longitude: 98 01' 55.18"W

F. Animal Type:

- ☒ Dairy-0241
- ☐ Beef Cattle- 0211
- ☐ Swine-0213
- ☐ Broiler-0251
- ☐ Laying Hens-0252
- ☐ Sheep/Goats-0214
- ☐ Auction-5154
- ☐ Other, specify: Click here to enter text.

G. Existing Maximum Number of Animals: 2,000 Total; 1,500 Milking

Proposed Maximum Number of Animals: 2,000 Total; 1,500 Milking

H. What is the total LMU acreage? 463

SECTION 11. MISCELLANEOUS INFORMATION

A. Did any person who was formerly employed by the TCEQ represent your company and get paid for service regarding this application? Yes ☐ No ☒
If yes, provide the name(s) of the former TCEQ employee(s): Click here to enter text.

B. Is the facility located on Indian Country Lands? Yes ☐ No ☒
If yes, do not submit this application. You must obtain authorization through EPA Region 6.

C. Is the production area located within the protection zone of a sole source drinking water supply? Yes ☐ No ☒

D. Is any permanent school fund land affected by this application? Yes ☐ No ☒

If yes, provide the location and foreseeable impacts and effects this application has on the land(s). Click here to enter text.

E. Delinquent Fees and Penalties:

Do you owe fees to the TCEQ? Yes ☐ No ☒

Do you owe any penalties to the TCEQ? Yes ☐ No ☒

If you answered yes to either of the above questions, provide the amount owed, the type of fee or penalty, and an identifying number.
Click here to enter text.

SECTION 12. AFFECTED LANDOWNER INFORMATION

This section must be completed if the application type is new or major amendment. If the application type is renewal or minor amendment, skip to Section 13.

A. Landowner map. Attach a landowner map or drawing, with scale, that includes the following. Each landowner should be designated by a letter or number on both the list and the map.

- The applicant's property boundaries, including onsite and offsite LMUs; and
- The property boundaries of all landowners within 500 feet of the applicant's property.

B. Landowner list. Attach a separate list of the landowners' names and mailing addresses. The list must be cross-referenced to the landowners map.

C. Landowner list media. Indicate the format of the landowners list.

☒ Read/Writeable CD

☐ 4 sets of mailing labels

D. Landowner data source. Provide the source of the landowners' names and mailing addresses.

Hamilton County Appraisal District

SECTION 13. ATTACHMENTS

A. All applications

- Supplemental Permit Information Form, if required by instructions on that form
- Current copy of tax records or deed showing ownership of the land
- Lease agreement, if LMUs are not owned by the applicant or co-applicant

B. New, Major amendment, or Renewal

- Completed Technical Information Packet (TCEQ-00760).

C. New and Major amendment

- Public Involvement Plan Form (TCEQ-20960)

D. Minor Amendment

Attach the following items if applicable:

- Current vicinity map, site map, runoff control map, and LMU map

- RCS design calculations
- Nutrient Management Plan or Land application rate calculations
- Other technical documents affected by the proposed amendment

SIGNATURE PAGE

If co-applicants are required, each co-applicant must submit an original, separate signature page.

Permit Number: WQ0004108000

Applicant: Oene Keuning

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I further certify that I am authorized under 30 Texas Administrative Code

§305.44 to sign and submit this document, and can provide documentation in proof of such authorization upon request.

Signatory Name: Oene Keuning

Title: Owner

Signature: _____ Date: 7-2-25

SUBSCRIBED AND SWORN to before me by the said Oene Keuning on

this 2nd day of July, 20 25

My commission expires on the 25th day of February, 20 28

RICHARD LYN GEORGE NOTARY PUBLIC STATE OF TEXAS ID 132374303 EXP. 02-25-2028

_____
Notary Public

Hamilton County
County, Texas

Attachment 1
Individual Information

Complete this attachment if the facility owner or co-applicant is an individual. Make additional copies of this attachment if both are individuals.

Prefix (Mr., Ms., Miss): Mr.

Full Legal Name, including middle name: Oene Keuning

Driver's License or State Identification Number: XXXXXXXX

State that Issued the License or Identification Number: Texas

Date of Birth: XX/XX/XXXX

Mailing Address: 4745 CR 207

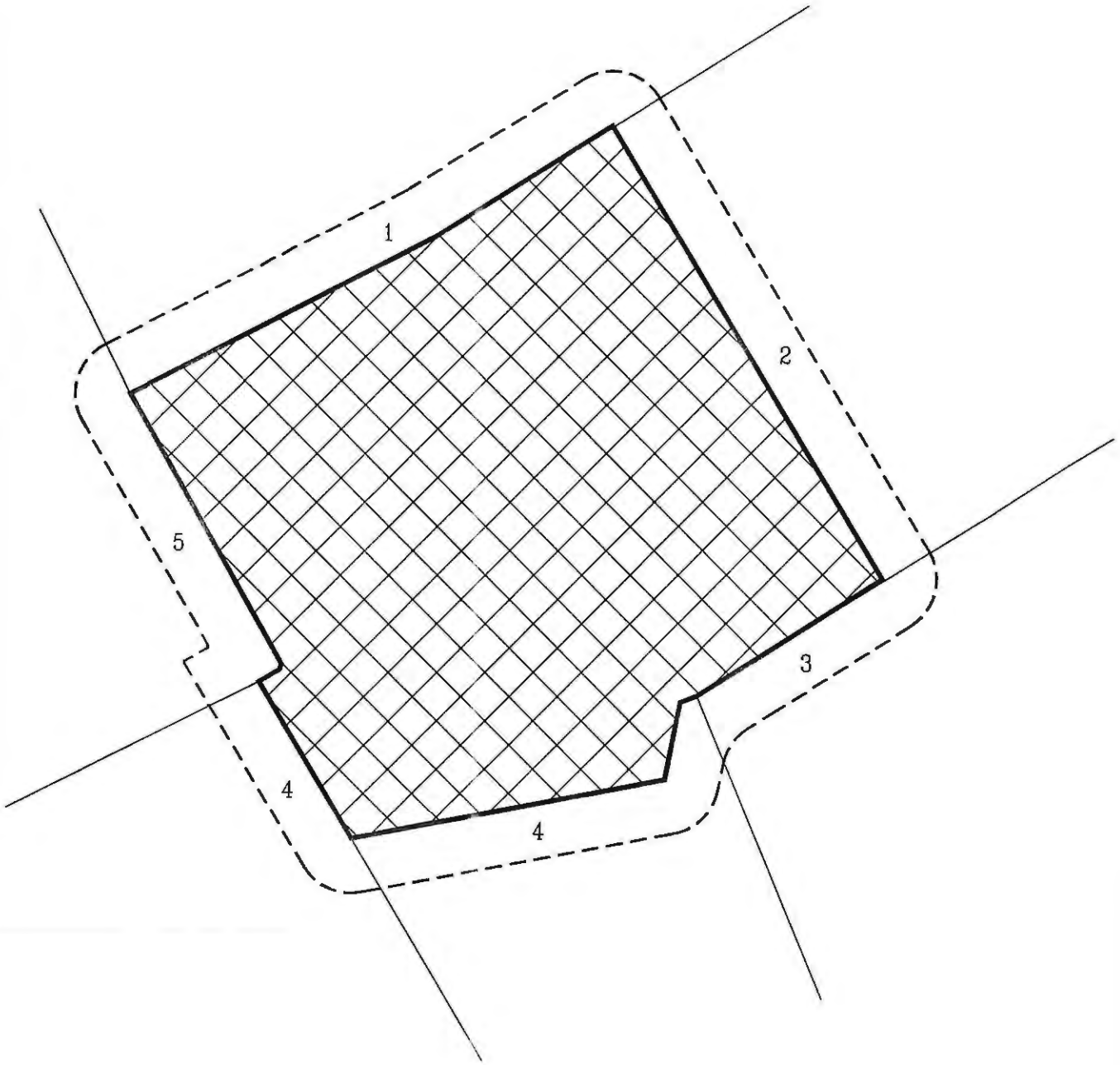
City, State and Zip Code: Hico, TX 76457

Phone Number: 254/796-4991 Fax Number: n/a

E-mail Address: n/a

For TCEQ Use Only

Customer Number _____
Regulated Entity Number _____
Permit Number _____



LEGEND:

Denotes Okee Dairy Property

— — Denotes 500' Radius

——— Denotes Adjacent Landowner Tract

Map Generated 6/16/2025

N

W E

S

700' 0 700' 1400'

SCALED AS SHOWN

Source: Hamilton County Appraisal District

Okee Dairy Hico, Texas Hamilton County	Adjacent Landowner Map	ENVIRO-AG EAE ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Blvd. AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

ADJACENT LANDOWNERS LIST

Name Lake M. Davis Number on Map 1 Address P.O. Box 466 Address Hico, TX 76457	Name David & Leslie DeJong Number on Map 5 Address 4483 E FM 219 Address Hico, TX 76457
Name Joseph Hennessy Number on Map 2 Address 6135 CR 207 Address Hico, TX 76457	
Name Gary & Jana Crabtree Number on Map 3 Address P.O. Box 690 Address Glen Rose, TX 76043	
Name 4P Pastures, LLC Number on Map 4 Address 4483 E. FM 219 Address Hico, TX 76457	

Please identify where you obtained the landowner information.

Hamilton County Appraisal District; June 2025

Facility Name Okee Dairy

Hamilton CAD Property Search

Property Details

Account			
Property ID:	19945	**Geographic ID:**	26000000000790001
Type:	R	**Zoning:**	
Property Use:			
Location			
Situs Address:	4745 CR 207 FAIRY, TX		
Map ID:	HI5	**Mapsco:**	
Legal Description:	468 R KENNEDY, ACRES: 176.5		
Abstract/Subdivision:	A00468		
Neighborhood:	(HICO) HICO STUDY		
Owner			
Owner ID:	20609		
Name:	KEUNING OENE		
Agent:			
Mailing Address:	4745 CR 207 HICO, TX 76457		
% Ownership:	100.0%		
Exemptions:	AB - For privacy reasons not all exemptions are shown online.		

Property Values

Improvement Homesite Value:	$141,700 (+)
Improvement Non-Homesite Value:	$0 (+)
Land Homesite Value:	$0 (+)
Land Non-Homesite Value:	35,000 (+)
Agricultural Market Valuation:	$877,500 (+)
Market Value:	$1,024,200 (=)
Agricultural Value Loss:	$858,980 (-)
Appraised Value:	$165,220 (=)
HS Cap Loss:	$0 (-)

Circuit Breaker:	$0 (-)
Assessed Value:	$165,220
Ag Use Value:	$18,520

The 2025 appraisal roll values are subject to change and are not certified. Information provided for research purposes only. Legal descriptions and acreage amounts are for Appraisal District use only and should be verified prior to using for legal purpose and or documents. Please contact the Appraisal District to verify all information for accuracy.

Property Taxing Jurisdiction

Owner: KEUNING OENE **%Ownership:** 100.0%

Entity	Description	Tax Rate	Market Value	Taxable Value	Estimated Tax	Freeze Ceiling
EHI	HICO EMERGENCY SERVICE DISTRICT	0.085295	$1,024,200	$165,220	$140.92	
GHA	HAMILTON COUNTY	0.430000	$1,024,200	$164,811	$708.69	
SHI	HICO ISD	0.855200	$1,024,200	$165,220	$1,412.96	
CAD	County Appraisal District	0.000000	$1,024,200	$165,220	$0.00	

Total Tax Rate: 1.370495

Estimated Taxes With Exemptions: $2,262.57

Estimated Taxes Without Exemptions: $14,036.61

Property Improvement - Building

Type: Mobile Home Living Area: 2324.0 sqft **Value:** $141,700

Type	Description	Class CD	Year Built	SQFT
MH	MH	MH2	2019	728
MH	MH	MH2	2019	868
MH	MH	MH2	2022	728
CPT	CARPORT	CPT1	2022	480
CPT	CARPORT	CPT1	2022	600
CPT	CARPORT	CPT1	2022	576

Property Land

Type	Description	Acreage	Sqft	Eff Front	Eff Depth	Market Value	Prod. Value
NP	NATIVE PASTURE	175.50	7,644,780.00	0.00	0.00	$877,500	$18,520
RES	RESIDENTIAL LAND	1.00	43,560.00	0.00	0.00	$5,000	$0

Property Roll Value History

Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap Loss	Assessed
2025	$141,700	$882,500	$18,520	$165,220	$0	$165,220
2024	$145,870	$885,800	$13,730	$167,900	$0	$167,900
2023	$109,260	$706,000	$12,890	$122,150	$0	$122,150
2022	$109,260	$811,900	$12,890	$122,150	$0	$122,150
2021	$90,410	$529,500	$12,890	$103,300	$0	$103,300
2020	$0	$423,600	$12,890	$12,890	$0	$12,890
2019	$0	$529,500	$12,890	$12,890	$0	$12,890
2018	$0	$441,250	$12,890	$12,890	$0	$12,890
2017	$0	$441,250	$12,890	$12,890	$0	$12,890

Property Deed History

Deed Date	Type	Description	Grantor	Grantee	Volume	Page	Number
3/20/2008	OT	OWNER TRANSFER	ALT JEWEL	KEUNING OENE	423	836	0
2/8/2002	WD	WARRANTY DEED	MULDER BAUKE	ALT JEWEL	346	19	0
2/23/1994	OT	OWNER TRANSFER	ALT RUSSELL	MULDER BAUKE			0

Estimated Tax Due

If Paid:

Year	Taxing Jurisdiction	Tax Rate	Market Value	Taxable Value	Base Tax	Base Taxes Paid	Base Tax Due	Discount/Penalty & Interest	Attorney Fees
2024	HICO EMERGENCY SERVICE DISTRICT	0.085295	$1,031,670	$167,900	$143.21	$143.21	$0.00	$0.00	$0.00
2024	HAMILTON COUNTY	0.430000	$1,031,670	$167,491	$720.21	$720.21	$0.00	$0.00	$0.00
2024	HICO ISD	0.855200	$1,031,670	$167,900	$1,435.88	$1,435.88	$0.00	$0.00	$0.00
	2024 Total	1.370495			$2,299.30	$2,299.30	$0.00	$0.00	$0.00
2023	HICO EMERGENCY SERVICE DISTRICT	0.062379	$815,260	$122,150	$76.20	$76.20	$0.00	$0.00	$0.00
2023	HAMILTON COUNTY	0.400500	$815,260	$121,741	$487.57	$487.57	$0.00	$0.00	$0.00
2023	HICO ISD	0.902300	$815,260	$122,150	$1,102.16	$1,102.16	$0.00	$0.00	$0.00
	2023 Total	1.365179			$1,665.93	$1,665.93	$0.00	$0.00	$0.00
2022	HICO EMERGENCY SERVICE DISTRICT	0.068878	$921,160	$122,150	$139.16	$139.16	$0.00	$0.00	$0.00
2022	HAMILTON COUNTY	0.378300	$921,160	$121,741	$762.82	$762.82	$0.00	$0.00	$0.00
2022	HICO ISD	1.042900	$921,160	$122,150	$2,107.20	$2,107.20	$0.00	$0.00	$0.00
	2022 Total	1.490078			$3,009.18	$3,009.18	$0.00	$0.00	$0.00
2021	HICO EMERGENCY SERVICE DISTRICT	0.084900	$619,910	$103,300	$87.70	$87.70	$0.00	$0.00	$0.00
2021	HAMILTON COUNTY	0.455400	$619,910	$102,891	$468.57	$468.57	$0.00	$0.00	$0.00
2021	HICO ISD	1.110300	$619,910	$103,300	$1,146.94	$1,146.94	$0.00	$0.00	$0.00
	2021 Total	1.650600			$1,703.21	$1,703.21	$0.00	$0.00	$0.00

2020	HICO EMERGENCY SERVICE DISTRICT	0.098100	$423,600	$12,890	$12.65	$12.65	$0.00	$0.00	$0.00
2020	HAMILTON COUNTY	0.532300	$423,600	$12,481	$66.44	$66.44	$0.00	$0.00	$0.00
2020	HICO ISD	1.194700	$423,600	$12,890	$153.99	$153.99	$0.00	$0.00	$0.00
	2020 Total	1.825100			$233.08	$233.08	$0.00	$0.00	$0.00
2019	HICO EMERGENCY SERVICE DISTRICT	0.098100	$529,500	$12,890	$12.65	$12.65	$0.00	$0.00	$0.00
2019	HAMILTON COUNTY	0.560500	$529,500	$12,481	$69.96	$69.96	$0.00	$0.00	$0.00
2019	HICO ISD	1.258300	$529,500	$12,890	$162.19	$162.19	$0.00	$0.00	$0.00
	2019 Total	1.916900			$244.80	$244.80	$0.00	$0.00	$0.00
2018	HICO EMERGENCY SERVICE DISTRICT	0.098100	$441,250	$12,890	$12.65	$12.65	$0.00	$0.00	$0.00
2018	HAMILTON COUNTY	0.560500	$441,250	$12,481	$69.96	$69.96	$0.00	$0.00	$0.00
2018	HICO ISD	1.360000	$441,250	$12,890	$175.30	$175.30	$0.00	$0.00	$0.00
	2018 Total	2.018600			$257.91	$257.91	$0.00	$0.00	$0.00
2017	HICO EMERGENCY SERVICE DISTRICT	0.098100	$441,250	$12,890	$12.65	$12.65	$0.00	$0.00	$0.00
2017	HAMILTON COUNTY	0.560500	$441,250	$12,481	$69.96	$69.96	$0.00	$0.00	$0.00
2017	HICO ISD	1.360000	$441,250	$12,890	$175.30	$175.30	$0.00	$0.00	$0.00
	2017 Total	2.018600			$257.91	$257.91	$0.00	$0.00	$0.00
2016	HICO EMERGENCY SERVICE DISTRICT	0.098100	$441,250	$12,890	$12.65	$12.65	$0.00	$0.00	$0.00
2016	HAMILTON COUNTY	0.560500	$441,250	$12,481	$69.96	$69.96	$0.00	$0.00	$0.00
2016	HICO ISD	1.360000	$441,250	$12,890	$175.30	$175.30	$0.00	$0.00	$0.00

	2016 Total	2.018600			$257.91	$257.91	$0.00	$0.00	$0.00
2015	HICO EMERGENCY SERVICE DISTRICT	0.098100	$441,250	$12,890	$12.65	$12.65	$0.00	$0.00	$0.00
2015	HAMILTON COUNTY	0.540500	$441,250	$12,481	$67.46	$67.46	$0.00	$0.00	$0.00
2015	HICO ISD	1.360000	$441,250	$12,890	$175.30	$175.30	$0.00	$0.00	$0.00
	2015 Total	1.998600			$255.41	$255.41	$0.00	$0.00	$0.00
2014	HICO EMERGENCY SERVICE DISTRICT	0.098100	$441,250	$12,890	$12.65	$12.65	$0.00	$0.00	$0.00
2014	HAMILTON COUNTY	0.572400	$441,250	$12,481	$71.44	$71.44	$0.00	$0.00	$0.00
2014	HICO ISD	1.360000	$441,250	$12,890	$175.30	$175.30	$0.00	$0.00	$0.00
	2014 Total	2.030500			$259.39	$259.39	$0.00	$0.00	$0.00
2013	HICO EMERGENCY SERVICE DISTRICT	0.098100	$441,250	$12,890	$12.65	$12.65	$0.00	$0.00	$0.00
2013	HAMILTON COUNTY	0.522000	$441,250	$12,481	$65.15	$65.15	$0.00	$0.00	$0.00
2013	HICO ISD	1.320000	$441,250	$12,890	$170.15	$170.15	$0.00	$0.00	$0.00
	2013 Total	1.940100			$247.95	$247.95	$0.00	$0.00	$0.00
2012	HICO EMERGENCY SERVICE DISTRICT	0.096500	$441,250	$12,890	$12.44	$12.44	$0.00	$0.00	$0.00
2012	HAMILTON COUNTY	0.557900	$441,250	$12,481	$69.63	$69.63	$0.00	$0.00	$0.00
2012	HICO ISD	1.300000	$441,250	$12,890	$167.57	$167.57	$0.00	$0.00	$0.00
	2012 Total	1.954400			$249.64	$249.64	$0.00	$0.00	$0.00
2011	HICO EMERGENCY SERVICE DISTRICT	0.096500	$441,250	$12,720	$12.27	$12.27	$0.00	$0.00	$0.00
2011	HAMILTON COUNTY	0.559900	$441,250	$12,311	$68.93	$68.93	$0.00	$0.00	$0.00

2011	HICO ISD	1.240000	$441,250	$12,720	$157.72	$157.72	$0.00	$0.00	$0.00
	2011 Total	1.896400			$238.92	$238.92	$0.00	$0.00	$0.00
2010	HICO EMERGENCY SERVICE DISTRICT	0.088600	$441,250	$12,720	$11.27	$11.27	$0.00	$0.00	$0.00
2010	HAMILTON COUNTY	0.561600	$441,250	$12,311	$69.14	$69.14	$0.00	$0.00	$0.00
2010	HICO ISD	1.240000	$441,250	$12,720	$157.72	$157.72	$0.00	$0.00	$0.00
	2010 Total	1.890200			$238.13	$238.13	$0.00	$0.00	$0.00
2009	HICO EMERGENCY SERVICE DISTRICT	0.088300	$441,250	$12,720	$11.23	$11.23	$0.00	$0.00	$0.00
2009	HAMILTON COUNTY	0.555500	$441,250	$12,311	$69.62	$69.62	$0.00	$0.00	$0.00
2009	HICO ISD	1.210000	$441,250	$12,720	$151.37	$151.37	$0.00	$0.00	$0.00
	2009 Total	1.853800			$232.22	$232.22	$0.00	$0.00	$0.00
2008	HICO EMERGENCY SERVICE DISTRICT	0.090000	$441,250	$12,720	$11.45	$11.45	$0.00	$0.00	$0.00
2008	HAMILTON COUNTY	0.555500	$441,250	$12,311	$68.39	$68.39	$0.00	$0.00	$0.00
2008	HICO ISD	1.190000	$441,250	$12,720	$151.37	$151.37	$0.00	$0.00	$0.00
	2008 Total	1.835500			$231.21	$231.21	$0.00	$0.00	$0.00
2007	HICO EMERGENCY SERVICE DISTRICT	0.093200	$317,700	$12,720	$11.86	$11.86	$0.00	$0.00	$0.00
2007	HAMILTON COUNTY	0.516800	$317,700	$12,311	$63.62	$63.62	$0.00	$0.00	$0.00
2007	HICO ISD	1.190000	$317,700	$12,720	$151.37	$151.37	$0.00	$0.00	$0.00
	2007 Total	1.800000			$226.85	$226.85	$0.00	$0.00	$0.00
2006	HICO EMERGENCY SERVICE DISTRICT	0.093200	$167,680	$12,880	$12.00	$12.00	$0.00	$0.00	$0.00

2005	HAMILTON COUNTY	0.530000	$167,680	$12,880	$68.26	$68.26	$0.00	$0.00	$0.00
2006	HICO ISD	1.420000	$167,680	$12,880	$182.90	$182.90	$0.00	$0.00	$0.00
	2006 Total	2.043200			$263.16	$263.16	$0.00	$0.00	$0.00
2005	HICO EMERGENCY SERVICE DISTRICT	0.100000	$97,575	$12,880	$12.88	$12.88	$0.00	$0.00	$0.00
2005	HAMILTON COUNTY	0.530000	$97,575	$12,880	$68.26	$68.26	$0.00	$0.00	$0.00
2005	HICO ISD	1.540000	$97,575	$12,880	$198.35	$198.35	$0.00	$0.00	$0.00
	2005 Total	2.170000			$279.49	$279.49	$0.00	$0.00	$0.00
2004	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$12,880	$12.88	$12.88	$0.00	$0.00	$0.00
2004	HAMILTON COUNTY	0.544800	$0	$12,880	$70.17	$70.17	$0.00	$0.00	$0.00
2004	HICO ISD	1.540000	$0	$12,880	$198.35	$198.35	$0.00	$0.00	$0.00
	2004 Total	2.184800			$281.40	$281.40	$0.00	$0.00	$0.00
2003	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$12,880	$12.88	$12.88	$0.00	$0.00	$0.00
2003	HAMILTON COUNTY	0.538900	$0	$12,880	$69.41	$69.41	$0.00	$0.00	$0.00
2003	HICO ISD	1.540000	$0	$12,880	$198.35	$198.35	$0.00	$0.00	$0.00
	2003 Total	2.178900			$280.64	$280.64	$0.00	$0.00	$0.00
2002	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$12,880	$12.88	$12.88	$0.00	$0.00	$0.00
2002	HAMILTON COUNTY	0.543000	$0	$12,880	$69.94	$69.94	$0.00	$0.00	$0.00
2002	HICO ISD	1.540000	$0	$12,880	$198.35	$198.35	$0.00	$0.00	$0.00
	2002 Total	2.183000			$281.17	$281.17	$0.00	$0.00	$0.00

2001	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$11,930	$11.93	$11.93	$0.00	$0.00	$0.00
2001	HAMILTON COUNTY	0.567800	$0	$11,930	$67.74	$67.74	$0.00	$0.00	$0.00
2001	HICO ISD	1.470000	$0	$11,930	$175.37	$175.37	$0.00	$0.00	$0.00
	2001 Total	2.137800			$255.04	$255.04	$0.00	$0.00	$0.00

Hamilton CAD Property Search

Property Details

Account			
Property ID:	21721	**Geographic ID:**	26000810010132001
Type:	R	**Zoning:**	
Property Use:			
Location			
Situs Address:	4745 CR 207 FAIRY, TX		
Map ID:	HI5	**Mapsco:**	
Legal Description:	468 R KENNEDY, ACRES: 129.95		
Abstract/Subdivision:	A00468		
Neighborhood:	(HICO) HICO STUDY		
Owner			
Owner ID:	20609		
Name:	KEUNING OENE		
Agent:			
Mailing Address:	4745 CR 207 HICO, TX 76457		
% Ownership:	100.0%		
Exemptions:	AB - For privacy reasons not all exemptions are shown online.		

Property Values

Improvement Homesite Value:	$0 (+)
Improvement Non-Homesite Value:	$0 (+)
Land Homesite Value:	$0 (+)
Land Non-Homesite Value:	$0 (+)
Agricultural Market Valuation:	$649,750 (+)
Market Value:	$649,750 (=)
Agricultural Value Loss:	$636,030 (-)
Appraised Value:	$13,720 (=)
HS Cap Loss:	$0 (-)

Circuit Breaker:	$0 (-)
Assessed Value:	$13,720
Ag Use Value:	$13,720

The 2025 appraisal roll values are subject to change and are not certified. Information provided for research purposes only. Legal descriptions and acreage amounts are for Appraisal District use only and should be verified prior to using for legal purpose and or documents. Please contact the Appraisal District to verify all information for accuracy.

Property Taxing Jurisdiction

Owner: KEUNING OENE **%Ownership:** 100.0%

Entity	Description	Tax Rate	Market Value	Taxable Value	Estimated Tax	Freeze Ceiling
EHI	HICO EMERGENCY SERVICE DISTRICT	0.085295	$649,750	$13,720	$11.70	
GHA	HAMILTON COUNTY	0.430000	$649,750	$13,583	$58.41	
SHI	HICO ISD	0.855200	$649,750	$13,720	$117.33	
CAD	County Appraisal District	0.000000	$649,750	$13,720	$0.00	

Total Tax Rate: 1.370495

Estimated Taxes With Exemptions: $187.44

Estimated Taxes Without Exemptions: $8,904.78

Property Land

Type	Description	Acreage	Sqft	Eff Front	Eff Depth	Market Value	Prod. Value
NP	NATIVE PASTURE	129.95	5,660,622.00	0.00	0.00	$649,750	$13,720

Property Roll Value History

Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap Loss	Assessed
2025	$0	$649,750	$13,720	$13,720	$0	$13,720
2024	$0	$974,630	$10,160	$10,160	$0	$10,160
2023	$0	$649,750	$9,490	$9,490	$0	$9,490
2022	$0	$604,270	$9,490	$9,490	$0	$9,490
2021	$0	$389,850	$9,490	$9,490	$0	$9,490
2020	$0	$311,880	$9,490	$9,490	$0	$9,490
2019	$0	$389,850	$9,490	$9,490	$0	$9,490
2018	$0	$324,880	$9,490	$9,490	$0	$9,490
2017	$0	$324,880	$9,490	$9,490	$0	$9,490

Property Deed History

Deed Date	Type	Description	Grantor	Grantee	Volume	Page	Number
3/20/2008	OT	OWNER TRANSFER	ALT JEWEL	KEUNING OENE	423	836	0
3/26/2004	WD	WARRANTY DEED	PRUITT JOHN W TRUSTEE	ALT JEWEL	370	298	0
1/30/2004	OT	OWNER TRANSFER	ANTHONY ALFRED E & SHIRLEY A	PRUITT JOHN W TRUSTEE	368	33	0

Estimated Tax Due

If Paid:

Year	Taxing Jurisdiction	Tax Rate	Market Value	Taxable Value	Base Tax	Base Taxes Paid	Base Tax Due	Discount/Penalty & Interest	Attorney Fees	A
2024	HICO EMERGENCY SERVICE DISTRICT	0.085295	$974,630	$10,160	$8.67	$8.67	$0.00	$0.00	$0.00	
2024	HAMILTON COUNTY	0.430000	$974,630	$10,023	$43.10	$43.10	$0.00	$0.00	$0.00	
2024	HICO ISD	0.855200	$974,630	$10,160	$86.89	$86.89	$0.00	$0.00	$0.00	
	2024 Total	1.370495			$138.66	$138.66	$0.00	$0.00	$0.00	
2023	HICO EMERGENCY SERVICE DISTRICT	0.062379	$649,750	$9,490	$5.92	$5.92	$0.00	$0.00	$0.00	
2023	HAMILTON COUNTY	0.400500	$649,750	$9,353	$37.46	$37.46	$0.00	$0.00	$0.00	
2023	HICO ISD	0.902300	$649,750	$9,490	$85.63	$85.63	$0.00	$0.00	$0.00	
	2023 Total	1.365179			$129.01	$129.01	$0.00	$0.00	$0.00	
2022	HICO EMERGENCY SERVICE DISTRICT	0.068878	$604,270	$9,490	$47.51	$47.51	$0.00	$0.00	$0.00	
2022	HAMILTON COUNTY	0.378300	$604,270	$9,353	$260.39	$260.39	$0.00	$0.00	$0.00	
2022	HICO ISD	1.042900	$604,270	$9,490	$719.27	$719.27	$0.00	$0.00	$0.00	
	2022 Total	1.490078			$1,027.17	$1,027.17	$0.00	$0.00	$0.00	
2021	HICO EMERGENCY SERVICE DISTRICT	0.084900	$389,850	$9,490	$8.06	$8.06	$0.00	$0.00	$0.00	
2021	HAMILTON COUNTY	0.455400	$389,850	$9,353	$42.59	$42.59	$0.00	$0.00	$0.00	
2021	HICO ISD	1.110300	$389,850	$9,490	$105.37	$105.37	$0.00	$0.00	$0.00	
	2021 Total	1.650600			$156.02	$156.02	$0.00	$0.00	$0.00	

2020	HICO EMERGENCY SERVICE DISTRICT	0.098100	$311,880	$9,490	$9.31	$9.31	$0.00	$0.00	$0.00	
2020	HAMILTON COUNTY	0.532300	$311,880	$9,353	$49.79	$49.79	$0.00	$0.00	$0.00	
2020	HICO ISD	1.194700	$311,880	$9,490	$113.38	$113.38	$0.00	$0.00	$0.00	
	2020 Total	1.825100			$172.48	$172.48	$0.00	$0.00	$0.00	
2019	HICO EMERGENCY SERVICE DISTRICT	0.098100	$389,850	$9,490	$9.31	$9.31	$0.00	$0.00	$0.00	
2019	HAMILTON COUNTY	0.560500	$389,850	$9,353	$52.42	$52.42	$0.00	$0.00	$0.00	
2019	HICO ISD	1.258300	$389,850	$9,490	$119.41	$119.41	$0.00	$0.00	$0.00	
	2019 Total	1.916900			$181.14	$181.14	$0.00	$0.00	$0.00	
2018	HICO EMERGENCY SERVICE DISTRICT	0.098100	$324,880	$9,490	$9.31	$9.31	$0.00	$0.00	$0.00	
2018	HAMILTON COUNTY	0.560500	$324,880	$9,353	$52.42	$52.42	$0.00	$0.00	$0.00	
2018	HICO ISD	1.360000	$324,880	$9,490	$129.06	$129.06	$0.00	$0.00	$0.00	
	2018 Total	2.018600			$190.79	$190.79	$0.00	$0.00	$0.00	
2017	HICO EMERGENCY SERVICE DISTRICT	0.098100	$324,880	$9,490	$9.31	$9.31	$0.00	$0.00	$0.00	
2017	HAMILTON COUNTY	0.560500	$324,880	$9,353	$52.42	$52.42	$0.00	$0.00	$0.00	
2017	HICO ISD	1.360000	$324,880	$9,490	$129.06	$129.06	$0.00	$0.00	$0.00	
	2017 Total	2.018600			$190.79	$190.79	$0.00	$0.00	$0.00	
2016	HICO EMERGENCY SERVICE DISTRICT	0.098100	$324,880	$9,490	$9.31	$9.31	$0.00	$0.00	$0.00	
2016	HAMILTON COUNTY	0.560500	$324,880	$9,353	$52.42	$52.42	$0.00	$0.00	$0.00	
2016	HICO ISD	1.360000	$324,880	$9,490	$129.06	$129.06	$0.00	$0.00	$0.00	

	2016 Total	2.018600			$190.79	$190.79	$0.00	$0.00	$0.00	
2015	HICO EMERGENCY SERVICE DISTRICT	0.098100	$324,880	$9,490	$9.31	$9.31	$0.00	$0.00	$0.00	
2015	HAMILTON COUNTY	0.540500	$324,880	$9,353	$50.55	$50.55	$0.00	$0.00	$0.00	
2015	HICO ISD	1.360000	$324,880	$9,490	$129.06	$129.06	$0.00	$0.00	$0.00	
	2015 Total	1.998600			$188.92	$188.92	$0.00	$0.00	$0.00	
2014	HICO EMERGENCY SERVICE DISTRICT	0.098100	$324,880	$9,490	$9.31	$9.31	$0.00	$0.00	$0.00	
2014	HAMILTON COUNTY	0.572400	$324,880	$9,353	$53.53	$53.53	$0.00	$0.00	$0.00	
2014	HICO ISD	1.360000	$324,880	$9,490	$129.06	$129.06	$0.00	$0.00	$0.00	
	2014 Total	2.030500			$191.90	$191.90	$0.00	$0.00	$0.00	
2013	HICO EMERGENCY SERVICE DISTRICT	0.098100	$324,880	$9,490	$9.31	$9.31	$0.00	$0.00	$0.00	
2013	HAMILTON COUNTY	0.522000	$324,880	$9,353	$48.82	$48.82	$0.00	$0.00	$0.00	
2013	HICO ISD	1.320000	$324,880	$9,490	$125.27	$125.27	$0.00	$0.00	$0.00	
	2013 Total	1.940100			$183.40	$183.40	$0.00	$0.00	$0.00	
2012	HICO EMERGENCY SERVICE DISTRICT	0.096500	$324,880	$9,490	$9.16	$9.16	$0.00	$0.00	$0.00	
2012	HAMILTON COUNTY	0.557900	$324,880	$9,353	$52.18	$52.18	$0.00	$0.00	$0.00	
2012	HICO ISD	1.300000	$324,880	$9,490	$123.37	$123.37	$0.00	$0.00	$0.00	
	2012 Total	1.954400			$184.71	$184.71	$0.00	$0.00	$0.00	
2011	HICO EMERGENCY SERVICE DISTRICT	0.096500	$324,880	$9,360	$9.03	$9.03	$0.00	$0.00	$0.00	
2011	HAMILTON COUNTY	0.559900	$324,880	$9,223	$51.64	$51.64	$0.00	$0.00	$0.00	

2011	HICO ISD	1.240000	$324,880	$9,360	$116.06	$116.06	$0.00	$0.00	$0.00	
	2011 Total	1.896400			$176.73	$176.73	$0.00	$0.00	$0.00	
2010	HICO EMERGENCY SERVICE DISTRICT	0.088600	$324,880	$9,360	$8.29	$8.29	$0.00	$0.00	$0.00	
2010	HAMILTON COUNTY	0.561600	$324,880	$9,223	$51.79	$51.79	$0.00	$0.00	$0.00	
2010	HICO ISD	1.240000	$324,880	$9,360	$116.06	$116.06	$0.00	$0.00	$0.00	
	2010 Total	1.890200			$176.14	$176.14	$0.00	$0.00	$0.00	
2009	HICO EMERGENCY SERVICE DISTRICT	0.088300	$324,880	$9,360	$8.26	$8.26	$0.00	$0.00	$0.00	
2009	HAMILTON COUNTY	0.565500	$324,880	$9,223	$52.16	$52.16	$0.00	$0.00	$0.00	
2009	HICO ISD	1.210000	$324,880	$9,360	$111.38	$111.38	$0.00	$0.00	$0.00	
	2009 Total	1.863800			$171.80	$171.80	$0.00	$0.00	$0.00	
2008	HICO EMERGENCY SERVICE DISTRICT	0.090000	$324,880	$9,360	$8.42	$8.42	$0.00	$0.00	$0.00	
2008	HAMILTON COUNTY	0.555500	$324,880	$9,223	$51.23	$51.23	$0.00	$0.00	$0.00	
2008	HICO ISD	1.190000	$324,880	$9,360	$111.38	$111.38	$0.00	$0.00	$0.00	
	2008 Total	1.835500			$171.03	$171.03	$0.00	$0.00	$0.00	
2007	HICO EMERGENCY SERVICE DISTRICT	0.093200	$233,910	$9,360	$8.72	$8.72	$0.00	$0.00	$0.00	
2007	HAMILTON COUNTY	0.516800	$233,910	$9,223	$47.66	$47.66	$0.00	$0.00	$0.00	
2007	HICO ISD	1.190000	$233,910	$9,360	$111.38	$111.38	$0.00	$0.00	$0.00	
	2007 Total	1.800000			$167.76	$167.76	$0.00	$0.00	$0.00	
2006	HICO EMERGENCY SERVICE DISTRICT	0.093200	$123,450	$9,490	$8.84	$8.84	$0.00	$0.00	$0.00	

2006	HAMILTON COUNTY	0.530000	$123,450	$9,490	$50.30	$50.30	$0.00	$0.00	$0.00
2006	HICO ISD	1.420000	$123,450	$9,490	$134.76	$134.76	$0.00	$0.00	$0.00
	2006 Total	2.043200			$193.90	$193.90	$0.00	$0.00	$0.00
2005	HICO EMERGENCY SERVICE DISTRICT	0.100000	$123,450	$9,490	$9.49	$9.49	$0.00	$0.00	$0.00
2005	HAMILTON COUNTY	0.530000	$123,450	$9,490	$50.30	$50.30	$0.00	$0.00	$0.00
2005	HICO ISD	1.540000	$123,450	$9,490	$146.15	$146.15	$0.00	$0.00	$0.00
	2005 Total	2.170000			$205.94	$205.94	$0.00	$0.00	$0.00
2004	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$9,490	$9.49	$9.49	$0.00	$0.00	$0.00
2004	HAMILTON COUNTY	0.544800	$0	$9,490	$51.70	$51.70	$0.00	$0.00	$0.00
2004	HICO ISD	1.540000	$0	$9,490	$146.15	$146.15	$0.00	$0.00	$0.00
	2004 Total	2.184800			$207.34	$207.34	$0.00	$0.00	$0.00
2003	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$9,490	$9.49	$9.49	$0.00	$0.00	$0.00
2003	HAMILTON COUNTY	0.538900	$0	$9,490	$51.14	$51.14	$0.00	$0.00	$0.00
2003	HICO ISD	1.540000	$0	$9,490	$146.15	$146.15	$0.00	$0.00	$0.00
	2003 Total	2.178900			$206.78	$206.78	$0.00	$0.00	$0.00
2002	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$9,490	$9.49	$9.49	$0.00	$0.00	$0.00
2002	HAMILTON COUNTY	0.543000	$0	$9,490	$51.53	$51.53	$0.00	$0.00	$0.00
2002	HICO ISD	1.540000	$0	$9,490	$146.15	$146.15	$0.00	$0.00	$0.00
	2002 Total	2.183000			$207.17	$207.17	$0.00	$0.00	$0.00

2001	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$8,840	$8.84	$8.84	$0.00	$0.00	$0.00
2001	HAMILTON COUNTY	0.567800	$0	$8,840	$50.19	$50.19	$0.00	$0.00	$0.00
2001	HICO ISD	1.470000	$0	$8,840	$129.95	$129.95	$0.00	$0.00	$0.00
	2001 Total	2.137800			$188.98	$188.98	$0.00	$0.00	$0.00

Hamilton CAD Property Search

Property Details

Account

Property ID:	21722	**Geographic ID:**	26000810010134001
Type:	R	**Zoning:**	
Property Use:			

Location

Situs Address:	4745 CR 207 FAIRY, TX		
Map ID:	HI5	**Mapsco:**	
Legal Description:	918 JOHN WATSON, Acres 79.04		
Abstract/Subdivision:	A00918		
Neighborhood:	(HICO) HICO STUDY		

Owner

Owner ID:	20609
Name:	KEUNING OENE
Agent:	
Mailing Address:	4745 CR 207 HICO, TX 76457
% Ownership:	100.0%
Exemptions:	For privacy reasons not all exemptions are shown online.

Property Values

Improvement Homesite Value:	$0 (+)
Improvement Non-Homesite Value:	$0 (+)
Land Homesite Value:	$0 (+)
Land Non-Homesite Value:	$0 (+)
Agricultural Market Valuation:	$395,200 (+)
Market Value:	$395,200 (=)
Agricultural Value Loss:	$386,860 (-)
Appraised Value:	$8,340 (=)
HS Cap Loss:	$0 (-)
Circuit Breaker:	$0 (-)

Assessed Value:	$8,340
Ag Use Value:	$8,340

The 2025 appraisal roll values are subject to change and are not certified. Information provided for research purposes only. Legal descriptions and acreage amounts are for Appraisal District use only and should be verified prior to using for legal purpose and or documents. Please contact the Appraisal District to verify all information for accuracy.

Property Taxing Jurisdiction

Owner: KEUNING OENE %Ownership: 100.0%

Entity	Description	Tax Rate	Market Value	Taxable Value	Estimated Tax	Freeze Ceiling
EHI	HICO EMERGENCY SERVICE DISTRICT	0.085295	$395,200	$8,340	$7.11	
GHA	HAMILTON COUNTY	0.430000	$395,200	$8,340	$35.86	
SHI	HICO ISD	0.855200	$395,200	$8,340	$71.32	
CAD	County Appraisal District	0.000000	$395,200	$8,340	$0.00	

Total Tax Rate: 1.370495

Estimated Taxes With Exemptions: $114.29

Estimated Taxes Without Exemptions: $5,416.20

Property Land

Type	Description	Acreage	Sqft	Eff Front	Eff Depth	Market Value	Prod. Value
NP	NATIVE PASTURE	79.04	3,442,982.40	0.00	0.00	$395,200	$8,340

Property Roll Value History

Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap Loss	Assessed
2025	$0	$395,200	$8,340	$8,340	$0	$8,340
2024	$0	$395,200	$6,180	$6,180	$0	$6,180
2023	$0	$316,160	$5,770	$5,770	$0	$5,770
2022	$0	$276,640	$5,770	$5,770	$0	$5,770
2021	$0	$237,120	$5,770	$5,770	$0	$5,770
2020	$0	$189,700	$5,770	$5,770	$0	$5,770
2019	$0	$237,120	$5,770	$5,770	$0	$5,770
2018	$0	$197,600	$5,770	$5,770	$0	$5,770
2017	$0	$197,600	$5,770	$5,770	$0	$5,770

Property Deed History

Deed Date	Type	Description	Grantor	Grantee	Volume	Page	Number
3/20/2008	OT	OWNER TRANSFER	ALT JEWEL	KEUNING OENE	423	836	0
3/26/2004	WD	WARRANTY DEED	PRUITT JOHN W TRUSTEE	ALT JEWEL	370	298	0
1/30/2004	OT	OWNER TRANSFER	ANTHONY ALFRED E & SHIRLEY A	PRUITT JOHN W TRUSTEE	368	33	0

Estimated Tax Due

If Paid:

Year	Taxing Jurisdiction	Tax Rate	Market Value	Taxable Value	Base Tax	Base Taxes Paid	Base Tax Due	Discount/Penalty & Interest	Attorney Fees	Amou D
2024	HICO EMERGENCY SERVICE DISTRICT	0.085295	$395,200	$6,180	$5.27	$5.27	$0.00	$0.00	$0.00	$0.
2024	HAMILTON COUNTY	0.430000	$395,200	$6,180	$26.57	$26.57	$0.00	$0.00	$0.00	$0
2024	HICO ISD	0.855200	$395,200	$6,180	$52.85	$52.85	$0.00	$0.00	$0.00	$0.
	2024 Total	1.370495			$84.69	$84.69	$0.00	$0.00	$0.00	$0
2023	HICO EMERGENCY SERVICE DISTRICT	0.062379	$316,160	$5,770	$3.60	$3.60	$0.00	$0.00	$0.00	$0.
2023	HAMILTON COUNTY	0.400500	$316,160	$5,770	$23.11	$23.11	$0.00	$0.00	$0.00	$0.
2023	HICO ISD	0.902300	$316,160	$5,770	$52.06	$52.06	$0.00	$0.00	$0.00	$0.
	2023 Total	1.365179			$78.77	$78.77	$0.00	$0.00	$0.00	$0.
2022	HICO EMERGENCY SERVICE DISTRICT	0.066878	$276,640	$5,770	$22.63	$22.63	$0.00	$0.00	$0.00	$0.
2022	HAMILTON COUNTY	0.378300	$276,640	$5,770	$124.30	$124.30	$0.00	$0.00	$0.00	$0.
2022	HICO ISD	1.042900	$276,640	$5,770	$342.67	$342.67	$0.00	$0.00	$0.00	$0
	2022 Total	1.490078			$489.60	$489.60	$0.00	$0.00	$0.00	$0.
2021	HICO EMERGENCY SERVICE DISTRICT	0.084900	$237,120	$5,770	$4.90	$4.90	$0.00	$0.00	$0.00	$0
2021	HAMILTON COUNTY	0.455400	$237,120	$5,770	$26.28	$26.28	$0.00	$0.00	$0.00	$0.
2021	HICO ISD	1.110300	$237,120	$5,770	$64.07	$64.07	$0.00	$0.00	$0.00	$0
	2021 Total	1.650600			$95.25	$95.25	$0.00	$0.00	$0.00	$0.

2020	HICO EMERGENCY SERVICE DISTRICT	0.098100	$189,700	$5,770	$5.66	$5.66	$0.00	$0.00	$0.00	$0.
2020	HAMILTON COUNTY	0.532300	$189,700	$5,770	$30.71	$30.71	$0.00	$0.00	$0.00	$0.
2020	HICO ISD	1.194700	$189,700	$5,770	$68.94	$68.94	$0.00	$0.00	$0.00	$0.
	2020 Total	1.825100			$105.31	$105.31	$0.00	$0.00	$0.00	$0.
2019	HICO EMERGENCY SERVICE DISTRICT	0.098100	$237,120	$5,770	$5.66	$5.66	$0.00	$0.00	$0.00	$0.
2019	HAMILTON COUNTY	0.560500	$237,120	$5,770	$32.34	$32.34	$0.00	$0.00	$0.00	$0.
2019	HICO ISD	1.258300	$237,120	$5,770	$72.60	$72.60	$0.00	$0.00	$0.00	$0.
	2019 Total	1.916900			$110.60	$110.60	$0.00	$0.00	$0.00	$0.
2018	HICO EMERGENCY SERVICE DISTRICT	0.098100	$197,600	$5,770	$5.66	$5.66	$0.00	$0.00	$0.00	$0.
2018	HAMILTON COUNTY	0.560500	$197,600	$5,770	$32.34	$32.34	$0.00	$0.00	$0.00	$0.
2018	HICO ISD	1.360000	$197,600	$5,770	$78.47	$78.47	$0.00	$0.00	$0.00	$0.
	2018 Total	2.018600			$116.47	$116.47	$0.00	$0.00	$0.00	$0.
2017	HICO EMERGENCY SERVICE DISTRICT	0.098100	$197,600	$5,770	$5.66	$5.66	$0.00	$0.00	$0.00	$0.
2017	HAMILTON COUNTY	0.560500	$197,600	$5,770	$32.34	$32.34	$0.00	$0.00	$0.00	$0.
2017	HICO ISD	1.360000	$197,600	$5,770	$78.47	$78.47	$0.00	$0.00	$0.00	$0.
	2017 Total	2.018600			$116.47	$116.47	$0.00	$0.00	$0.00	$0.
2016	HICO EMERGENCY SERVICE DISTRICT	0.098100	$197,600	$5,770	$5.66	$5.66	$0.00	$0.00	$0.00	$0.
2016	HAMILTON COUNTY	0.560500	$197,600	$5,770	$32.34	$32.34	$0.00	$0.00	$0.00	$0
2016	HICO ISD	1.360000	$197,600	$5,770	$78.47	$78.47	$0.00	$0.00	$0.00	$0

	2016 Total	2.018600			$116.47	$116.47	$0.00	$0.00	$0.00	$0.
2015	HICO EMERGENCY SERVICE DISTRICT	0.098100	$197,600	$5,770	$5.66	$5.66	$0.00	$0.00	$0.00	$0
2015	HAMILTON COUNTY	0.540500	$197,600	$5,770	$31.19	$31.19	$0.00	$0.00	$0.00	$0.
2015	HICO ISD	1.360000	$197,600	$5,770	$78.47	$78.47	$0.00	$0.00	$0.00	$0.
	2015 Total	1.998600			$115.32	$115.32	$0.00	$0.00	$0.00	$0.
2014	HICO EMERGENCY SERVICE DISTRICT	0.098100	$197,600	$5,770	$5.66	$5.66	$0.00	$0.00	$0.00	$0.
2014	HAMILTON COUNTY	0.572400	$197,600	$5,770	$33.03	$33.03	$0.00	$0.00	$0.00	$0.
2014	HICO ISD	1.360000	$197,600	$5,770	$78.47	$78.47	$0.00	$0.00	$0.00	$0
	2014 Total	2.030500			$117.16	$117.16	$0.00	$0.00	$0.00	$0.
2013	HICO EMERGENCY SERVICE DISTRICT	0.098100	$197,600	$5,770	$5.66	$5.66	$0.00	$0.00	$0.00	$0
2013	HAMILTON COUNTY	0.522000	$197,600	$5,770	$30.12	$30.12	$0.00	$0.00	$0.00	$0
2013	HICO ISD	1.320000	$197,600	$5,770	$76.17	$76.17	$0.00	$0.00	$0.00	$0
	2013 Total	1.940100			$111.95	$111.95	$0.00	$0.00	$0.00	$0
2012	HICO EMERGENCY SERVICE DISTRICT	0.096500	$197,600	$5,770	$5.57	$5.57	$0.00	$0.00	$0.00	$0.
2012	HAMILTON COUNTY	0.557900	$197,600	$5,770	$32.19	$32.19	$0.00	$0.00	$0.00	$0
2012	HICO ISD	1.300000	$197,600	$5,770	$75.01	$75.01	$0.00	$0.00	$0.00	$0.
	2012 Total	1.954400			$112.77	$112.77	$0.00	$0.00	$0.00	$0
2011	HICO EMERGENCY SERVICE DISTRICT	0.096500	$197,600	$5,700	$5.50	$5.50	$0.00	$0.00	$0.00	$0.
2011	HAMILTON COUNTY	0.559900	$197,600	$5,700	$31.91	$31.91	$0.00	$0.00	$0.00	$0

2011	HICO ISD	1.240000	$197,600	$5,700	$70.68	$70.68	$0.00	$0.00	$0.00	$0.
	2011 Total	1.896400			$108.09	$108.09	$0.00	$0.00	$0.00	$0
2010	HICO EMERGENCY SERVICE DISTRICT	0.088600	$197,600	$5,700	$5.05	$5.05	$0.00	$0.00	$0.00	$0
2010	HAMILTON COUNTY	0.561600	$197,600	$5,700	$32.01	$32.01	$0.00	$0.00	$0.00	$0.
2010	HICO ISD	1.240000	$197,600	$5,700	$70.68	$70.68	$0.00	$0.00	$0.00	$0
	2010 Total	1.890200			$107.74	$107.74	$0.00	$0.00	$0.00	$0
2009	HICO EMERGENCY SERVICE DISTRICT	0.088300	$142,270	$5,700	$5.03	$5.03	$0.00	$0.00	$0.00	$0
2009	HAMILTON COUNTY	0.565500	$142,270	$5,700	$32.23	$32.23	$0.00	$0.00	$0.00	$0.
2009	HICO ISD	1.210000	$142,270	$5,700	$67.83	$67.83	$0.00	$0.00	$0.00	$0
	2009 Total	1.863800			$105.09	$105.09	$0.00	$0.00	$0.00	$0
2008	HICO EMERGENCY SERVICE DISTRICT	0.090000	$142,270	$5,700	$5.13	$5.13	$0.00	$0.00	$0.00	$0
2008	HAMILTON COUNTY	0.555500	$142,270	$5,700	$31.66	$31.66	$0.00	$0.00	$0.00	$0
2008	HICO ISD	1.190000	$142,270	$5,700	$67.83	$67.83	$0.00	$0.00	$0.00	$0.
	2008 Total	1.835500			$104.62	$104.62	$0.00	$0.00	$0.00	$0
2007	HICO EMERGENCY SERVICE DISTRICT	0.093200	$142,270	$5,700	$5.31	$5.31	$0.00	$0.00	$0.00	$0
2007	HAMILTON COUNTY	0.516800	$142,270	$5,700	$29.46	$29.46	$0.00	$0.00	$0.00	$0
2007	HICO ISD	1.190000	$142,270	$5,700	$67.83	$67.83	$0.00	$0.00	$0.00	$0
	2007 Total	1.800000			$102.60	$102.60	$0.00	$0.00	$0.00	$0
2006	HICO EMERGENCY SERVICE DISTRICT	0.093200	$75,090	$5,770	$5.38	$5.38	$0.00	$0.00	$0.00	$0

2006	HAMILTON COUNTY	0.530000	$75,090	$5,770	$30.58	$30.58	$0.00	$0.00	$0.00	$0.
2006	HICO ISD	1.420000	$75,090	$5,770	$81.93	$81.93	$0.00	$0.00	$0.00	$0.
	2006 Total	2.043200			$117.89	$117.89	$0.00	$0.00	$0.00	$0.
2005	HICO EMERGENCY SERVICE DISTRICT	0.100000	$75,090	$5,770	$5.77	$5.77	$0.00	$0.00	$0.00	$0.
2005	HAMILTON COUNTY	0.530000	$75,090	$5,770	$30.58	$30.58	$0.00	$0.00	$0.00	$0.
2005	HICO ISD	1.540000	$75,090	$5,770	$88.86	$88.86	$0.00	$0.00	$0.00	$0.
	2005 Total	2.170000			$125.21	$125.21	$0.00	$0.00	$0.00	$0.
2004	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$5,770	$5.77	$5.77	$0.00	$0.00	$0.00	$0.
2004	HAMILTON COUNTY	0.544800	$0	$5,770	$31.44	$31.44	$0.00	$0.00	$0.00	$0.
2004	HICO ISD	1.540000	$0	$5,770	$88.86	$88.86	$0.00	$0.00	$0.00	$0.
	2004 Total	2.184800			$126.07	$126.07	$0.00	$0.00	$0.00	$0.
2003	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$5,770	$5.77	$5.77	$0.00	$0.00	$0.00	$0.
2003	HAMILTON COUNTY	0.538900	$0	$5,770	$31.09	$31.09	$0.00	$0.00	$0.00	$0.
2003	HICO ISD	1.540000	$0	$5,770	$88.86	$88.86	$0.00	$0.00	$0.00	$0.
	2003 Total	2.178900			$125.72	$125.72	$0.00	$0.00	$0.00	$0.
2002	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$5,770	$5.77	$5.77	$0.00	$0.00	$0.00	$0.
2002	HAMILTON COUNTY	0.543000	$0	$5,770	$31.33	$31.33	$0.00	$0.00	$0.00	$0.
2002	HICO ISD	1.540000	$0	$5,770	$88.86	$88.86	$0.00	$0.00	$0.00	$0.
	2002 Total	2.183000			$125.96	$125.96	$0.00	$0.00	$0.00	$0.

2001	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$5,370	$5.37	$5.37	$0.00	$0.00	$0.00	$0.
2001	HAMILTON COUNTY	0.567800	$0	$5,370	$30.49	$30.49	$0.00	$0.00	$0.00	$0.
2001	HICO ISD	1.470000	$0	$5,370	$78.94	$78.94	$0.00	$0.00	$0.00	$0.
	2001 Total	2.137800			$114.80	$114.80	$0.00	$0.00	$0.00	$0.

Hamilton CAD Property Search

Property Details

Account			
Property ID:	19603	**Geographic ID:**	26000000000328001
Type:	R	**Zoning:**	
Property Use:			
Location			
Situs Address:	5245 CR 207 HICO, TX 76457		
Map ID:	HI5	**Mapsco:**	
Legal Description:	466 R KENNEDY, ACRES 99.12		
Abstract/Subdivision:	A00468		
Neighborhood:	(HICO) HICO STUDY		
Owner			
Owner ID:	20609		
Name:	KEUNING OENE		
Agent:			
Mailing Address:	4745 CR 207 HICO, TX 76457		
% Ownership:	100.0%		
Exemptions:	For privacy reasons not all exemptions are shown online.		

Property Values

Improvement Homesite Value:	$0 (+)
Improvement Non-Homesite Value:	$14,080 (+)
Land Homesite Value:	$0 (+)
Land Non-Homesite Value:	$0 (+)
Agricultural Market Valuation:	$495,600 (+)
Market Value:	$509,680 (=)
Agricultural Value Loss:	$485,140 (-)
Appraised Value:	$24,540 (=)
HS Cap Loss:	$0 (-)
Circuit Breaker:	$0 (-)

Assessed Value:	$24,540
Ag Use Value:	$10,460

The 2025 appraisal roll values are subject to change and are not certified. Information provided for research purposes only. Legal descriptions and acreage amounts are for Appraisal District use only and should be verified prior to using for legal purpose and or documents. Please contact the Appraisal District to verify all information for accuracy.

Property Taxing Jurisdiction

Owner: KEUNING OENE **%Ownership:** 100.0%

Entity	Description	Tax Rate	Market Value	Taxable Value	Estimated Tax	Freeze Ceiling
EHI	HICO EMERGENCY SERVICE DISTRICT	0.085295	$509,680	$24,540	$20.93	
GHA	HAMILTON COUNTY	0.430000	$509,680	$24,540	$105.52	
SHI	HICO ISD	0.855200	$509,680	$24,540	$209.87	
CAD	County Appraisal District	0.000000	$509,680	$24,540	$0.00	

Total Tax Rate: 1.370495

Estimated Taxes With Exemptions: $336.32

Estimated Taxes Without Exemptions: $6,985.13

Property Improvement - Building

Description: SHEDS **Type:** Misc Imp **Living Area:** 0 sqft **Value:** $14,080

Type	Description	Class CD	Year Built	SQFT
SHED	MA	SHED1	1990	1168
CPT	OPEN POLE DT	CPT2	1980	900
SHED	SHEDS	SHED1	1990	400

Property Land

Type	Description	Acreage	Sqft	Eff Front	Eff Depth	Market Value	Prod. Value
NP	NATIVE PASTURE	99.12	4,317,667.20	0.00	0.00	$495,600	$10,460

Property Roll Value History

Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap Loss	Assessed
2025	$14,080	$495,600	$10,460	$24,540	$0	$24,540
2024	$14,300	$495,600	$7,750	$22,050	$0	$22,050
2023	$18,850	$405,600	$7,400	$26,250	$0	$26,250
2022	$19,130	$466,440	$7,400	$26,530	$0	$26,530
2021	$10,000	$304,200	$8,730	$18,730	$0	$18,730
2020	$11,210	$268,560	$8,730	$19,940	$0	$19,940
2019	$10,340	$304,200	$8,730	$19,070	$0	$19,070
2018	$4,720	$253,500	$8,730	$13,450	$0	$13,450
2017	$4,720	$253,500	$8,510	$13,230	$0	$13,230

Property Deed History

Deed Date	Type	Description	Grantor	Grantee	Volume	Page	Number
9/12/2024	WDVL	WARRANTY DEED W/VENDOR'S LIEN	LEWIS LINDA KAYE	KEUNING OENE	648	349	20241651
8/21/2024	AFF	AFFIDAVIT OF HEIRSHIP	LEWIS LONNIE D & LINDA KAYE	LEWIS LINDA KAYE	648	339	20241650
8/14/2009	OT	OWNER TRANSFER	BULLARD ROY P	LEWIS LONNIE D & LINDA KAYE	438	715	0

Estimated Tax Due

If Paid:

Year	Taxing Jurisdiction	Tax Rate	Market Value	Taxable Value	Base Tax	Base Taxes Paid	Base Tax Due	Discount/Penalty & Interest	Attorney Fees	Amou D
2024	HICO EMERGENCY SERVICE DISTRICT	0.085295	$509,900	$22,050	$18.81	$18.81	$0.00	$0.00	$0.00	$0
2024	HAMILTON COUNTY	0.430000	$509,900	$22,050	$94.82	$94.82	$0.00	$0.00	$0.00	$0
2024	HICO ISD	0.855200	$509,900	$22,050	$188.57	$188.57	$0.00	$0.00	$0.00	$0.
	2024 Total	1.370495			$302.20	$302.20	$0.00	$0.00	$0.00	$0.
2023	HICO EMERGENCY SERVICE DISTRICT	0.062379	$424,450	$26,250	$16.37	$16.37	$0.00	$0.00	$0.00	$0.
2023	HAMILTON COUNTY	0.400500	$424,450	$26,195	$104.91	$104.91	$0.00	$0.00	$0.00	$0
2023	HICO ISD	0.902300	$424,450	$26,250	$236.85	$236.85	$0.00	$0.00	$0.00	$0
	2023 Total	1.365179			$358.13	$358.13	$0.00	$0.00	$0.00	$0.
2022	HICO EMERGENCY SERVICE DISTRICT	0.068878	$485,570	$26,530	$18.27	$18.27	$0.00	$0.00	$0.00	$0.
2022	HAMILTON COUNTY	0.378300	$485,570	$26,475	$100.15	$100.15	$0.00	$0.00	$0.00	$0
2022	HICO ISD	1.042900	$485,570	$26,530	$276.68	$276.68	$0.00	$0.00	$0.00	$0
	2022 Total	1.490078			$395.10	$395.10	$0.00	$0.00	$0.00	$0
2021	HICO EMERGENCY SERVICE DISTRICT	0.084900	$314,200	$18,730	$15.90	$15.90	$0.00	$0.00	$0.00	$0
2021	HAMILTON COUNTY	0.455400	$314,200	$18,675	$85.05	$85.05	$0.00	$0.00	$0.00	$0.
2021	HICO ISD	1.110300	$314,200	$18,730	$207.96	$207.96	$0.00	$0.00	$0.00	$0
	2021 Total	1.650600			$308.91	$308.91	$0.00	$0.00	$0.00	$0

2020	HICO EMERGENCY SERVICE DISTRICT	0.098100	$279,770	$19,940	$19.56	$19.56	$0.00	$0.00	$0.00	$0.
2020	HAMILTON COUNTY	0.532300	$279,770	$19,885	$105.85	$105.85	$0.00	$0.00	$0.00	$0.
2020	HICO ISD	1.194700	$279,770	$19,940	$238.22	$238.22	$0.00	$0.00	$0.00	$0.
	2020 Total	1.825100			$363.63	$363.63	$0.00	$0.00	$0.00	$0.
2019	HICO EMERGENCY SERVICE DISTRICT	0.098100	$314,540	$19,070	$18.71	$18.71	$0.00	$0.00	$0.00	$0.
2019	HAMILTON COUNTY	0.560500	$314,540	$19,015	$106.58	$106.58	$0.00	$0.00	$0.00	$0
2019	HICO ISD	1.258300	$314,540	$19,070	$239.95	$239.95	$0.00	$0.00	$0.00	$0.
	2019 Total	1.916900			$365.24	$365.24	$0.00	$0.00	$0.00	$0.
2018	HICO EMERGENCY SERVICE DISTRICT	0.098100	$258,220	$13,450	$13.19	$13.19	$0.00	$0.00	$0.00	$0
2018	HAMILTON COUNTY	0.560500	$258,220	$13,395	$75.08	$75.08	$0.00	$0.00	$0.00	$0.
2018	HICO ISD	1.360000	$258,220	$13,450	$182.93	$182.93	$0.00	$0.00	$0.00	$0
	2018 Total	2.018600			$271.20	$271.20	$0.00	$0.00	$0.00	$0.
2017	HICO EMERGENCY SERVICE DISTRICT	0.098100	$258,220	$13,230	$12.98	$12.98	$0.00	$0.00	$0.00	$0
2017	HAMILTON COUNTY	0.560500	$258,220	$13,175	$73.85	$73.85	$0.00	$0.00	$0.00	$0
2017	HICO ISD	1.360000	$258,220	$13,230	$179.93	$179.93	$0.00	$0.00	$0.00	$0
	2017 Total	2.018600			$266.76	$266.76	$0.00	$0.00	$0.00	$0.
2016	HICO EMERGENCY SERVICE DISTRICT	0.098100	$258,220	$13,230	$12.98	$12.98	$0.00	$0.00	$0.00	$0.
2016	HAMILTON COUNTY	0.560500	$258,220	$13,175	$73.85	$73.85	$0.00	$0.00	$0.00	$0.
2016	HICO ISD	1.360000	$258,220	$13,230	$179.93	$179.93	$0.00	$0.00	$0.00	$0

	2016 Total	2.018600			$266.76	$266.76	$0.00	$0.00	$0.00	$0.
2015	HICO EMERGENCY SERVICE DISTRICT	0.098100	$258,220	$13,230	$12.98	$12.98	$0.00	$0.00	$0.00	$0.
2015	HAMILTON COUNTY	0.540500	$258,220	$13,175	$71.21	$71.21	$0.00	$0.00	$0.00	$0
2015	HICO ISD	1.360000	$258,220	$13,230	$179.93	$179.93	$0.00	$0.00	$0.00	$0.
	2015 Total	1.998600			$264.12	$264.12	$0.00	$0.00	$0.00	$0
2014	HICO EMERGENCY SERVICE DISTRICT	0.098100	$258,220	$13,230	$12.98	$12.98	$0.00	$0.00	$0.00	$0
2014	HAMILTON COUNTY	0.572400	$258,220	$13,175	$75.42	$75.42	$0.00	$0.00	$0.00	$0
2014	HICO ISD	1.360000	$258,220	$13,230	$179.93	$179.93	$0.00	$0.00	$0.00	$0.
	2014 Total	2.030500			$268.33	$268.33	$0.00	$0.00	$0.00	$0
2013	HICO EMERGENCY SERVICE DISTRICT	0.098100	$258,220	$13,230	$12.98	$12.98	$0.00	$0.00	$0.00	$0
2013	HAMILTON COUNTY	0.522000	$258,220	$13,175	$68.77	$68.77	$0.00	$0.00	$0.00	$0.
2013	HICO ISD	1.320000	$258,220	$13,230	$174.64	$174.64	$0.00	$0.00	$0.00	$0
	2013 Total	1.940100			$256.39	$256.39	$0.00	$0.00	$0.00	$0.
2012	HICO EMERGENCY SERVICE DISTRICT	0.096500	$258,220	$13,230	$12.77	$12.77	$0.00	$0.00	$0.00	$0
2012	HAMILTON COUNTY	0.557900	$258,220	$13,175	$73.51	$73.51	$0.00	$0.00	$0.00	$0
2012	HICO ISD	1.300000	$258,220	$13,230	$171.99	$171.99	$0.00	$0.00	$0.00	$0.
	2012 Total	1.954400			$258.27	$258.27	$0.00	$0.00	$0.00	$0.
2011	HICO EMERGENCY SERVICE DISTRICT	0.096500	$258,220	$12,840	$12.39	$12.39	$0.00	$0.00	$0.00	$0
2011	HAMILTON COUNTY	0.559900	$258,220	$12,785	$71.59	$71.59	$0.00	$0.00	$0.00	$0

2011	HICO ISD	1.240000	$258,220	$12,840	$159.22	$159.22	$0.00	$0.00	$0.00	$0.
	2011 Total	1.896400			$243.20	$243.20	$0.00	$0.00	$0.00	$0.
2010	HICO EMERGENCY SERVICE DISTRICT	0.086600	$258,050	$12,670	$11.23	$11.23	$0.00	$0.00	$0.00	$0.
2010	HAMILTON COUNTY	0.551600	$258,050	$12,615	$70.85	$70.85	$0.00	$0.00	$0.00	$0
2010	HICO ISD	1.240000	$258,050	$12,670	$157.11	$157.11	$0.00	$0.00	$0.00	$0.
	2010 Total	1.890200			$239.19	$239.19	$0.00	$0.00	$0.00	$0
2009	HICO EMERGENCY SERVICE DISTRICT	0.088300	$258,050	$12,660	$11.18	$11.18	$0.00	$0.00	$0.00	$0
2009	HAMILTON COUNTY	0.565500	$258,050	$12,605	$71.28	$71.28	$0.00	$0.00	$0.00	$0.
2009	HICO ISD	1.210000	$258,050	$12,660	$150.65	$150.65	$0.00	$0.00	$0.00	$0
	2009 Total	1.863800			$233.11	$233.11	$0.00	$0.00	$0.00	$0
2008	HICO EMERGENCY SERVICE DISTRICT	0.090000	$258,050	$12,660	$11.39	$11.39	$0.00	$0.00	$0.00	$0
2008	HAMILTON COUNTY	0.555500	$258,050	$12,605	$70.02	$70.02	$0.00	$0.00	$0.00	$0
2008	HICO ISD	1.190000	$258,050	$12,660	$150.65	$150.65	$0.00	$0.00	$0.00	$0
	2008 Total	1.835500			$232.06	$232.06	$0.00	$0.00	$0.00	$0
2007	HICO EMERGENCY SERVICE DISTRICT	0.093200	$187,070	$12,660	$11.80	$11.80	$0.00	$0.00	$0.00	$0
2007	HAMILTON COUNTY	0.516800	$187,070	$12,605	$65.14	$65.14	$0.00	$0.00	$0.00	$0.
2007	HICO ISD	1.190000	$187,070	$12,660	$150.65	$150.65	$0.00	$0.00	$0.00	$0
	2007 Total	1.800000			$227.59	$227.59	$0.00	$0.00	$0.00	$0
2006	HICO EMERGENCY SERVICE DISTRICT	0.093200	$156,650	$12,730	$11.86	$11.86	$0.00	$0.00	$0.00	$0

2005	HAMILTON COUNTY	0.530000	$156,650	$12,730	$67.47	$67.47	$0.00	$0.00	$0.00	$0.
2006	HICO ISD	1.420000	$156,650	$12,730	$180.77	$180.77	$0.00	$0.00	$0.00	$0.
	2006 Total	2.043200			$260.10	$260.10	$0.00	$0.00	$0.00	$0.
2005	HICO EMERGENCY SERVICE DISTRICT	0.100000	$80,600	$12,730	$12.73	$12.73	$0.00	$0.00	$0.00	$0
2005	HAMILTON COUNTY	0.530000	$80,600	$12,730	$67.47	$67.47	$0.00	$0.00	$0.00	$0
2005	HICO ISD	1.540000	$80,600	$12,730	$196.04	$196.04	$0.00	$0.00	$0.00	$0
	2005 Total	2.170000			$276.24	$276.24	$0.00	$0.00	$0.00	$0
2004	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$12,730	$12.73	$12.73	$0.00	$0.00	$0.00	$0.
2004	HAMILTON COUNTY	0.544800	$0	$12,730	$69.35	$69.35	$0.00	$0.00	$0.00	$0
2004	HICO ISD	1.540000	$0	$12,730	$196.04	$196.04	$0.00	$0.00	$0.00	$0
	2004 Total	2.184800			$278.12	$278.12	$0.00	$0.00	$0.00	$0
2003	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$12,730	$12.73	$12.73	$0.00	$0.00	$0.00	$0
2003	HAMILTON COUNTY	0.538900	$0	$12,730	$68.60	$68.60	$0.00	$0.00	$0.00	$0.
2003	HICO ISD	1.540000	$0	$12,730	$196.04	$196.04	$0.00	$0.00	$0.00	$0
	2003 Total	2.178900			$277.37	$277.37	$0.00	$0.00	$0.00	$0
2002	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$11,500	$11.50	$11.50	$0.00	$0.00	$0.00	$0
2002	HAMILTON COUNTY	0.543000	$0	$11,500	$62.45	$62.45	$0.00	$0.00	$0.00	$0
2002	HICO ISD	1.540000	$0	$11,500	$177.10	$177.10	$0.00	$0.00	$0.00	$0.
	2002 Total	2.183000			$251.05	$251.05	$0.00	$0.00	$0.00	$0

2001	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$11,170	$11.17	$11.17	$0.00	$0.00	$0.00	$0.
2001	HAMILTON COUNTY	0.567800	$0	$11,170	$63.42	$63.42	$0.00	$0.00	$0.00	$0
2001	HICO ISD	1.470000	$0	$11,170	$164.20	$164.20	$0.00	$0.00	$0.00	$0
	2001 Total:	2.137800			$238.79	$238.79	$0.00	$0.00	$0.00	$0.

Hamilton CAD Property Search

Property Details

Account

Property ID:	19604	**Geographic ID:**	26000000000329001
Type:	R	**Zoning:**	
Property Use:			

Location

Situs Address:	5245 CR 207 FAIRY, TX		
Map ID:	HI5	**Mapsco:**	
Legal Description:	468 R KENNEDY, ACRES: 102.4		
Abstract/Subdivision:	A00468		
Neighborhood:	(HICO) HICO STUDY		

Owner

Owner ID:	20609
Name:	KEUNING OENE
Agent:	
Mailing Address:	4745 CR 207 HICO, TX 76457
% Ownership:	100.0%
Exemptions:	For privacy reasons not all exemptions are shown online.

Property Values

Improvement Homesite Value:	$0 (+)
Improvement Non-Homesite Value:	$0 (+)
Land Homesite Value:	$0 (+)
Land Non-Homesite Value:	$0 (+)
Agricultural Market Valuation:	$512,000 (+)
Market Value:	$512,000 (=)
Agricultural Value Loss:	$501,190 (-)
Appraised Value:	$10,810 (=)
HS Cap Loss:	$0 (-)
Circuit Breaker:	$0 (-)

Assessed Value:	$10,810
Ag Use Value:	$10,810

The 2025 appraisal roll values are subject to change and are not certified. Information provided for research purposes only. Legal descriptions and acreage amounts are for Appraisal District use only and should be verified prior to using for legal purpose and or documents. Please contact the Appraisal District to verify all information for accuracy.

Property Taxing Jurisdiction

Owner: KEUNING OENE **%Ownership:** 100.0%

Entity	Description	Tax Rate	Market Value	Taxable Value	Estimated Tax	Freeze Ceiling
EHI	HICO EMERGENCY SERVICE DISTRICT	0.085295	$512,000	$10,810	$9.22	
GHA	HAMILTON COUNTY	0.430000	$512,000	$10,810	$46.48	
SHI	HICO ISD	0.855200	$512,000	$10,810	$92.45	
CAD	County Appraisal District	0.000000	$512,000	$10,810	$0.00	

Total Tax Rate: 1.370495

Estimated Taxes With Exemptions: $148.15

Estimated Taxes Without Exemptions: $7,016.93

Property Land

Type	Description	Acreage	Sqft	Eff Front	Eff Depth	Market Value	Prod. Value
NP	NATIVE PASTURE	102.40	4,460,544.00	0.00	0.00	$512,000	$10,810

Property Roll Value History

Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap Loss	Assessed
2025	$0	$512,000	$10,810	$10,810	$0	$10,810
2024	$0	$512,000	$8,010	$8,010	$0	$8,010
2023	$0	$409,600	$7,480	$7,480	$0	$7,480
2022	$0	$471,040	$7,480	$7,480	$0	$7,480
2021	$0	$307,200	$7,480	$7,480	$0	$7,480
2020	$0	$245,760	$7,480	$7,480	$0	$7,480
2019	$0	$307,200	$7,480	$7,480	$0	$7,480
2018	$0	$256,000	$7,480	$7,480	$0	$7,480
2017	$0	$256,000	$7,480	$7,480	$0	$7,480

Property Deed History

Deed Date	Type	Description	Grantor	Grantee	Volume	Page	Number
9/12/2024	WDVL	WARRANTY DEED W/VENDOR'S LIEN	LEWIS LINDA KAYE	KEUNING OENE	648	349	20241651
8/21/2024	AFF	AFFIDAVIT OF HEIRSHIP	LEWIS LONNIE D & LINDA KAYE	LEWIS LINDA KAYE	648	339	20241650
8/14/2009	OT	OWNER TRANSFER	BULLARD ROY P	LEWIS LONNIE D & LINDA KAYE	438	715	0

Estimated Tax Due

If Paid:

Year	Taxing Jurisdiction	Tax Rate	Market Value	Taxable Value	Base Tax	Base Taxes Paid	Base Tax Due	Discount/Penalty & Interest	Attorney Fees	Amou D
2024	HICO EMERGENCY SERVICE DISTRICT	0.085295	$512,000	$8,010	$6.83	$6.83	$0.00	$0.00	$0.00	$0
2024	HAMILTON COUNTY	0.430000	$512,000	$8,010	$34.44	$34.44	$0.00	$0.00	$0.00	$0.
2024	HICO ISD	0.855200	$512,000	$8,010	$68.50	$68.50	$0.00	$0.00	$0.00	$0.
	2024 Total	1.370495			$109.77	$109.77	$0.00	$0.00	$0.00	$0.
2023	HICO EMERGENCY SERVICE DISTRICT	0.062379	$409,600	$7,480	$4.67	$4.67	$0.00	$0.00	$0.00	$0.
2023	HAMILTON COUNTY	0.400500	$409,600	$7,435	$29.78	$29.78	$0.00	$0.00	$0.00	$0.
2023	HICO ISD	0.902300	$409,600	$7,480	$67.49	$67.49	$0.00	$0.00	$0.00	$0
	2023 Total	1.365179			$101.94	$101.94	$0.00	$0.00	$0.00	$0
2022	HICO EMERGENCY SERVICE DISTRICT	0.068878	$471,040	$7,480	$5.15	$5.15	$0.00	$0.00	$0.00	$0.
2022	HAMILTON COUNTY	0.378300	$471,040	$7,435	$28.13	$28.13	$0.00	$0.00	$0.00	$0
2022	HICO ISD	1.042900	$471,040	$7,480	$78.01	$78.01	$0.00	$0.00	$0.00	$0.
	2022 Total	1.490078			$111.29	$111.29	$0.00	$0.00	$0.00	$0.
2021	HICO EMERGENCY SERVICE DISTRICT	0.084900	$307,200	$7,480	$6.35	$6.35	$0.00	$0.00	$0.00	$0
2021	HAMILTON COUNTY	0.455400	$307,200	$7,435	$33.86	$33.86	$0.00	$0.00	$0.00	$0
2021	HICO ISD	1.110300	$307,200	$7,480	$83.05	$83.05	$0.00	$0.00	$0.00	$0
	2021 Total	1.650600			$123.26	$123.26	$0.00	$0.00	$0.00	$0.

2020	HICO EMERGENCY SERVICE DISTRICT	0.098100	$245,760	$7,480	$7.34	$7.34	$0.00	$0.00	$0.00	$0
2020	HAMILTON COUNTY	0.532300	$245,760	$7,435	$39.58	$39.58	$0.00	$0.00	$0.00	$0
2020	HICO ISD	1.194700	$245,760	$7,480	$89.36	$89.36	$0.00	$0.00	$0.00	$0.
	2020 Total	1.825100			$136.28	$136.28	$0.00	$0.00	$0.00	$0.
2019	HICO EMERGENCY SERVICE DISTRICT	0.098100	$307,200	$7,480	$7.34	$7.34	$0.00	$0.00	$0.00	$0.
2019	HAMILTON COUNTY	0.560500	$307,200	$7,435	$41.67	$41.67	$0.00	$0.00	$0.00	$0.
2019	HICO ISD	1.258300	$307,200	$7,480	$94.12	$94.12	$0.00	$0.00	$0.00	$0.
	2019 Total	1.916900			$143.13	$143.13	$0.00	$0.00	$0.00	$0.
2018	HICO EMERGENCY SERVICE DISTRICT	0.098100	$256,000	$7,480	$7.34	$7.34	$0.00	$0.00	$0.00	$0.
2018	HAMILTON COUNTY	0.560500	$256,000	$7,435	$41.67	$41.67	$0.00	$0.00	$0.00	$0.
2018	HICO ISD	1.360000	$256,000	$7,480	$101.73	$101.73	$0.00	$0.00	$0.00	$0.
	2018 Total	2.018600			$150.74	$150.74	$0.00	$0.00	$0.00	$0.
2017	HICO EMERGENCY SERVICE DISTRICT	0.098100	$256,000	$7,480	$7.34	$7.34	$0.00	$0.00	$0.00	$0.
2017	HAMILTON COUNTY	0.560500	$256,000	$7,435	$41.67	$41.67	$0.00	$0.00	$0.00	$0.
2017	HICO ISD	1.360000	$256,000	$7,480	$101.73	$101.73	$0.00	$0.00	$0.00	$0.
	2017 Total	2.018600			$150.74	$150.74	$0.00	$0.00	$0.00	$0
2016	HICO EMERGENCY SERVICE DISTRICT	0.098100	$256,000	$7,480	$7.34	$7.34	$0.00	$0.00	$0.00	$0
2016	HAMILTON COUNTY	0.560500	$256,000	$7,435	$41.67	$41.67	$0.00	$0.00	$0.00	$0
2016	HICO ISD	1.360000	$256,000	$7,480	$101.73	$101.73	$0.00	$0.00	$0.00	$0

	2016 Total	2.018600			$150.74	$150.74	$0.00	$0.00	$0.00	$0
2015	HICO EMERGENCY SERVICE DISTRICT	0.098100	$256,000	$7,480	$7.34	$7.34	$0.00	$0.00	$0.00	$0
2015	HAMILTON COUNTY	0.540500	$256,000	$7,435	$40.19	$40.19	$0.00	$0.00	$0.00	$0
2015	HICO ISD	1.360000	$256,000	$7,480	$101.73	$101.73	$0.00	$0.00	$0.00	$0.
	2015 Total	1.998600			$149.26	$149.26	$0.00	$0.00	$0.00	$0
2014	HICO EMERGENCY SERVICE DISTRICT	0.098100	$256,000	$7,480	$7.34	$7.34	$0.00	$0.00	$0.00	$0
2014	HAMILTON COUNTY	0.572400	$256,000	$7,435	$42.56	$42.56	$0.00	$0.00	$0.00	$0
2014	HICO ISD	1.360000	$256,000	$7,480	$101.73	$101.73	$0.00	$0.00	$0.00	$0
	2014 Total	2.030500			$151.63	$151.63	$0.00	$0.00	$0.00	$0
2013	HICO EMERGENCY SERVICE DISTRICT	0.098100	$256,000	$7,480	$7.34	$7.34	$0.00	$0.00	$0.00	$0.
2013	HAMILTON COUNTY	0.522000	$256,000	$7,435	$38.81	$38.81	$0.00	$0.00	$0.00	$0
2013	HICO ISD	1.320000	$256,000	$7,480	$98.74	$98.74	$0.00	$0.00	$0.00	$0
	2013 Total	1.940100			$144.89	$144.89	$0.00	$0.00	$0.00	$0
2012	HICO EMERGENCY SERVICE DISTRICT	0.096500	$256,000	$7,480	$7.22	$7.22	$0.00	$0.00	$0.00	$0
2012	HAMILTON COUNTY	0.557900	$256,000	$7,435	$41.48	$41.48	$0.00	$0.00	$0.00	$0
2012	HICO ISD	1.300000	$256,000	$7,480	$97.24	$97.24	$0.00	$0.00	$0.00	$0
	2012 Total	1.954400			$145.94	$145.94	$0.00	$0.00	$0.00	$0
2011	HICO EMERGENCY SERVICE DISTRICT	0.096500	$256,000	$7,380	$7.12	$7.12	$0.00	$0.00	$0.00	$0
2011	HAMILTON COUNTY	0.559900	$256,000	$7,335	$41.07	$41.07	$0.00	$0.00	$0.00	$0

2011	HICO ISD	1.240000	$256,000	$7,380	$91.52	$91.52	$0.00	$0.00	$0.00	$0
	2011 Total	1.895400			$139.71	$139.71	$0.00	$0.00	$0.00	$0
2010	HICO EMERGENCY SERVICE DISTRICT	0.088600	$256,000	$7,380	$6.54	$6.54	$0.00	$0.00	$0.00	$0
2010	HAMILTON COUNTY	0.561600	$256,000	$7,335	$41.19	$41.19	$0.00	$0.00	$0.00	$0
2010	HICO ISD	1.240000	$256,000	$7,380	$91.52	$91.52	$0.00	$0.00	$0.00	$0
	2010 Total	1.890200			$139.25	$139.25	$0.00	$0.00	$0.00	$0
2009	HICO EMERGENCY SERVICE DISTRICT	0.088300	$256,000	$7,380	$6.52	$6.52	$0.00	$0.00	$0.00	$0
2009	HAMILTON COUNTY	0.565500	$256,000	$7,335	$41.48	$41.48	$0.00	$0.00	$0.00	$0
2009	HICO ISD	1.210000	$256,000	$7,380	$87.82	$87.82	$0.00	$0.00	$0.00	$0
	2009 Total	1.863800			$135.82	$135.82	$0.00	$0.00	$0.00	$0
2008	HICO EMERGENCY SERVICE DISTRICT	0.090000	$256,000	$7,380	$6.64	$6.64	$0.00	$0.00	$0.00	$0
2008	HAMILTON COUNTY	0.555500	$256,000	$7,335	$40.75	$40.75	$0.00	$0.00	$0.00	$0
2008	HICO ISD	1.190000	$256,000	$7,380	$87.82	$87.82	$0.00	$0.00	$0.00	$0
	2008 Total	1.835500			$135.21	$135.21	$0.00	$0.00	$0.00	$0
2007	HICO EMERGENCY SERVICE DISTRICT	0.093200	$184,320	$7,380	$6.88	$6.88	$0.00	$0.00	$0.00	$0
2007	HAMILTON COUNTY	0.516800	$184,320	$7,335	$37.91	$37.91	$0.00	$0.00	$0.00	$0
2007	HICO ISD	1.190000	$184,320	$7,380	$87.82	$87.82	$0.00	$0.00	$0.00	$0
	2007 Total	1.800000			$132.61	$132.61	$0.00	$0.00	$0.00	$0
2006	HICO EMERGENCY SERVICE DISTRICT	0.093200	$153,600	$7,480	$6.97	$6.97	$0.00	$0.00	$0.00	$0

2006	HAMILTON COUNTY	0.530000	$153,600	$7,480	$39.64	$39.64	$0.00	$0.00	$0.00	$0
2006	HICO ISD	1.420000	$153,600	$7,480	$106.22	$106.22	$0.00	$0.00	$0.00	$0
	2006 Total	2.043200			$152.83	$152.83	$0.00	$0.00	$0.00	$0
2005	HICO EMERGENCY SERVICE DISTRICT	0.100000	$76,800	$7,480	$7.48	$7.48	$0.00	$0.00	$0.00	$0
2005	HAMILTON COUNTY	0.530000	$76,800	$7,480	$39.64	$39.64	$0.00	$0.00	$0.00	$0
2005	HICO ISD	1.540000	$76,800	$7,480	$115.19	$115.19	$0.00	$0.00	$0.00	$0
	2005 Total	2.170000			$162.31	$162.31	$0.00	$0.00	$0.00	$0
2004	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$7,480	$7.48	$7.48	$0.00	$0.00	$0.00	$0
2004	HAMILTON COUNTY	0.544800	$0	$7,480	$40.75	$40.75	$0.00	$0.00	$0.00	$0
2004	HICO ISD	1.540000	$0	$7,480	$115.19	$115.19	$0.00	$0.00	$0.00	$0
	2004 Total	2.184800			$163.42	$163.42	$0.00	$0.00	$0.00	$0
2003	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$7,480	$7.48	$7.48	$0.00	$0.00	$0.00	$0
2003	HAMILTON COUNTY	0.538900	$0	$7,480	$40.31	$40.31	$0.00	$0.00	$0.00	$0
2003	HICO ISD	1.540000	$0	$7,480	$115.19	$115.19	$0.00	$0.00	$0.00	$0
	2003 Total	2.178900			$162.98	$162.98	$0.00	$0.00	$0.00	$0
2002	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$7,480	$7.48	$7.48	$0.00	$0.00	$0.00	$0
2002	HAMILTON COUNTY	0.543000	$0	$7,480	$40.62	$40.62	$0.00	$0.00	$0.00	$0
2002	HICO ISD	1.540000	$0	$7,480	$115.19	$115.19	$0.00	$0.00	$0.00	$0
	2002 Total	2.183000			$163.29	$163.29	$0.00	$0.00	$0.00	$0

2001	HICO EMERGENCY SERVICE DISTRICT	0.100000	$0	$6,960	$6.96	$6.96	$0.00	$0.00	$0.00	$0
2001	HAMILTON COUNTY	0.567800	$0	$6,960	$39.52	$39.52	$0.00	$0.00	$0.00	$0
2001	HICO ISD	1.470000	$0	$6,960	$102.31	$102.31	$0.00	$0.00	$0.00	$0
	2001 Total	2.137800			$148.79	$148.79	$0.00	$0.00	$0.00	$0

TCEQ USE ONLY

Application type: ☐ Renewal ☐ Major Amendment ☐ Minor Amendment ☐ New County: _____ Admin Complete Date: _____ Agency Receiving SPIF: ☐ Texas Historical Commission ☐ U.S. Fish and Wildlife ☐ Texas Parks and Wildlife ☐ Army Corps of Engineers

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

This form is required for all TPDES applications

1. Applicant: Oene Keuning
2. Permit Number: WQ0004108000 EPA ID Number: TX0128619
3. Address of the project (location description that includes street/highway, city/vicinity, and county). The facility is located approximately 3.8 miles West of the intersection of US Hwy 281 and County Road 207 in Hamilton County, Texas.
4. Provide the name, address, telephone and fax number of an individual that can be contacted to answer specific questions about the property.

   First and Last Name: Corey Mullin

   Company Name: Enviro-Ag Engineering, Inc.

   Mailing Address: 9855 FM 847

   City, State, and Zip Code: Dublin, TX 76446

   Phone Number: 254/965-3500 Fax Number: 254/965-8000
5. County where the facility is located: Hamilton
6. If the property is publicly owned and the owner is different than the permittee/applicant, please identify the owner. n/a
7. Identify the name of the water body (receiving waters) and TCEQ segment number that will receive the discharge. North Bosque River in Segment No. 1226 of the Brazos River Basin
8. Provide a 7.5-minute USGS quadrangle map with the project boundaries plotted and a general location map showing the project area. (This map is required in addition to the map in the administrative report.)
9. Provide photographs of any structures 50 years or older on the property.
10. Does your project involve any of the following? Select all that apply.
    - ☐ Proposed access roads, utility lines, and construction easements
    - ☐ Visual effects that could damage or detract from a historic property's integrity
    - ☐ Vibration effects during construction or as a result of project design
    - ☐ Additional phases of development that are planned for the future
    - ☐ Sealing of caves, fractures, sinkholes, or other karst features
    - ☐ Disturbance of vegetation or wetlands
11. List proposed construction impact (surface acres to be impacted, depth of excavation, sealing of caves or other karst features): Click here to enter text.

12. Describe existing disturbances, vegetation & land use (plowing, other ground disturbances): n/a

The following applies to New TPDES and Major Amendment to TPDES Permits:

13. List construction dates of any buildings or structures on the property: The Land Management Units (LMUs) at the facility are planted in Corn and Coastal Bermuda grass and normal expected farming practices to maintain the crops will be utilized.

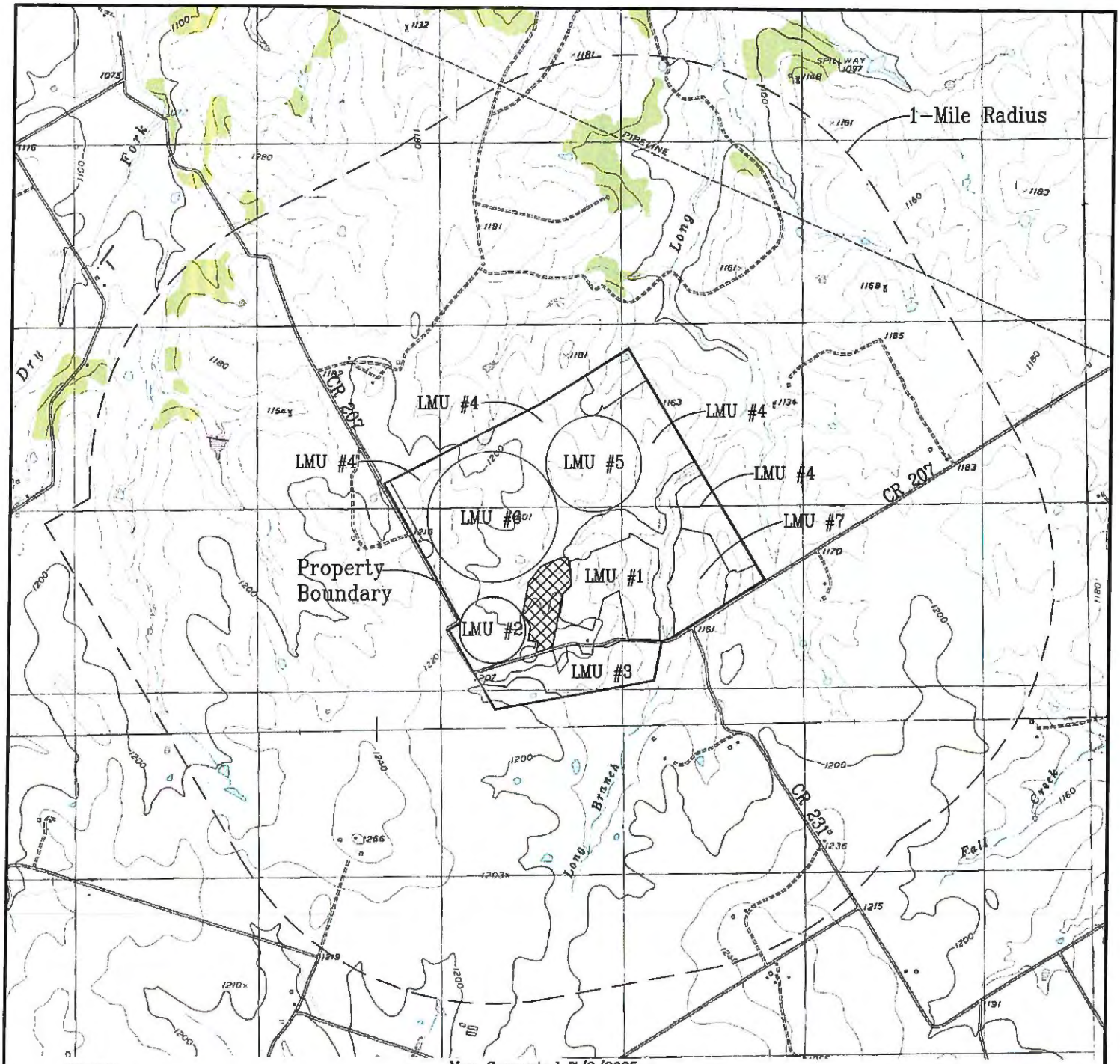
14. Provide a brief history of the property, and name of the architect/builder, if known: unknown

The following applies to New, Amended and Renewal TPDES applications:

15. List each Retention Control Structure and its required capacity (Acre Feet). unknown

16. Provide the location and number of acres where wastewater and manure are land applied: The facility has 463 acres available for waste and wastewater application. See attached Figure 1.3 for exact locations of the LMUs.

17. List the maximum number of head to be permitted. 2,000



LEGEND:

Denotes Production Area

Map Generated 7/2/2025

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1250' 0 1250' 2500'

SCALED AS SHOWN

Source: USDA–NRCS. Geospatial Data Gateway. Available at: http://datagateway.nrcs.usda.gov/. Digital Raster Graphic County Mosaic by NRCS – Accessed July, 2017.

Note: Refer to Figures 1.3 & 1.4 for overall facility maps.

Okee Dairy Hico, Texas Hamilton County	SPIF Map	ENVIRO–AG EAE ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Blvd. AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

TECHNICAL INFORMATION PACKET FOR CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFOS)

Submit this Form with your Individual Permit Application (TCEQ – 000728)

Name of Site: Okee Dairy

TCEQ Permit Number, if assigned: WQ000 4108000

Date Prepared: June 2025

SECTION 1. POLLUTANT SOURCES MANAGEMENT

For each potential pollutant source listed in the table below, provide the management practices utilized or enter "Not Applicable". Management practices should address the collection, storage and final disposition of each potential pollutant source. You may attach your list.

Table 1: Potential Pollutant Sources and Best Management Practices

Potential Pollutant Source	Best Management Practices
Manure and Manure Stockpiles	See Attached BMPs
Wastewater	See Attached BMPs
Sludge	See Attached BMPs
Compost	See Attached BMPs
Feed and Bedding	See Attached BMPs
Silage stockpiles	See Attached BMPs
Dead animals	See Attached BMPs
Dust	See Attached BMPs
Lubricants	See Attached BMPs
Pesticides	See Attached BMPs
Bulk cleaning chemicals	N/A
Inorganic fertilizers	N/A
Fuel storage tanks	See Attached BMPs
Other, specify: Parlor Chemicals & Burial Site	See Attached BMPs

SECTION 2. RETENTION CONTROL STRUCTURE DESIGN

A. Design Summary

1) Design Standards, Characteristic, and Values Sources Used

- ☐ Natural Resource Conservation Service
- ☒ American Society of Agricultural and Biological Engineers
- ☒ Other; specify: Midwest Plan Services

I. POLLUTANT SOURCES AND MANAGEMENT

B. For each potential pollutant source, provide the management practices utilized.

Note: A Best Management Practice, as defined in 30 TAC §321.32(7), is the schedule of activities, prohibitions of practices, maintenance procedures, and other management and conservation practices to prevent or reduce the pollution of water in the state. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge, land application, or drainage from raw material storage. The following practices should be updated in the on-site PPP as changes to facility operating procedures occur. Employee training should be provided upon development & implementation of any BMP.

Potential Pollutant Sources:	Potential Best Management Practices (BMPs)
Manure, Sludge, Stockpiles, Slurry, Bedding, Feed Waste & Compost	Temporary (< 30 days) & Permanent Storage (>30 days) Store in drainage area of the RCS - OR - If not located within drainage area, berm area to contain runoff. Annually sample manure/manure stockpiles/compost/slurry for nutrient concentrations. Manure, Sludge, Slurry and/or Compost -Land application on-site or to third-party fields or transferred to other persons. Regular pen maintenance (scraping & drainage)
Dust - Vehicle Traffic	Control speeds around the facility. Reduce travel on unpaved facility roads, or manage dust by sprinkling road with water and/or a suppressant on an as needed basis. Utilize paving products and/or gravel to manage dust on facility roads.
Dust - Feed Handling/Processing	Utilize dust abatement measures for feed handling equipment, Utilize choke feeding when handling feed ingredients & Utilize feed ingredients, such as moisture or other additives, to manage dust.
Feedstuff/Silage Stockpiles	Contain leachate in an earthen berm or in the RCS Minimize feed spoilage & utilize plastic covers or roofed areas for storage when applicable.
Lubricants/Pesticides/Herbicides/Parlor Chemicals	Store under roof Handle and dispose according to label directions
Fuel Tanks	Provide secondary containment Prevent overfills/spills
Wastewater	Store in RCS Land application according to NUP/NMP Land application will not occur during periods of saturation or frozen conditions (except in the event of imminent overflow) Annually sample for nutrient concentrations Maintain liner and capacity certifications Land application on-site or to third-party fields Maintain adequate capacity as determined by the pond marker schematic
Dead Animals	Disposed by a third-party rendering service, composted on-site or burial. Collected within 24 hours of death and disposed within three days of death
Burial Pits	Carcasses buried at least 3 feet below the natural surface of the ground. Covered with 3 feet of native soil.

2) Total Number of Animals:
In Open Lots: 500 In Buildings: 1,500

3) Animal Housing Location, hours/day:
Open Lots: 21.5 Buildings: 2.5

4) Average Liveweight, pounds per head: 1,400

5) Volatile Solids Removed by Separator System: 40%

6) Volatile Solids Loading Rate, lbs/day/1000 ft³: 5.30

7) Spilled Drinking Water, gallons/day: Included in cleanup water

8) Water for Cleanup, gallons/day: 22,500 gal/day

9) Water for Manure Removal, gallons/day: Included in cleanup water

10) Recycled Wastewater, gallons/day: n/a

B. Wastewater Runoff

1) Design Rainfall Amount, inches: 12.2

2) Design Rainfall Event:

- ☐ 25-year, 24 hour
- ☐ Soil Plant Air and Water (SPAW) Field and Pond Hydrology Model
- ☒ 25-year, 10 day
- ☐ Other; specify: Click here to enter text.

C. Retention Control Structure(s) (RCS) Volume Allocations

Table 2. RCS Volume Allocations (Acre-Feet)

RCS Name	Design Rainfall Event Runoff	Process Generated Wastewater	Minimum Treatment Volume	Sludge Accumulation	Water Balance	Required Capacity	Actual Capacity
1	0.00	0.00	6.90	1.15	0.00	8.05	9.62
2	14.82	2.07	0.00	0.16	4.60	21.64*	27.12
						*Rounded Figure	

Indicate which RCSs are in-series: RCS #1 & RCS #2

D. RCS Liner or Lack of Hydrologic Connection Certification

Table 3: RCS Hydrologic Connection

RCS Name	Construction Date	Type of Hydrologic Connection Certification
RCS #1	1992	Liner Cert., Jerry Holligan P.E., February 17, 1997
RCS #2	2008	Liner Cert., Norman Mullin P.E., October 13, 2008
Settling Pond #1	2001	Liner Cert., Norman Mullin P.E., April 24, 2006
Settling Pond #2	2004	Liner Cert., Norman Mullin P.E., June 19, 2017

E. Playa Lakes

Are any playa lakes used for RCSs? Yes ☐ No ☒

SECTION 3. MANURE, SLUDGE, AND WASTEWATER HANDLING

A. Manure:

1) Use or Disposal Method:
   - ☒ Land Application to LMUs
   - ☒ Transfer to other persons
   - ☒ Third Party Fields
   - ☐ Other; specify: Click here to enter text.

2) Land Application Location:
   - ☒ Onsite ☒ Offsite ☐ Not Applicable

3) Composting Location:
   - ☒ Onsite ☐ Offsite ☐ Not Applicable

B. Sludge:

1) Use or Disposal Method:
   - ☒ Land Application to LMUs
   - ☐ Transfer to other persons
   - ☒ Third Party Fields

☐ Other; specify: Click here to enter text.

2) Land Application Location:

☒ Onsite ☒ Offsite ☐ Not Applicable

C. Wastewater:

1) Use or Disposal Method:

☒ Land Application to LMUs

☐ Total Evaporation

☒ Third Party Fields

☐ Other; specify: Click here to enter text.

2) Land Application Location:

☒ Onsite ☒ Offsite ☐ Not Applicable

D. Land Application Summary from the Nutrient Management Plan

For each Land Management Unit (LMU), provide the name, acre, crops/yield goals and application rates on Table 4 below. Add rows if needed or attach additional pages.

Table 4: Land Management Unit Summary from the Current NMP

LMU Name	Acre	Crop(s) and Yield Goal(s)	Application Rate (Ac-ft/Ac/Year OR Tons/Ac/Year)
1	51	Coastal GC 9-11T; SG GC 6-7T	238.1 tons/ac/yr
2	26	Coastal GC 9-11T; SG GC 6-7T	0.167 ac-ft/ac/yr
3	45	Coastal GC 9-11T; SG GC 6-7T	238.1 tons/ac/yr
4	155	Coastal GC 9-11T; SG GC 6-7T	238.1 tons/ac/yr
5	53	Coastal GC 9-11T; SG GC 6-7T	0.658 ac-ft/ac/yr
6	100	Silage-Corn 16-20T; SG GC 8-9T	0.458 ac-ft/ac/yr
7	33	Coastal GC 9-11T; SG GC 6-7T	113.3 tons/ac/yr

1) Wastewater production, ac-in/year: 600.12 ac-in/yr (Table 2.3, Col. 4)
2) Estimated Wastewater application, ac-in/year: 394.08 ac-in/yr (Table 2.3, Col. 10)
3) Manure production, tons/year: 6,479 tons/yr (Table 2.1)
4) Estimated manure application, tons/year: 1,016 ton/yr (NMP)
5) Estimated manure transferred to other persons, tons/year: 5,463 tons/yr (NMP)

E. Floodplain Information

1) Is any part of the production area within a 100-year floodplain? Yes ☐ No ☒

If YES, describe management practices to protect the sites. Click here to enter text.

2) Is land application or temporary storage of manure in a 100-year floodplain or near a water course? Yes ☒ No ☐

If YES, describe management practices. Vegetative buffer shall be maintained between all waters of the state and any waste/wastewater application.

F. Soil Limitations

Table 5: Soil Limiting Characteristics and Best Management Practices

Soil Types	Limiting Characteristics	Best Management Practices
BxD, OgB	Droughty Depth to Hard Bedrock Depth to Soft Bedrock	- Land Application not to exceed agronomic rates for nutrients and soil hydraulic rates (refer to NMP) - Irrigation events will be managed to assist in maintaining soil moisture levels within the range of the available water holding capacity of that Land Management Unit. -No land application to inundated soils
PkB	Droughty Depth to Bedrock	- Land Application will be based upon the AWC (refer to NMP) of the soil and will not exceed agronomic rates for nutrients. - Irrigation events will be managed to assist in maintaining soil moisture levels within the range of the available water holding capacity of that Land Management Unit. -No land application to inundated soils
KrB, SsB	Slow Water Movement	- Land Application will be based upon the AWC (refer to NMP) of the soil and will not exceed agronomic rates for nutrients. -No land application to inundated soils
ToC, WsC	Depth to Soft Bedrock	- Land Application will be based upon the AWC (refer to NMP) of the soil and will not exceed agronomic rates for nutrients. - Irrigation events will be managed to assist in maintaining soil moisture levels within the range of the available water holding capacity of that Land Management Unit. -No land application to inundated soils
NuC	Large Surface Stones Slow Water Movement	- Land Application will be based upon the AWC (refer to NMP) of the soil and will not exceed agronomic rates for nutrients.

Soil Types	Limiting Characteristics	Best Management Practices
		- Irrigation events will be managed to assist in maintaining soil moisture levels within the range of the available water holding capacity of that Land Management Unit. -No land application to inundated soils

G. Well Protection

Table 6: Water Well Status and Protective Measures

Well ID Number	Well Type	Producing or Non-Producing	Open, Cased, or Capped	Protective Measures
1	Domestic	Producing	Cased	See Attached Approved Well Buffer Exception
2	Domestic	Producing	Cased	See Attached Approved Well Buffer Exception
3	Domestic	Producing	Cased	Maintain 150-ft Buffer
4	Domestic	Producing	Cased	Maintain 150-ft Buffer
5	Domestic	Non-Producing	Cased	See Attached Plugging Report
6	Domestic	Non-Producing	Cased	See Attached Plugging Report
7	Domestic	Non-Producing	Cased	See Attached Plugging Report
8	Domestic	Producing	Cased	Maintain 150-ft Buffer
9	Domestic	Producing	Cased	Maintain 150-ft Buffer
10	Domestic	Producing	Cased	Maintain 150-ft Buffer
11	Domestic	Producing	Cased	Maintain 150-ft Buffer

Well ID Number	Well Type	Producing or Non-Producing	Open, Cased, or Capped	Protective Measures
12	Domestic	Producing	Cased	Maintain 150-ft Buffer

SECTION 4. AIR AUTHORIZATION SUMMARY

A. Type of Air Authorization

- ☒ Air Standard Permit in 30 TAC § 321.43
- ☐ Permit By Rule in 30 TAC Chapter 106 Subchapter F
- ☐ Individual Air Quality Permit

If Air Standard Permit is selected, then complete Sections B and C below.

B. Indicate the AFO Status and Buffer Option.

☐ Operation started after August 19, 1998:
- ☐ ½ mile buffer*
- ☐ ¼ mile buffer* and an odor control plan

☒ Operation started on or before August 19, 1998:
- ☒ ¼ mile buffer*
- ☐ odor control plan

*A written letter of consent from an affected landowner may be used in lieu of meeting the buffer distances specified.

C. Odor Receptors

Identify the number of occupied residences or business structures, schools (including associated recreational areas), places of worship, or public parks located within the following distances from permanent odor sources as defined in 30 TAC §321.32(43):

0 - ¼ mile: 4 (4 Applicant Owned)

¼ - ½ mile: 0

½ - 1 mile: 8 (1 Applicant Owned)

SECTION 5. ATTACHMENTS

A. Maps

1) Site Map
2) Land Management Unit Map
3) Vicinity Map
4) Original United States Geological Survey 7.5 Minute Quadrangle Map
5) 100 Year Floodplain Map (if applicable)
6) Runoff Control Map
7) Natural Resource Conservation Service (NRCS) Soil Survey Map

B. Professional Certifications

1) Recharge Feature Certification Statement and Supporting Documents
2) RCS Design Calculations (Water Nutr, Animal Waste Management (AWM), or equivalent)
3) RCS As-Built Capacity Certifications (if constructed)
4) RCS Hydrologic Connection Certifications (if constructed)

C. Land Application

1) Nutrient Management Plan
2) Nutrient Utilization Plan. If the NUP is already approved, include the approval letter.
3) Copy of Annual Soil Sampling Analyses (used for the NMP that was submitted with the application)

4) Copy of Annual Manure and Wastewater Analyses (used for the NMP that was submitted with the application

D. Air Standard Permit Documentation (if required)

1) Area Land Use Map,
2) Odor Control Plan, if applicable
3) Written Consent Letters, if applicable

E. Groundwater Monitoring (if required)

1) Groundwater Monitoring Plan
2) Groundwater Monitoring Analyses

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1.0 FACILITY MAPS

1.1 Vicinity Map

Figure 1.1, Vicinity Map, is a general highway map generated in AutoCAD using Tiger Primary and Secondary roads data from geospatial Data Gateway at http://datagateway.nrcs.usda.gov/ (retrieved 2014). The location of the facility is depicted on the map.

1.2 USGS Quadrangle Map

Figure 1.2, entitled 7.5-Minute USGS Map is a seamless, high-quality copy of the 7.5-minute USGS quadrangle map (Hico, TX, quadrangle) that shows the boundaries of land owned, operated, or controlled by Okee Dairy and used as part of the concentrated animal feeding operation; and all springs, lakes, or ponds located on-site and within 1 mile of the property boundary.

1.3 Site Map

Figure 1.3, Site Map, is a scaled drawing of the entire property to be permitted showing the locations of the following information:

- Pens/Open Lots
- Barns
- Retention Control Structures
- Land Management Units
- Buffer zones
- Wells
- Freshwater Ponds
- Berms/Diversions
- Milking Parlor
- Manure/Compost Storage Areas
- Burial Site

1.4 Runoff Control Map

Figure 1.4 is a scaled drawing of the production area showing the pens, barns, wells, RCSs, permanent manure storage and compost areas, hay/silage storage, drainage area boundaries and flow directions.

Map Updated 7/22/2020

LEGEND:

- Denotes City/County Roads
- Denotes Major Roads
- Okee Dairy

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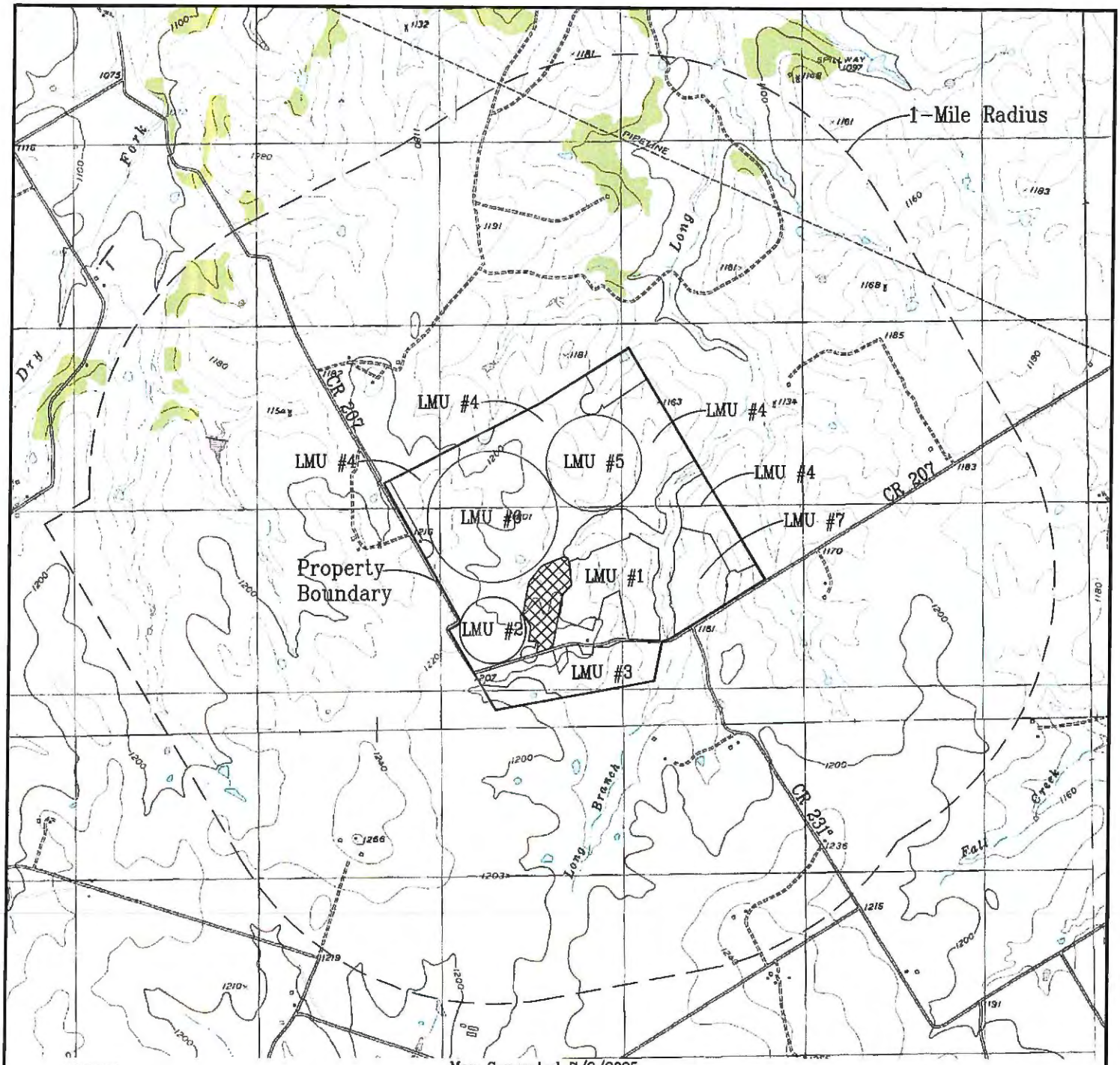
7000' 0 7000' 14000'

SCALED AS SHOWN

Source: USDA–NRCS. Geospatial Data Gateway. Available at: http://datagateway.nrcs.usda.gov/. Tiger 2010 Primary and Secondary Roads – Accessed May, 2014.

Okee Dairy Hico, Texas Hamilton County	Vicinity Map Figure 1.1 Page 2	ENVIRO–AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Blvd. AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132



Map Generated 7/2/2025

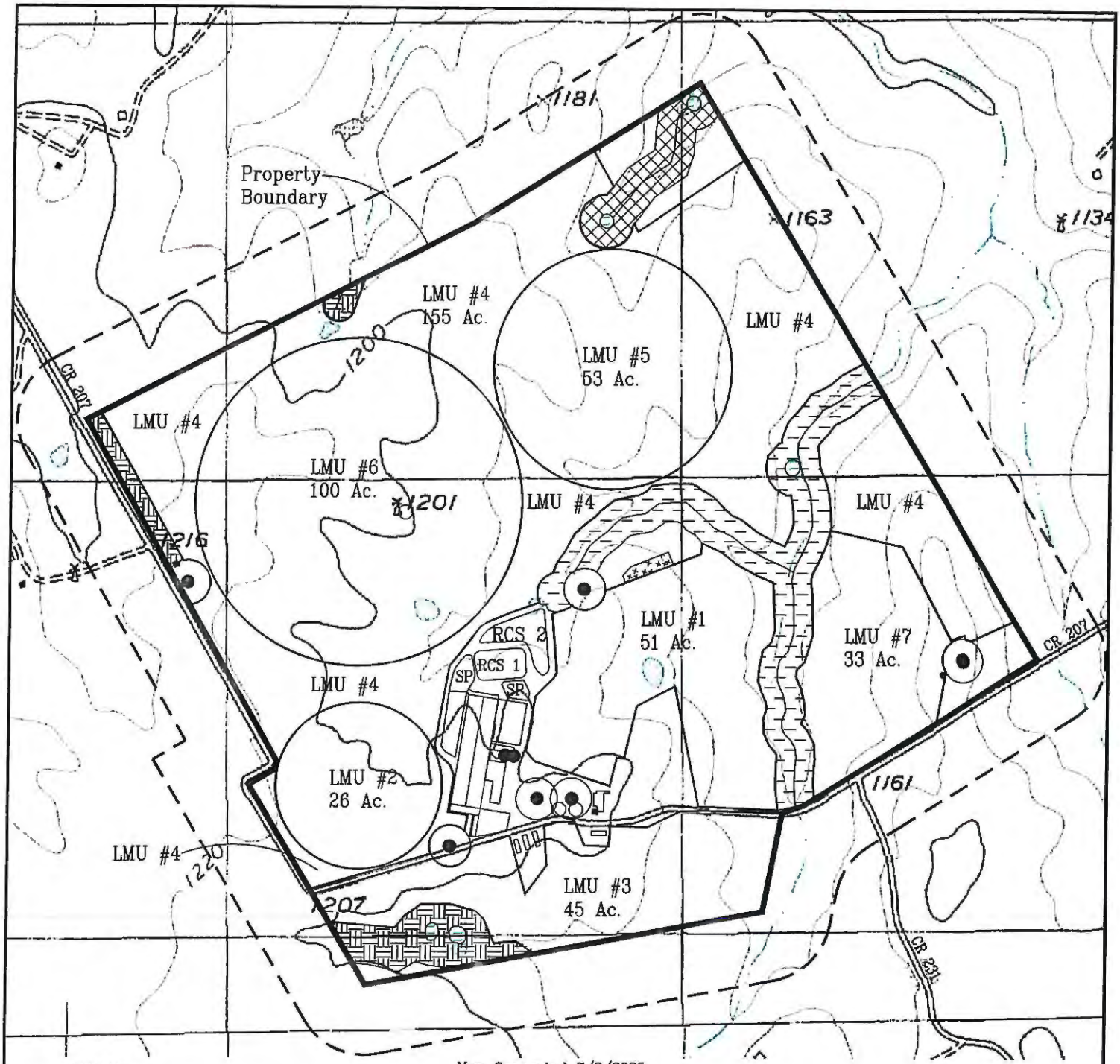
LEGEND:

Denotes Production Area

Source: USDA–NRCS. Geospatial Data Gateway. Available at: http://datagateway.nrcs.usda.gov/. Digital Raster Graphic County Mosaic by NRCS – Accessed July, 2017.

Note: Refer to Figures 1.3 & 1.4 for overall facility maps.

Okee Dairy Hico, Texas Hamilton County	USGS 7.5 Minute Quadrangle Map Figure 1.2 Page 3	ENVIRO–AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Blvd. AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132



Map Generated 7/2/2025

LEGEND:

- Denotes Plugged Water Well
- Denotes Well 150-ft Buffer
- Denotes Well
- Denotes 128ft Buffer
- Denotes 136ft Buffer
- Denotes 142ft Buffer
- Denotes Burial Site
- Denotes Fresh Water Pond

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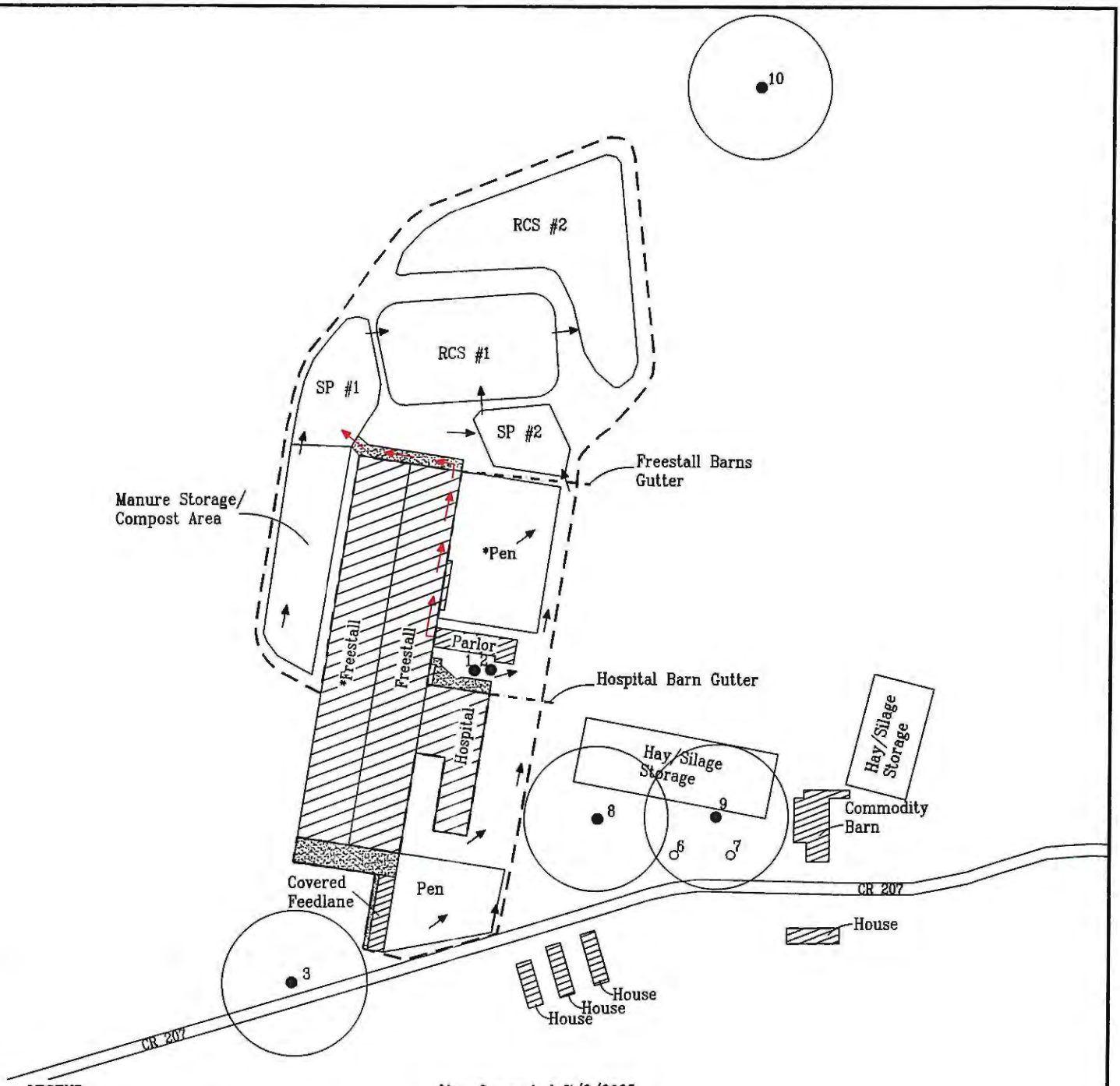
500' 0 500' 1000'

SCALED AS SHOWN

Source: USDA-NRCS. Geospatial Data Gateway. Available at: http://datagateway.nrcs.usda.gov/. Digital Raster Graphic County Mosaic by NRCS - Accessed July, 2017.

Note: Refer to Figure 1.4 for a detailed production area map.

Okee Dairy Hico, Texas Hamilton County	Site Map Figure 1.3 Page 4	ENVIRO-AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Blvd. AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132



LEGEND:

- ● Denotes Water Well
- ○ Denotes Plugged Well
- ◉ Denotes Well with 150' Buffer
- Denotes Gutter Drain
- Denotes Drainage Area
- Denotes Barn/Roofed Area
- Denotes Concreted Area
- * Denotes Proposed Structure

Map Generated 7/2/2025

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150' 0 150' 300'

SCALED AS SHOWN

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

Note: Refer to Figure 1.3 for overall facility map.

Okee Dairy Hico, Texas Hamilton County	Runoff Control Map Figure 1.4 Page 5	ENVIRO-AG EAE ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Blvd. AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

2.0 CALCULATIONS & SPECIFICATIONS

2.1 Facility Overview

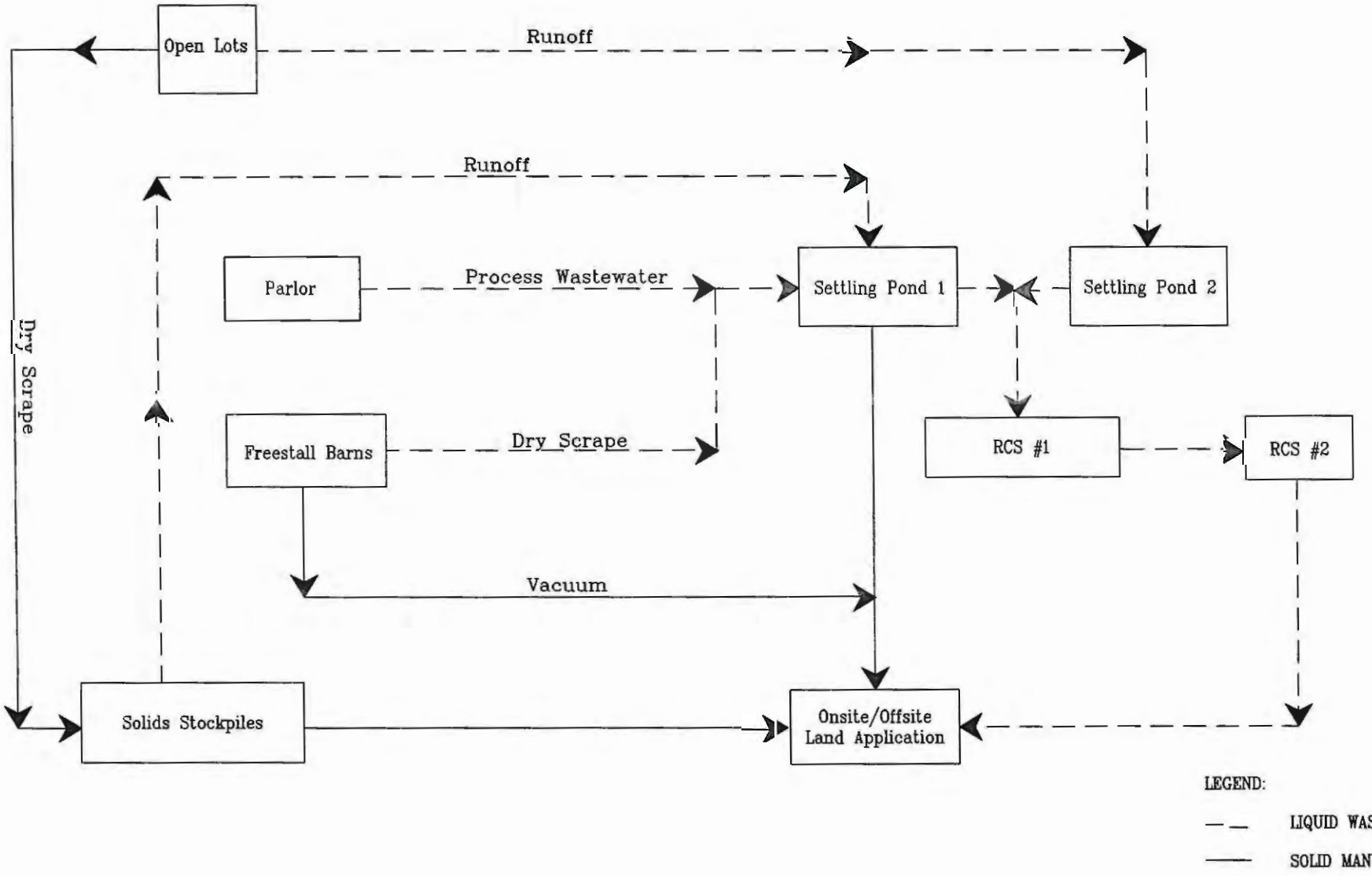
The existing facility consists of pens, freestall barns, a milking parlor, two settling ponds, one slurry pit and two retention control structures to confine 2,000 head, of which 1,500 head are milking.

This major amendment application is for reconfiguring the LMUs, addition of land, addition of new LMUs, reconfigure the drainage area, addition of a freestall barn, remove the slurry pit, expansion of the hospital barn, addition of a pen located to the East of the freestall barn and addition of wells #10, #11 and #12. The existing manure and/or wastewater storage structures have been certified as meeting TCEQ requirements for soil liner. Figure 2.1, Manure & Wastewater Flow Chart, shows the waste handling procedures and storage practices at the facility.

2.2 Manure Production

Table 2.1, As-Excreted Manure Characteristics Existing Dairy Facility, is included as a summary of the annual manure and nutrient production for the facility. The totals in Table 2.1 represent as-excreted manure and nutrient values for the maximum head count shown in the application.

Note: This data is intended for planning and design purposes and is not to be used for whole-farm nutrient mass balance calculations.



Okee Dairy Hico, Texas Hamilton County	Manure & Wastewater Flow Chart Figure 2.1 Page 7	ENVIRO-AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Blvd. AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

ESTIMATED MANURE PRODUCTION
for a DAIRY FACILITY
Table 2.1
ENVIRO-AG ENGINEERING, INC.

NAME OF CAFO: Okee Dairy
LOCATION: Hamilton County
DATE: June-25

FACILITY TOTAL	MANURE PRODUCTION CRITERIA (a) Milkers in Parlor	Milkers in Barns	Others*	Total
1. Maximum Number of Animals Confined (head):	**1,500**	**1,500**	**500**	**2,000**
2. Confinement period, hrs/hd/day	2.5	21.5	24	24
3. Percent of time in Confinement	10%	90%	100%	100%
4. Total Manure Production, lbs/day	23,438	201,563	41,500	266,500
5. Total Solids Production, lbs/day	3,125	26,875	5,500	35,500
6. Manure Production, tons/year	570	4,905	1,004	6,479
7. Volatile Solids Production, lbs/day	2,656	22,844	4,600	30,100
8. Total Nitrogen Production, lbs/day	155	1,330	250	1,735
9. Total Phosphorus, P2O5 lbs/day (b)	61	523	76	660
10. Total Potassium, K2O lbs/day (b)	43	371	198	612

NOTES:

* - Includes dry cows, growing heifers and young stock.

(a) - Manure and nutrient production values are taken from American Society of Agricultural and Biological Engineers Data: (ASABE D384.2 MAR05_R2010) Manure Production and Characteristics, Table 1.b - Section 3. Production values given in terms of lb/day-animal (wet-basis).

(b) - The ASAE Manure Production and Characteristics Tables give P and K in the elemental forms. Convert to P2O5 by multiplying by 2.29 and to K2O by multiplying by 1.2.

2.3 Process-Generated Wastewater Volume

The primary source of process-generated wastewater is wash water from the milking parlor operations, which is directed to settling pond #1 and then into RCS #1 and RCS #2. The freestall barns are vacuumed and dry scrapped manure removal. All open lot pens are dry scraped for manure removal. The volume of process wastewater (including wet manure from the milking parlor) generated daily is estimated to be 15 gallons per head (based on site specific data for Okee Dairy). The design storage volume in RCS #2 for process-generated wastewater is 30 days and is calculated in Table 2.2.

2.4 25-Year, 10-Day Rainfall Storage Volume

In accordance with 30 TAC §321.42(c)(1), RCS #2 is designed to maintain a margin of safety to contain the runoff and direct precipitation from the 25-year, 10-day storm event for this location, which is 12.2 inches of rainfall. Drainage area runoff volumes are calculated using the SCS method with curve numbers (CN) selected based on soil type and land use. The pen area runoff and compost/manure area were calculated using a CN of 90, the pond area was calculated using a CN of 100, and the adjacent areas were calculated a CN of 90. Roofed/concrete areas were calculated using a CN of 100. Run-on from areas outside the control facility is directed away from the RCSs. Table 2.2 shows the calculated storage volume required for the rainfall runoff from a 25-year, 10-day storm.

2.5 Sludge Accumulation Volume

Sludge accumulation from the milking parlor wash water was calculated using a rate of 0.0729 cubic feet of sludge per pound total solids (from USDA-NRCS Agricultural Waste Management Handbook) and a sludge storage period of 1 year. Parlor waste/wastewater is directed to settling ponds, with an estimated collection/removal efficiency of 40% (Midwest Plan Services) to reduce the amount of solids entering the RCSs, thereby reducing the demand for sludge storage. The required sludge accumulation volume calculations are shown in Table 2.2

2.6 Water Balance Model

Table 2.3, Water Balance Model, estimates the inflows and withdrawals from RCS #2 including runoff, direct rainfall, process-generated wastewater, evaporation, and irrigation withdrawal based on crop demand in accordance with 30 TAC §321.38(e)(7)(C). Actual pond withdrawal amounts will vary with changing weather conditions. An additional volume is included in the RCS to provide flexibility in managing RCS levels.

2.7 RCS Management Plan

A RCS Management Plan was developed by a licensed Texas professional engineer and has been implemented to incorporate the margin of safety, as specified in 30 TAC

§321.42(g). The plan includes the elements specified in §321.42(g)(1)-(6), and a copy is maintained in the onsite PPP.

2.8 Minimum Treatment Volume Requirement

A minimum treatment volume for odor control is required to obtain air standard authorization from the TCEQ. The minimum treatment volume is determined by estimating the volatile solids production rate less the removal efficiency of the settling basins and using a loading rate specified by ASABE Standards (ASAE EP 403.4 FEB2011) of 5.30 lbs of volatile solids per 1,000 cubic feet of storage. Table 2.2 shows the minimum treatment volume calculation.

REQUIRED STORAGE VOLUMES FOR TREATMENT/ RUNOFF RETENTION CONTROL STRUCTURES

Table 2.2

ENVIRO-AG ENGINEERING, INC.

NAME OF CAFO: Okee Dairy
LOCATION: Hamilton County
DATE: June-25

RCS #1 - TREATMENT POND REQUIREMENT

TREATMENT VOLUME		
Volatile Solids Produced:	(lb/day)	2,656
Settling Basin Efficiency (%) (a):		40%
Adjusted Volatile Solids Production:	(lb/day)	1,594
Design Loading Rate (lbVS/1000cuft-day) (b):		5 30
Treatment Volume:	(ac-ft)	6 90
SLUDGE VOLUME		
Dry Manure Produced:	(lb/day)	3,125
Settling Basin Efficiency (%):		40%
Adjusted Dry Manure Production:	(lb/day)	1,875
Sludge Accumulation Rate (c):	(cuft/lb)	0.0729
Sludge Accumulation Period:	(years)	1
Sludge Volume:	(ac-ft)	1 15
TOTAL TREATMENT VOLUME		
Treatment Volume:	(ac-ft)	6.90
1-Year Sludge Volume:	(ac-ft)	1 15
Total Required RCS #1 Volume:	(ac-ft)	**8.05**

NOTES:
(a) Midwest Plan Service, 1983. Revised 1987 (Waste Management, pg 702 11)
(b) Loading Rate taken from Figure 2, ASABE Standards (ASABE EP403 4 FEB2011)
(c) Sludge Accumulation Rate taken from Table 1, ASABE Standards (ASABE EP403 4 FEB 2011)
(d) Value includes wet manure production from the milking parlor
(e) Using SCS method:
Where:
S = (1000/CN) - 10
Q = ((I - 0.2S)^2)/(I + 0.8S)
S = Potential maximum retention after runoff begins in)
Q = Runoff (in)
I = 25-year, 10-day rainfall (in)
CN = Curve Number from SCS 210-VI-TR-55, 2nd Edition, June 1986
(f) USDA Agricultural Field Waste Handbook, Kansas, Part 651 1082, Suggested procedures for sediment volume estimation (1 year storage, pen/adjacent area and 1.5%)

NOTE: Calculations were performed in Microsoft Excel using floating point arithmetic in order to maintain the accuracy of the data. Any inconsistencies in rounding of the displayed values are not to be construed as errors in the calculation. For more information, please refer to http://support.microsoft.com/

RCS #2 - RUNOFF POND REQUIREMENT

PROCESS GENERATED WASTE/WASTEWATER		
Parlor Wash Water (d):	(gal/head/day)	15
No. of Head in Parlor:		1,500
Volume of Process Water:	(gal/day)	22500
Design Storage Period	(days)	30
Process Water Volume:	(ac-ft)	2.07
RAINFALL VOLUME		
Drainage Area Characteristics:	(acres)	CN
Pen Area:	2 30	90
Adjacent/Manure Storage Areas:	4.85	90
Paved/Roof Areas:	0 80	100
Settling Ponds:	1 35	100
RCS #1 Surface Area:	1 70	100
RCS #2 Surface Area:	4 30	100
Total Drainage Area:	15.30	
25-year, 10-Day rainfall:	(inches)	12.2
Runoff VolumeDetermination (e):	(inches)	(ac-ft)
Pen Area:	11 0	2 10
Adjacent/Manure Storage Areas:	11 0	4 43
Paved/Roof Areas:	12 2	0 81
Settling Ponds:	12 2	1 37
RCS #1 Surface Area:	12 2	1.73
RCS #2 Surface Area:	12 2	4 37
Rainfall Volume:	(ac-ft)	14 82
TOTAL RCS VOLUME REQUIRED		
Runoff Sludge Volume (f):	(ac-ft)	0 16
Process Water Volume:	(ac-ft)	2.07
Rainfall Volume:	(ac-ft)	14 82
Additional from Water Balance:	(ac-ft)	4 60
Total Required RCS #2 Volume:	(ac-ft)	**21.64**

STATE OF TEXAS
NORMAN H. MULLIN
66107
LICENSED
PROFESSIONAL ENGINEER
7/3/25

Firm No. F-2507

WATER BALANCE MODEL
IRRIGATION AND EVAPORATION for RCS #2
Table 2.3
ENVIRO-AG ENGINEERING, INC.

NAME: Okee Dairy
LOCATION: Hamilton County
DATE: June-25

HYDROLOGIC CHARACTERISTICS

Pen Areas (acres):	2.30	
Adjacent/Manure Storage Areas (acres):	4.85	
Paved/Roof Areas (acres):	0.80	
Total RCS/SB Surface Areas (acres):	7.35	
Total Irrigated Area (acres)(12):	100	100
Cropping Scheme:	Corn	Winter Wheat
Effective Evaporation Surface Area (acres):	5.66	

IRRIGATION CELL VOLUME SUMMARY DATA

25-Year, 10-Day Rainfall Volume (ac-ft):	14.82
Process Generated Wastewater Volume (ac-ft):	2.07
Sludge Accumulation Volume (ac-ft):	0.16
Additional Volume (ac-ft):	4.60
Total Required Capacity (ac-ft):	21.64

	RCS INFLOW CALCULATIONS					HYDRAULIC CROP DEMAND CALCULATIONS					RCS STORAGE SUMMARY			
MONTH	(1) (inches)	(2) (inches)	(2) (inches)	(3) (ac-ft)	(4) (ac-ft)	(5) (inches)	(6) (inches)	(6) (inches)	(7) (ac-ft)	(7) (ac-ft)	(8) (inches)	(9) (ac-ft)	(10) (ac-ft)	(11) (ac-ft)
													start value ---->	5.70
JAN	1.57	0.24	0.24	2.14	3.35	1.57	0.00	2.74	0.00	9.75	2.23	0.68	8.22	0.16
FEB	1.89	0.39	0.39	1.93	3.45	1.89	0.00	3.11	0.00	10.17	2.56	0.78	2.67	0.16
MAR	2.12	0.52	0.52	2.14	3.89	2.12	0.00	4.97	0.00	23.75	4.08	1.24	2.65	0.16
APR	2.68	0.86	0.86	2.07	4.40	2.68	2.62	5.74	0.00	25.51	4.97	1.51	2.89	0.16
MAY	4.15	1.94	1.94	2.14	6.11	3.97	5.40	5.33	11.95	11.36	4.97	1.51	4.60	0.16
JUN	3.08	1.13	1.13	2.07	4.84	3.06	7.78	3.22	39.36	1.36	6.67	2.03	2.81	0.16
JUL	1.87	0.38	0.38	2.14	3.64	1.87	9.05	0.00	59.83	0.00	7.72	2.35	1.29	0.16
AUG	2.13	0.52	0.52	2.14	3.90	2.13	4.86	0.00	22.75	0.00	7.42	2.26	1.64	0.16
SEP	2.95	1.04	1.04	2.07	4.70	2.94	0.00	0.00	0.00	0.00	5.61	1.71	0.00	3.14
OCT	2.96	1.05	1.05	2.14	4.78	2.95	0.00	2.15	0.00	0.00	4.60	1.40	0.00	6.52
NOV	1.88	0.39	0.39	2.07	3.58	1.88	0.00	1.70	0.00	0.00	3.17	0.97	0.00	9.13
DEC	1.60	0.25	0.25	2.14	3.38	1.60	0.00	2.33	0.00	6.08	2.37	0.72	6.08	5.70
TOTALS	28.88	8.71	8.71	25.20	50.01	28.64	29.71	31.29	133.89	87.98	56.37	17.17	32.84	

NOTES:

(1) AVERAGE PRECIPITATION - Average precipitation taken from the Texas Water Development Board, Erath County, Quad #609, retrieved June 16, 2025.

(2) RUNOFF PENS AND ADJACENT AREA - Runoff from pens, adjacent areas calculated using SCS Curve Number Method adjusted from 1 to 30-day Curve Number (Pen CN-77, Adj CN-77). (Ref. NRCS Animal Waste Management Software Help File-Program Documentation for Runoff)

(3) INFLOW - Inflow is calculated from process generated wastewater, Table 2.2

(4) TOTAL INFLOW - Total inflow is calculated as that volume of rainfall that falls on the RCS and process water that enters the RCS.

(5) RAINFALL ON IRRIGATED AREA - Effective monthly rainfall on the irrigated area calculated using SCS Curve Number Method adjusted from 1 to 30-day Curve Number (Irr CN-44) (Ref. NRCS Animal Waste Management Software Help File-Program Documentation for Runoff)

(6) CONSUMPTIVE USE values from Borrelli, et al., 1998 Mean Crop Consumptive Use and Free-Water Evaporation for Texas, Dept. of Civil Engineering, Texas Tech University, Lubbock, Texas (Table 16).

(7) NET CROP DEMAND - Net Crop Demand = ((Consumptive Use(6) - Effective Rainfall(5))/12) x Irrigated Area.

(8) MONTHLY LAKE SURFACE EVAPORATION - Average monthly lake surface evaporation taken from the Texas Water Development Board, Erath County, Quad #609, retrieved June 16, 2025.

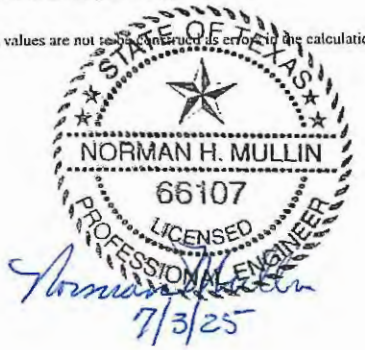
(9) NET POND EVAPORATION - Net Evaporation from the water surface is taken as (Monthly Lake Surface Evap/12) x (RCS Surface Area).

(10) ACTUAL WITHDRAWAL - Actual Withdrawal from the irrigation cell not to exceed Net Crop Demand. (No consideration given for nutrient demand of crop)

(11) STORAGE AT END OF MONTH - Storage volume in the irrigation cell at the end of the month. The storage calculated in this column should not encroach in the volume reserved for the 25-year, 10-day rainfall event

(12) Irrigated acres include LMU #6.

NOTE: Calculations were performed in Microsoft Excel using floating point arithmetic in order to maintain the accuracy of the data. Any inconsistencies in rounding of the displayed values are not to be construed as errors in the calculation. For more information, please refer to http://support.microsoft.com/kb/42980



Firm No. F-2507

3.0 FACILITY INFORMATION

3.1 Required Certifications

RCS #1, RCS #2, Settling Pond #1 and Settling Pond #2 have been certified by a licensed Texas professional engineer as meeting the liner requirements of the TCEQ. Existing liner and capacity certifications are attached.

3.2 100-Year Flood Plain Evaluation

There are no FEMA floodplain maps available for Hamilton County. Based on an on-site visit none of the production area is located within the 100-year flood plain.

ENVIRO-AG
EAE
ENGINEERING, INC.

Okee Dairy
Hamilton County, Texas
RCS #1 Capacity Certification

The survey capacity performed on October 14, 2008 by Enviro-Ag Engineering, Inc. using a Trimble GSP surveying system on retention control structure (RCS) #1 with 2 vertical feet of dry freeboard was calculated to be:

9.62 acre-feet (1.51 surface acres @ HWL)

Prepared by:

Norman Mullin, P.E.
Enviro-Ag Engineering, Inc.

(Supporting Documentation Attached)

3404 Airway Blvd. • AMARILLO, TEXAS 79118 • TEL (806) 353-6123 • FAX (806) 353-4132
www.enviroag.com

RCS #1

A.C. Lowther
Cert. Professional Soil Scientist
3310 Santa Monica
Abilene, Texas 79605

February 17, 1997

Texas Natural Resource Conservation Commission
Applications and Enforcement Section
Agriculture and Rural Assistance Division
P.O. Box 13067
Austin, Texas 78711-3087

Re: Bauke Mulder Dairy

A.C. Lowther has completed sampling and testing of the soil liner for the Waste Storage Pond on the Bauke Mulder Dairy, Hamilton, County, Texas. The test results including sample thickness, Atterberg limits, permeability and percent passing the number 200 sieve are tabulated on the attached report. Our findings indicate the soils meet the criteria established by the TNRCC.

Sincerely,

A. C. Lowther

A.C. Lowther, CPSS

Submitted By: Bauke Mulder

Signed By:

Date:

STATE OF TEXAS
JERRY E. HOLLIGAN
29146
REGISTERED
PROFESSIONAL ENGINEER

Jerry E. Holligan

Jerry E. Holligan
2309 Hancock Drive
Suite 1 A
Texas 78756

EE DAIRY
Attachment IV.C.4
LINER CERTIFICATION

A.C. Lowther
Cert. Professional Soil Scientist
3310 Santa Monica
Abilene, Texas 79605

Name: Mulder Dairy

Pond No. Pond # 1 **Sampled** 2-12-97 **Sampled By:** A.C. Lowther

Test Location	No. 1	No.2	No.3	No.4	Minimum Req.
Soil Description					
Color (Munsell)	Yellowish Brown	Yellowish Brown	Yellowish Brown	Yellowish Brown	
Texture (ASTM D-422)	Clay loam	Clay	Clay loam	Clay loam	
Unified	CL	CL	CL	CL	
Sample Depth	18	18	18	18	18
Atterberg Limits (ASTM D-423					
Liquid Limit %	36.3	41.2	41.4	34.3	30
Plastic Limit %	17.3	26.1	20.6	18.9	
Plasticity Index %	18.9	15.1	20.8	15.4	15
Passing No. 200 Seive %	78	85	79	83	30
Permeability	2.6 X 10 - 8				1 X 10 - 7

In-Place Density (Existing Pond)
(ASTM D-1556)

Sample No.	**Field Moilsture %**	**Optimum Moisture %**	**Field Density (#/Cu.Ft.)**	**Maximum Density (#/Cu.Ft.)**	**Density (% Maximum)**

A.C. Lowther
Cert. Professional Soil Scientist
3310 Santa Monica
Abilene, Texas 79605

February 17, 1997

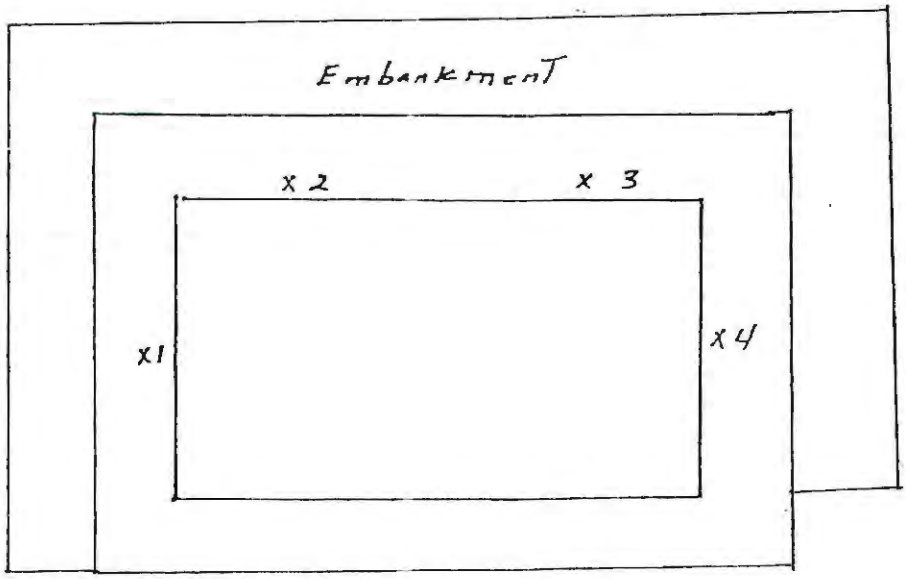
Name: Bauke Mulder Dairy

SOIL SAMPLE LOCATIONS

Depth of Samples (BGL): 8 Feet

Sampled By: A.C. Lowther

Not To Scale



ENVIRO-AG
EAE
ENGINEERING, INC.

Okee Dairy
Hamilton County, Texas
RCS #2 Capacity Certification

The survey capacity performed on May 27. 2008 by Enviro-Ag Engineering, Inc. for retention control structure (RCS) #2 with 2 vertical feet of dry freeboard is:

RCS #2 27.12 ac-ft with 3.17 surface acres @ HWL

Respectfully Submitted,

Norman Mullin, P.E.
Enviro-Ag Engineering, Inc.

(Supporting Documentation Attached)

3404 Airway Blvd. • AMARILLO, TEXAS 79118 • TEL (806) 353-6123 • FAX (806) 353-4132
www.enviroag.com

ENVIRO-AG
EAE
ENGINEERING, INC.

Okee Dairy
Hamilton County, Texas
New RCS #2 Liner Certification

Four three-inch Shelby tube core samples were collected from RCS #2 to document that the liner meets the requirements of the TCEQ requirements for soil liner. The liner thickness was documented to be at least 18 inches.

The hydraulic conductivity of the soil liner is documented as follows:

- RCS #2 Bottom 1 (784) 7.8 x 10-9 cm/sec
- RCS #2 Bottom 2 (785) 3.7 x 10-8 cm/sec
- RCS #2 Side 1 (786) 4.4 x 10-9 cm/sec
- RCS #2 Side 2 (787) 5.4 x 10-9 cm/sec

Based on the above documentation the liner in New RCS #2 is determined to be in accordance with TCEQ requirements for soil liners. The test results meet the requirements of the TCEQ for hydraulic conductivity considered protective of ground and surface water resources.

Respectfully Submitted,

Norman Mullin Revised 10/13/08
Norman Mullin, P.E.
Enviro-Ag Engineering, Inc.

(Supporting Documentation Attached)

3404 AIRWAY BLVD • AMARILLO, TEXAS 79118 • TEL (806) 353-6123 • FAX (806) 353-4132
www.enviroag.com

Enviro-Ag Engineering, Inc.

3404 Airway Blvd., Amarillo, TX 79118 (806) 353-6123
LABORATORY SERVICES

EAE

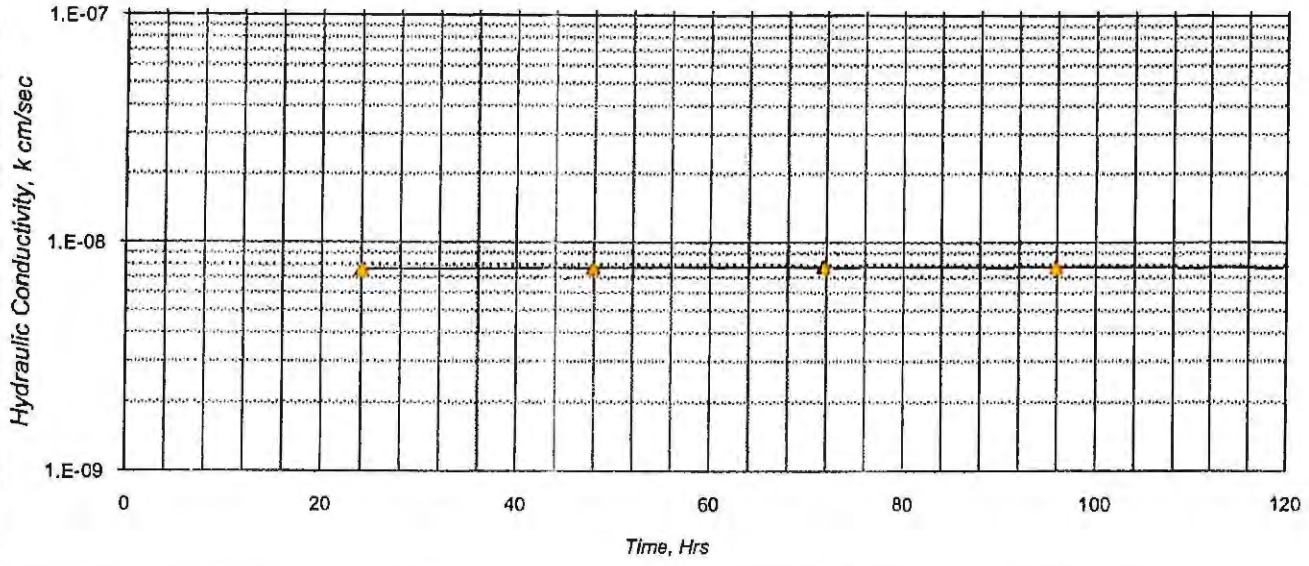
HYDRAULIC CONDUCTIVITY

REPORT

ASTM D-5084, Method C

Client / Project Name:	Project No:	Lab Sample Number:
Okee Dairy	08-05-20	784
Sample ID:	**Sample Location:**	**Report Date:**
1	RCS #2 - Bottom 1	July 2, 2008

Hydraulic Conductivity vs Time



SPECIMEN DATA

SAMPLE ID.	1	
DESCRIPTION.	RCS #2 - Bottom 1	
	INITIAL	FINAL
HEIGHT, In.	2.8	2.8
DIAMETER, in.	2.8	2.8
WATER CONTENT, %	9.7	18.6
DRY DENSITY, pcf	113	112
SATURATION, %	54	99
(Specific Gravity assumed as 2.7)		
SAMPLE COLOR	Brown/Yellow	
SAMPLE CONSISTENCY	Clay	

COMMENTS:
Tap water used as permeant.

TEST DATA

ASTM D-5084, Method C

EFFECTIVE STRESS:	5 psi
GRADIENT RANGE:	4 - 4
IN / OUT RATIO:	1.00

TRIAL nos.	TIME hrs.	HYDRAULIC CONDUCTIVITY cm / sec
1	24.1	7.6E-09
2	48.0	7.7E-09
3	71.8	7.8E-09
4	95.9	7.8E-09
5	120.2	7.8E-09

AVERAGE LAST 4 : **7.8E-09**

Enviro-Ag Engineering, Inc.

3404 Airway Blvd., Amarillo, TX 79118 (806) 353-6123

LABORATORY SERVICES

EAE

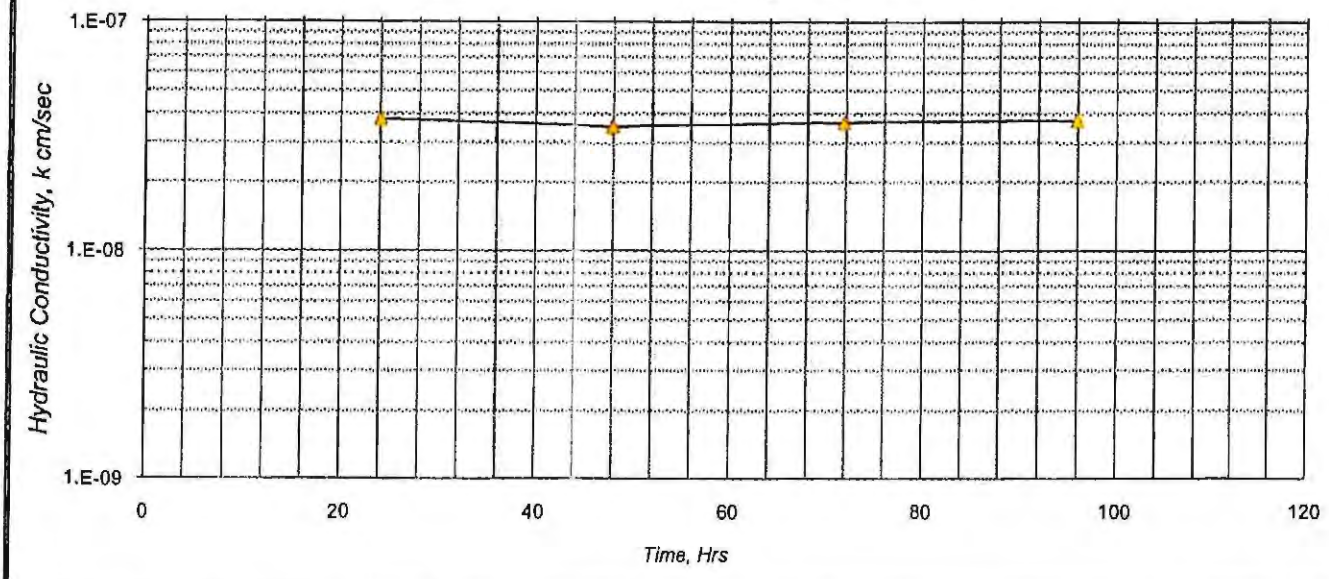
HYDRAULIC CONDUCTIVITY

REPORT

ASTM D-5084, Method C

Client / Project Name:	Project No:	Lab Sample Number:
Okee Dairy	08-05-20	785
Sample ID:	**Sample Location:**	**Report Date:**
2	RCS #2 - Bottom 2	July 2, 2008

Hydraulic Conductivity vs Time



SPECIMEN DATA

SAMPLE ID:	2	
DESCRIPTION:	RCS #2 - Bottom 2	
	INITIAL	FINAL
HEIGHT, in.	3.2	3.2
DIAMETER, In.	2.8	2.9
WATER CONTENT, %	14.9	17.3
DRY DENSITY, pcf	110	106
SATURATION, %	75	79
(Specific Gravity assumed as 2.7)		
SAMPLE COLOR	Yellow	
SAMPLE CONSISTENCY	Clay	

TEST DATA

ASTM D-5084, Method C

EFFECTIVE STRESS:	5 psi
GRADIENT RANGE:	3 - 3
IN / OUT RATIO:	1.06

TRIAL nos.	TIME hrs.	HYDRAULIC CONDUCTIVITY cm / sec
1	24.1	3.8E-08
2	48.0	3.5E-08
3	71.8	3.7E-08
4	95.9	3.8E-08

AVERAGE LAST 4 : **3.7E-08**

COMMENTS:

Tap water used as permeant.

Enviro-Ag Engineering, Inc.

3404 Airway Blvd., Amarillo, TX 79118 (806) 353-6123
LABORATORY SERVICES

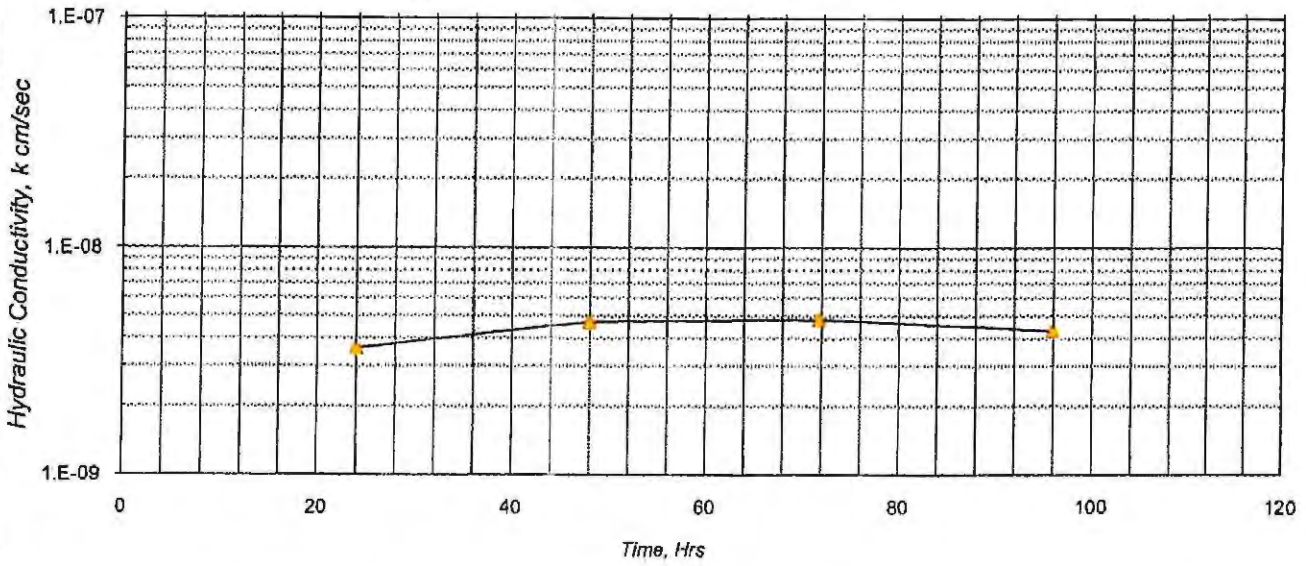
EAE

HYDRAULIC CONDUCTIVITY REPORT

ASTM D-5084, Method C

Client / Project Name:	Project No:	Lab Sample Number:
Okee Dairy	08-05-20	786
Sample ID:	**Sample Location:**	**Report Date:**
3	RCS #2 - Side 1	July 2, 2008

Hydraulic Conductivity vs Time



SPECIMEN DATA

SAMPLE ID:	3	
DESCRIPTION:	RCS #2 - Side 1	
	INITIAL	FINAL
HEIGHT, in.	1.8	1.8
DIAMETER, in.	2.8	2.7
WATER CONTENT, %	11.7	13.2
DRY DENSITY, pcf	110	119
SATURATION, %	59	86
(Specific Gravity assumed as 2.7)		
SAMPLE COLOR	Yellow	
SAMPLE CONSISTENCY	Clay	

COMMENTS:
Tap water used as permeant.

TEST DATA

ASTM D-5084, Method C

EFFECTIVE STRESS:	5 psi
GRADIENT RANGE:	5 - 6
IN / OUT RATIO:	1.10

TRIAL nos.	TIME hrs.	HYDRAULIC CONDUCTIVITY cm / sec
1	24.1	3.6E-09
2	48.0	4.7E-09
3	71.8	4.8E-09
4	95.9	4.3E-09

AVERAGE LAST 4 : **4.4E-09**

Enviro-Ag Engineering, Inc.

3404 Airway Blvd., Amarillo, TX 79118 (806) 353-6123

LABORATORY SERVICES

EAE

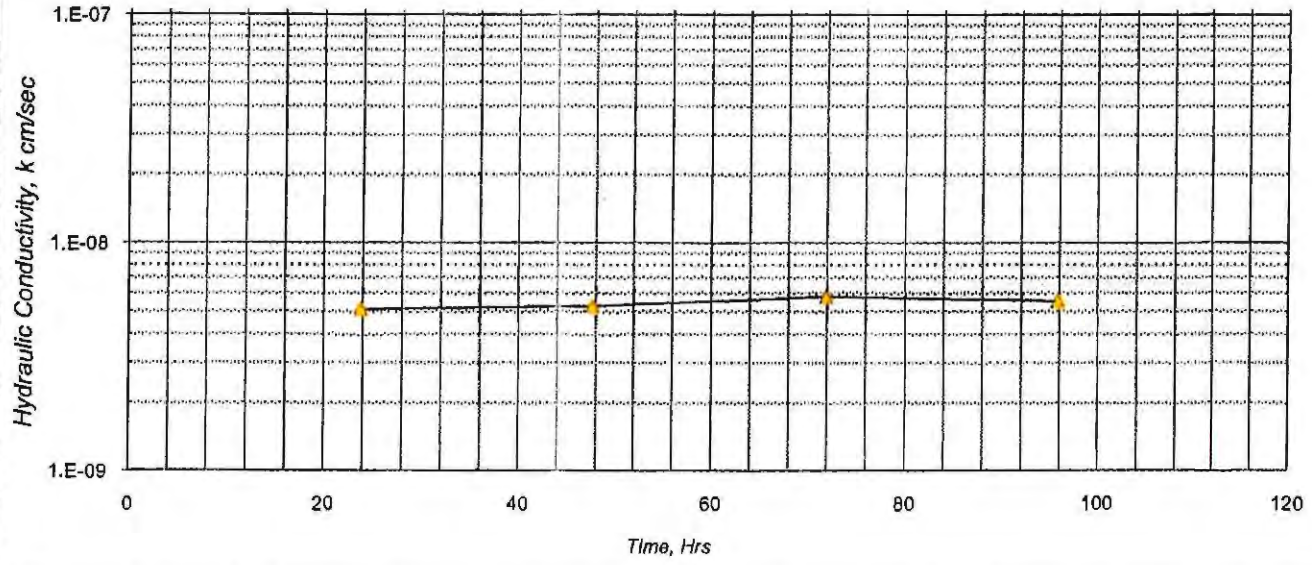
HYDRAULIC CONDUCTIVITY

REPORT

ASTM D-5084, Method C

Client / Project Name:	Project No:	Lab Sample Number:
Okee Dairy	08-05-20	787
Sample ID:	**Sample Location:**	**Report Date:**
4	RCS #2 - Side 2	July 2, 2008

Hydraulic Conductivity vs Time



SPECIMEN DATA

SAMPLE ID:	4	
DESCRIPTION:	RCS #2 - Side 2	
	INITIAL	FINAL
HEIGHT, in.	1.7	1.7
DIAMETER, in.	2.9	2.9
WATER CONTENT, %	10.1	23.9
DRY DENSITY, pcf	108	103
SATURATION, %	49	102
(Specific Gravity assumed as 2.7)		
SAMPLE COLOR	Yellow	
SAMPLE CONSISTENCY	Clay	

TEST DATA

ASTM D-5084, Method C

EFFECTIVE STRESS:	5 psi
GRADIENT RANGE:	5 - 6
IN / OUT RATIO:	1.06

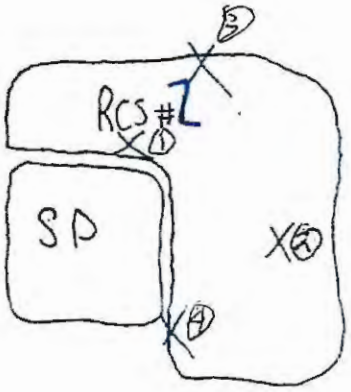
TRIAL nos.	TIME hrs.	HYDRAULIC CONDUCTIVITY cm / sec
1	23.9	5.1E-09
2	47.7	5.3E-09
3	71.9	5.8E-09
4	95.8	5.5E-09

AVERAGE LAST 4 : **5.4E-09**

COMMENTS:

Tap water used as permeant.

TRIAXIAL PERMEABILITY CHAIN of CUSTODY



STRUCTURE	PERM REPORT I.D.	LAB LOG
RCS #2 BOTTOM1	1	784
BOTTOM2	2	785
SIDE 1	3	786
SIDE 2	4	787

Facility Name: Okee Dairy

Project Engineer: Norman Mullin

Sampled by: Rockard Stokes

Date Sampled: 5/20/08

Date to Lab: 5/21/08 Received: Rich Baker

ENVIRO–AG EAE ENGINEERING, INC.

Enviro-Ag Engineering, Inc.
ENGINEERING CONSULTANTS
3404 Airway Boulevard
AMARILLO, TEXAS 79118
TEL (806) 353-6123 FAX (806) 353-4132

ENVIRO-AG
EAE
ENGINEERING, INC.

LINER DISTURBANCE RE-CERTIFICATION
Slurry/Settling Pond #1
Okee Dairy
Hamilton County, Texas

In January 2006, the clay liner for the settling basin located at Okee Dairy was sampled for hydraulic conductivity determination after cleaning activities. The sample was collected to verify a minimum liner thickness of 12 inches and then submitted to Dyess-Peterson Testing Laboratory, Inc. in Amarillo, Texas for permeability determination. Results of the permeability tests are as follows:

- Slurry/Settling Slurry Pond #1 - 5.61 x 10E-08 cm/sec

Based on a liquid depth of 12 ft, the above permeability test results meet the TCEQ allowable seepage rates for runoff control structures (1.5 ft thickness of 1.0 x 10E-07 cm/sec materials).

Respectfully submitted,

Norman H. Mullin, P.E.

(Revised on 4/24/06 to reflect date sample was collected)

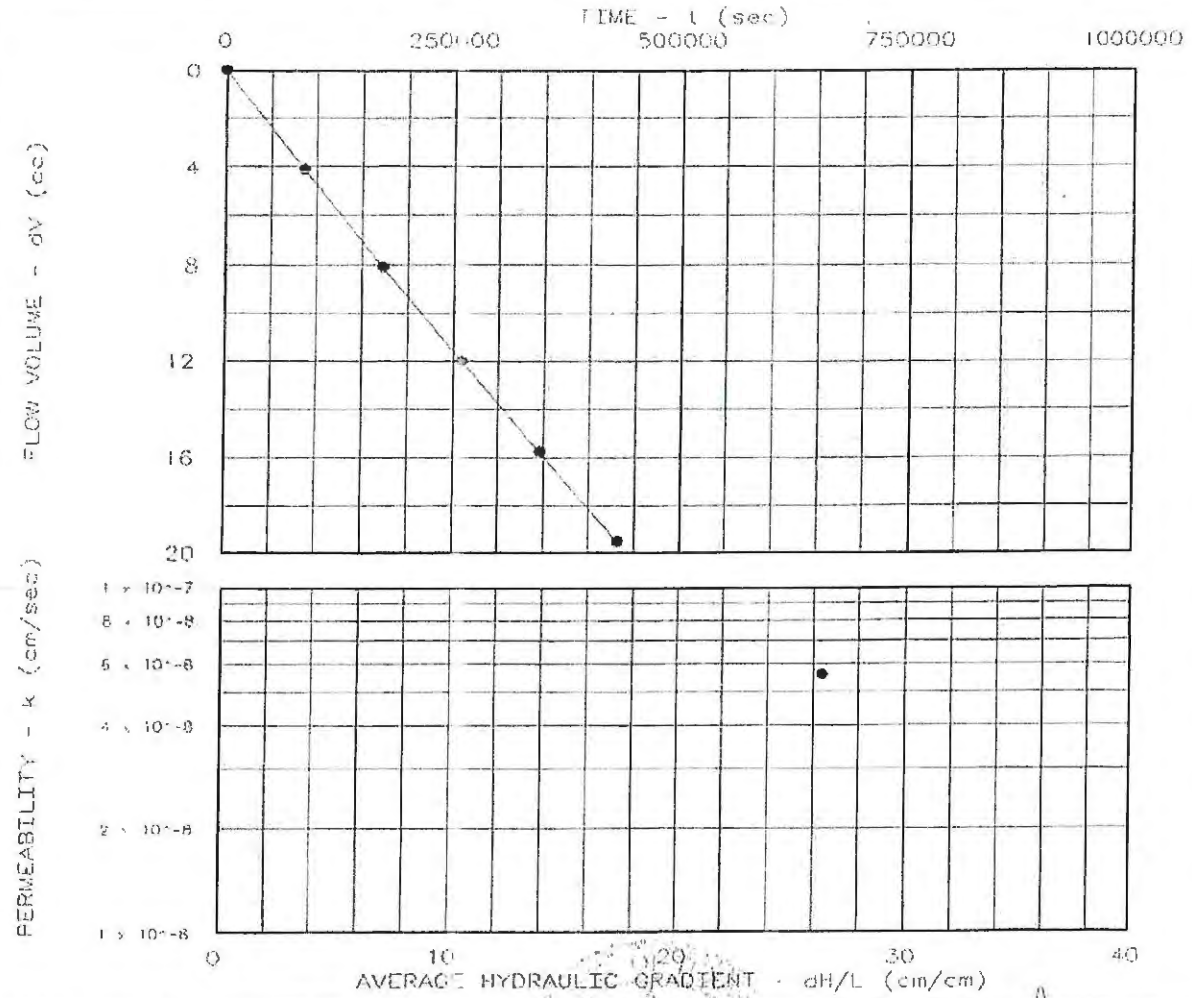
(Supporting Documentation Attached)

702 QUAIL CREEK DRIVE • AMARILLO, TEXAS 79124 • TEL (806) 353-6123 • FAX (806) 353-4132
www.enviroagengineers.com

PERMEABILITY TEST REPORT

TEST DATA:
Specimen Height (cm): 12.70
Specimen Diameter (cm): 6.23
Dry Unit Weight (pcf): 101.3
Moisture Before Test (%): 13.6
Moisture After Test (%): 24.4
Run Number: 1 ● 2 ▲
Cell Pressure (psi): 50.0
Test Pressure(psi): 40.9
Back Pressure(psi): 45.1
Diff. Head (psi): 4.8
Flow Rate (cc/sec): 4.51 x 10^-5
Perm. (cm/sec): 5.61 x 10^-8

SAMPLE DATA
Sample Identification: Sample Labeled Slurry Pond #1
Visual Description: Dark Brown Sandy Lean Clay with Caliche Nodules
Remarks: Hico, Texas
Maximum Dry Density (pcf):
Optimum Moisture Content (%):
Percent Compaction:
Permeameter type: Flexible Wall
Sample type: In-Place



Project: Enviro-Ag Engineering Inc.
Location: Okee Dairy Slurry Pond #1
Date: 4-03-2006

Project No.: DP-2185
File No.: PT-5
Lab No.: DP-4839
Tested by:
Checked by:
Test: CH - Constant head

PERMEABILITY TEST REPORT

DYESS-PETERSON TESTING LABORATORY, INC.

ENVIRO-AG ENGINEERING, INC.
AMARILLO - STEPHENVILLE - ARTESIA

CORPORATE OFFICE
3404 AIRWAY BLVD
AMARILLO, TEXAS 79118
800.753.6525

CENTRAL TEXAS OFFICE
9855 FM 847
DUBLIN, TEXAS 76446
800.753.6525

NEW MEXICO OFFICE
203 EAST MAIN STREET
ARTESIA, NEW MEXICO 88210
800.753.6525

www.enviroag.com

Okee Dairy
Hamilton County, Texas

Soil Liner Certification for Settling Pond #2

Two Shelby tube core samples of the soil liner in Settling Pond #2 at Okee Dairy were collected and analyzed for permeability to document that the soil liner meets the requirements of TCEQ. Results of the permeability analysis are shown below:

7.7×10^{-8} cm/sec (Northeast Wall)
8.0×10^{-8} cm/sec (Southwest Wall)

Based on the above documentation, the liner in Settling Pond #2 is determined to be in accordance with TCEQ requirements for soil liners. The test locations were backfilled with bentonite chips. The test results meet the requirements of the TCEQ for hydraulic conductivity considered protective of ground and surface water sources.

Respectfully Submitted,

STATE OF TEXAS
NORMAN H. MULLIN
66107
REGISTERED
PROFESSIONAL ENGINEER

Norman Mullin 6/19/17

Norman Mullin, P.E.
Enviro-Ag Engineering, Inc. F#2507

Attachments: Enviro-Ag Engineering, Inc. Reports

CALCULATION OF SPECIFIC DISCHARGE

SITE: **Okee Dairy**
LOCATION: **Hamilton County, TX**
STRUCTURE: **Settling Pond #2**

ENGINEER: NHM
DATE: **June '17**

This worksheet calculates the specific discharge through a soil liner based on the measured thickness of the clay liner and the results of the permeability testing. The maximum allowable specific discharge of the liner is 1.1 x E-06 cm/sec or 0.0374 in/day.

	Hydraulic Conductivity Results of Core Samples								
Laboratory Sample I.D.	4276	4277							
1. Water Depth, feet	12	12							
2. Liner Thickness, inches	18.0	18.0							
3. Hydraulic Conductivity, cm/sec	7.70E-08	8.00E-08							
4. Calculated specific discharge, v'									
Seepage Rate, inches/day	0.0236	0.0245							
Maximum Seepage Rate, inches/day	0.0374	0.0374							

NOTES:

(1) Water depth of the pond in feet.

(2) Soil liner thickness in inches.

(3) Hydaulic conductivity of the core sample(s) as determined by flexible wall permeameter in cm/sec (Ref: ASTM D 5084).

The following equation is used:

$$v' = k (H + d) / d$$

where: v' = Specific Discharge of area representative of core sample, inches/day
d = Measure Liner Thickness at core sample location, feet
k = Hydaulic Conductivity of liner based on core sample testing, inches/day
H = Maximum Water Depth, feet

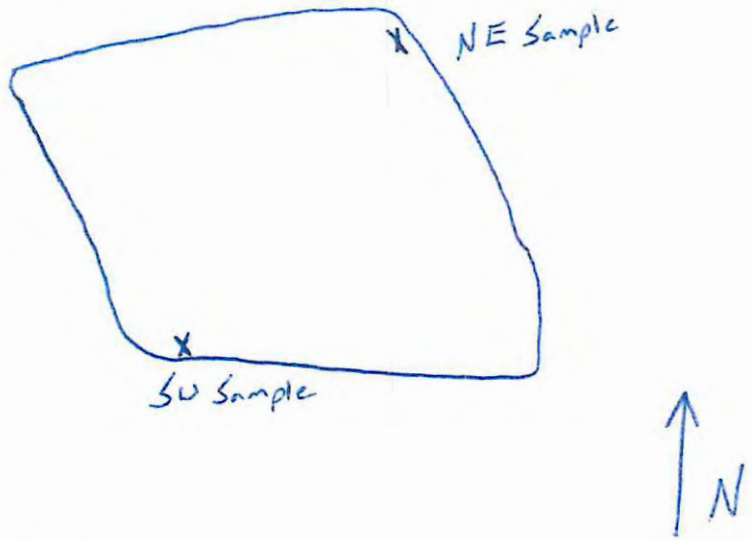
(4) Maximum Allowable Seepage Rate of 1.1 E-06 cm/sec (0.0374 in/day).

6/19/17

Norman Mullin, P.E. # 66107
Enviro-Ag Engineering, Inc.
TBPE Firm # 2507

TRIAXIAL PERMEABILITY CHAIN of CUSTODY

Okee Dairy Settling Pond #2



STRUCTURE	PERM REPORT I.D.	LAB LOG
SETTLING POND NE		4276
SETTLING POND SW		4277

Facility Name: Okee Dairy

Project Engineer:

Sampled by: Richard George

Date Sampled: 5-22-17

Date to Lab: 5/26/17 VIA UPS

Received: Rick Baker

ENVIRO-AG ENGINEERING, INC.
9855 FM 847
Dublin, TX 76446
(254) 965-3500
Fax: (254) 965-8000

Enviro-Ag Engineering, Inc.

3404 Airway Blvd., Amarillo, TX 79118 (806) 353-6123
LABORATORY SERVICES

EAE

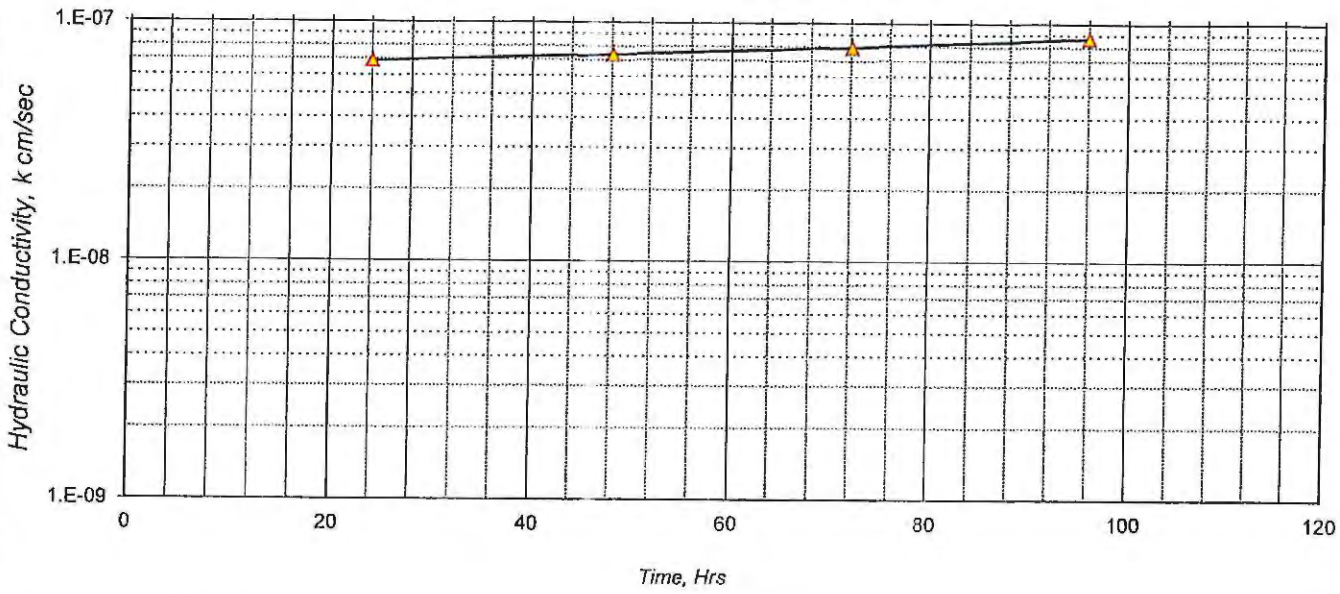
HYDRAULIC CONDUCTIVITY

REPORT

ASTM D-5084, Method C

Client / Project Name:	Project No:	Lab Sample Number:
Okee Dairy	17-05-22	4276
Sample ID:	**Sample Location:**	**Report Date:**
1	Settling Pond NE	June 15, 2017

Hydraulic Conductivity vs Time



SPECIMEN DATA

SAMPLE ID:	1	
DESCRIPTION:	Settling Pond NE	
	INITIAL	FINAL
HEIGHT, in.	3.1	3.1
DIAMETER, in.	2.8	2.9
WATER CONTENT, %	20.6	23.9
DRY DENSITY, pcf	105	102
SATURATION, %	91	99
(Specific Gravity assumed as 2.7)		
SAMPLE COLOR	Light Brown	
SAMPLE CONSISTENCY	Clay	

TEST DATA

ASTM D-5084, Method C

EFFECTIVE STRESS:	5 psi
GRADIENT RANGE:	3 - 3
IN / OUT RATIO:	1.00

TRIAL nos.	TIME hrs.	HYDRAULIC CONDUCTIVITY cm / sec
1	24.0	6.9E-08
2	48.1	7.4E-08
3	72.1	8.0E-08
4	96.0	8.7E-08

AVERAGE LAST 4 : **7.7E-08**

COMMENTS:
Tap water used as permeant.

Enviro-Ag Engineering, Inc.

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LABORATORY SERVICES

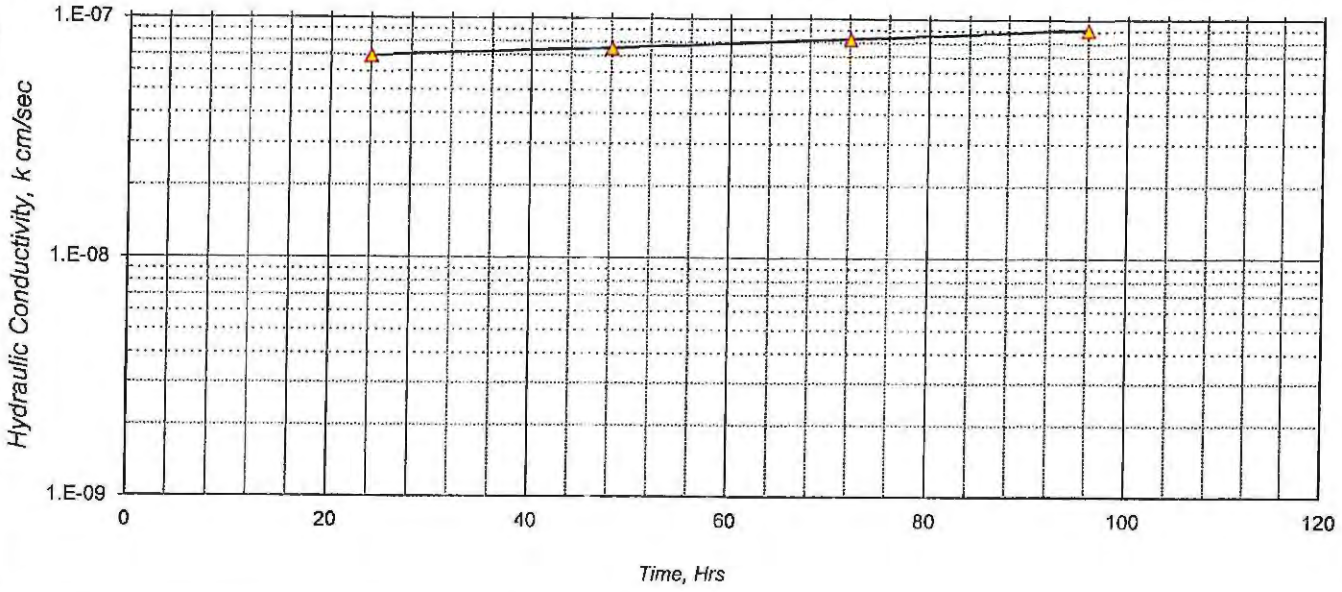
EAE

HYDRAULIC CONDUCTIVITY REPORT

ASTM D-5084, Method C

Client / Project Name:	Project No:	Lab Sample Number:
Okee Dairy	17-05-22	4277
Sample ID:	**Sample Location:**	**Report Date:**
2	Settling Pond SW	June 15, 2017

Hydraulic Conductivity vs Time



SPECIMEN DATA

SAMPLE ID:	2	
DESCRIPTION:	Settling Pond SW	
	INITIAL	FINAL
HEIGHT, in.	2.8	2.8
DIAMETER, in.	2.8	2.8
WATER CONTENT, %	24.6	28.6
DRY DENSITY, pcf	97	95
SATURATION, %	91	99
(Specific Gravity assumed as 2.7)		
SAMPLE COLOR	Light Brown	
SAMPLE CONSISTENCY	Clay	

TEST DATA

ASTM D-5084, Method C

EFFECTIVE STRESS:	5 psi
GRADIENT RANGE:	3 - 4
IN / OUT RATIO:	1.00

TRIAL nos.	TIME hrs.	HYDRAULIC CONDUCTIVITY cm / sec
1	24.0	7.0E-08
2	48.1	7.6E-08
3	72.1	8.3E-08
4	96.0	9.2E-08

AVERAGE LAST 4 : **8.0E-08**

COMMENTS:
Tap water used as permeant.

4.0 WASTE UTILIZATION & NUTRIENT MANAGEMENT PLAN

4.1 Nutrient Utilization

Agronomic application of dairy wastewater enhances soil productivity and provides the crop and forage growth with needed nutrients for optimum growth and vigor. Land application of wastewater will take place according to a Nutrient Utilization/Nutrient Management Plan (NUP/NMP) in accordance with NRCS Codes 590 and 633. The NUP/NMP for crop year 2025 is attached.

Per 30 TAC §321.42(j), existing dairy facilities located in a major sole-source impairment zone may request the TCEQ to allow the operator to provide manure, litter and wastewater to owners of third-party fields (areas not owned, operated, controlled, rented, or leased by the permittee) that have been identified in the PPP. Okee Dairy requests access to third-party fields to be operated in accordance with 30 TAC §321.42(j)(1)-(4). Third-party written contracts between the permittee and the third-party recipient will be maintained in the PPP. These contracts will confirm that the third party will allow manure, wastewater and slurry from the facility to be beneficially applied at agronomic rates based on the soil test phosphorus in accordance with applicable requirements of 30 TAC §321.36 and §321.40.

A Texas State Soil and Water Conservation Board (TSSWCB) certified Comprehensive Nutrient Management Plan (CNMP) has been developed.

4.2 Waste Handling Procedures

The dairy shall operate under the provisions of 30 TAC §321.42, which describes certain waste management and disposal requirements for individual water quality permits for dairy concentrated animal feeding operations (CAFOs) when an operation is located in a major sole-source impairment zone. Waste disposal options include:

- Beneficial use outside the watershed
- Disposed in permitted landfills outside the watershed
- Delivered to a composting facility approved by the Executive Director
- Other beneficial use approved by the Executive Director
- Applied on-site in accordance with a certified NRCS Code 590/633 NMP or NUP, as dictated by annual soil test results
- Provided to third parties as discussed above in Section 4.1

2025
Executive Summary
Okee Dairy
WQ0004108000

LMU Summary:

LMU's 1, 2, 3, 4, 5, and 7 are established in Coastal Bermudagrass overseeded with small grains for continuous nutrient uptake. LMU 6 is cropped in Corn Silage and small grains.

Nutrient Summary:

The following is a summary of planned and maximum allowed application rates.

LMU #	Max N Lb/ac Application Rates	Max P205 Lb/ac Application Rates	Planned N Lb/ac Application Rates	Planned P Lb/ac Application Rates
1	400	218	400	218
2	47	104	5	10
3	400	218	400	218
4	400	218	400	218
5	186	410	19	41
6	129	285	13	28
7	190	104	190	104

LMU 7 has not been sampled by the TCEQ at the time of this plan's creation. Keeping with worst case scenario, LMU 7 soil analysis has been set to 200ppm for this plan. LMU 7 will need to be sampled prior to land application. LMU 6 was not sampled by TCEQ for the current crop year. This plan will utilize the 2023 soil analysis for that field.

Although this plan illustrates the certain LMUs being utilized for wastewater application, it is not the intent of this document to limit application of wastewater and manure to specified LMUs. It may be necessary to apply to others LMUs in addition to the recommended LMUs. Thus, the maximum allowable nutrient application rates shown above are not to be exceeded during the crop year.

Any remaining manure is to be hauled off by a contract hauler for beneficial use. Offsite manure transfer activities will be in accordance with NRCS and TCEQ requirements for sampling, recordkeeping, and land application.

Supplemental nutrients will be necessary to achieve the desired yields. Commercial N application shall be split such that individual application events do not exceed 100 lbs/ac N.

Waste Utilization and Nutrient Management Plan

Okee Dairy

TCEQ Permit Number:
WQ0004108000

Owner
Oene Keuning
4745 CR 207
Hico, TX 76457
254-796-4991

Type of Organic Nutrient Management Plan:
Other AFO-CAFO Waste Plan
located in Hamilton County

Prepared By:

(Signature)
Stephen Colby
Certified Nutrient Management Specialist
Certificate Number = TX2025004
Expiration Date = December 31, 2025
Enviro-Ag Engineering
9855 FM 847
Dublin, TX 76446
(254) 233-9948

This plan is based on:
590 Organic Nutrient Management Plan V 5.0

6/23/25 8:49 AM

Waste Utilization and Nutrient Management Plan

EXECUTIVE SUMMARY: Permit #: WQ0004108000

This Nutrient Management Plan has fields that meet NMP and/or NUP requirements.

See Attached Executive Summary

LOCATION AND PURPOSE OF THE PLAN

This animal operation is located in **Hamilton** County (see attached topo map and plan map for location.) The purpose of this plan is to outline the details of the land application of the effluent and solids produced by this operation. When the plan is fully implemented, it should minimize the effects of the land application of animal wastes on the soil, water, air, plant, and animal resources in and around the application area. This plan, when applied, will meet the requirements of the Natural Resources Conservation Service Waste Utilization Standard and Nutrient Management Standard.

The plan is for the year of **2025** and will remain in effect until revision based on new soil or manure analysis or crop change (yield or crop) result in a new P-Index rating or plan classification (NMP-NUP). The waste has been stored in a **Dairy Lagoon** . Approximately **2000** head will be confined with the average weight of **1400** pounds. The animals will be confined **24** hours per day for **365** days per year.

Values in Table 1 may be based on actual analysis or "book" values during the initial planning to determine land application rates for the initial plan. When "book" values are used, they will be from NRCS, Texas Cooperative Extension or averages from other TX testing lab sources. Site specific data will be used as soon as feasible after production begins. Manure and/or effluent will be tested at least annually or in the year of application if it is stored for more than one year. If the actual values are more than 10% higher or lower than the estimated values, this plan will need to be revised accordingly.

Application of waste products may be made up to the Maximum Rate given in Table 2 or 2a as applicable. Table 2 applies to those that are subject to Nutrient Management Plan (NMP) requirements while Table 2a applies when subject to Nutrient Utilization Plan (NUP) requirements. Current requirements for both the NMP and NUP are given in the headers of the tables. Table 2a has a criteria involving the distance to a named stream when the Soil Test P Level is above 200 ppm in arid areas as well as special requirements when the site is in a TMDL watershed designated by TCEQ. For various P Index Ratings, the maximum rates in Table 2 are based on crop requirements, whereas the maximum rates in Table 2a are based on crop removal rates. County avg. rainfall information can be found in the TX Agronomy Technical Note 15, Phosphorus Assessment Tool for Texas, located in the eFOTG at the address given in the section entitled **"Collecting Soil Samples for Analyses"**.

CROP REMOVAL RATES:

Crop Removal Rates of nitrogen (N), phosphorus (P), and potassium (K) in pounds per acre are given in Table 3 for the crop and yield planned for each field. This Table is included for information only, and should be used during the planning process to compare planned or maximum application rates to crop removal. Crop removal rates may be based on actual analysis of harvested material or default values in the database. P build-up will occur at higher rates when crop removal rates are exceeded..

SOLIDS APPLICATION:

The maximum solids application rates are given in Table 4 along with the current soil test P level, maximum P_2O_5 application rate, maximum tons per acre of solids and the total tons of solids per field that can be applied to each field. The maximum tons of solids that can be utilized on the fields planned is indicated in the box near the lower left corner of Table 4. When the total application acres of the fields are adequate to allow all of the solids to be applied, "Adequate" will be indicated below the tonnage in this box. If "Not Adequate" is indicated, then the lower box will indicate the tons of solids that must be utilized off-site unless more fields/acres are added. This plan is valid only if the application of waste to the crops listed does not exceed the per acre rates by more than 10%. If the yield of a crop does not meet the expected goal, the application rate should be adjusted the following year.

The estimated amounts of N, P_2O_5, and K_2O contained in the solids are provided in Table 5 for the maximum application rate. Supplemental N and K_2O will be applied to achieve the yield goals in Table 4 when recommended by the soil test and the maximum rate of the solids does not meet the crop needs. When the maximum application rate is applied and Table 5 indicates additional commercial nutrients, they **must** be applied to fields as indicated. **NOTE:** If additional nitrogen is recommended, the producer should consider collecting soil samples from the 6 - 36 inch layer to see if there is any additional deep nitrogen available. Additional deep nitrogen within the root zone of the crop can be substituted for supplemental commercial nitrogen, and should be included in the soil test N ppm entry.

SOLIDS APPLICATION: (cont) Permit #: WQ0004108000

In situations where more land is available than is needed to utilize the maximum application rate on each field, the application rates in Table 6 have been reduced to the level that does not exceed the amount of solids produced. Table 7 indicates the amount of nutrients provided and, if needed, the supplemental nutrients which **must** be applied when the application is based on these rates. The amounts of supplemental nutrients in Table 7 are based on the actual amount of waste available rather than the **maximum** rate that **"could"** be applied.

The second line from the bottom of Table 6 on the right has a box that will be **"YES"** or **"NO"**. When the reduced rates use all solids to be produced in a year, this box will be **"Yes"**. If the percentages are too low, it will be **"No"**. If **"No"**, either more acreage is needed on which to apply the solids or the solids will need to be transported off-site. The amount is located on the bottom line on the extreme right of the page.

Actual application will be based on the quantities produced, as well as, current manure analyses. **Application at the MAXIMUM rates shown in Table 4 will result in a more rapid build-up of phosphorus than if applied at lower rates. A different percentage may be used as long as the rate does not exceed the maximum shown in Table 4 for the field and the proper amount of supplemental nutrients are applied. Applying a lower rate to the fields with higher soil test P levels will slow down the P buildup and extend their land application life. Phosphorus will also build up more rapidly on pastureland than on hayland or cropland, since very few nutrients are actually removed by grazing animals.**

The solids may be applied to the same acreage every year according to Table 2 or 2a. The annual rates in both Table 4 and 6 may be doubled not to exceed the 2X the annual nitrogen requirement or nitrogen removal rate, as applicable. When the full biennial rate has been used, no additional phosphorus fertilizer or animal wastes may be applied in the alternate year. A column in both tables indicates whether the rates given are Annual Rates (A) or Biennial Rates (B). Rates given are based on Table 2 or 2a as applicable. Annual application rate for fields in a TMDL area with a Soil Test P level equal to or greater than 500 ppm or any field in a TMDL area with P Index Rating of Very High is 0.5 annual crop removal rate.

EFFLUENT APPLICATION:

The maximum effluent application rates are given in Table 8 for each field. This table provides the current soil test P level, maximum P_2O_5 application rate, effluent either in gallons per acre or acre inches per acre and the amount of effluent that can be applied per field. The maximum amount of effluent that can be utilized on the fields planned is indicated in a box near the lower left corner of Table 8. When the total application acres are adequate to allow all of the effluent to be applied, "Adequate" will be indicated below this box. If "Not Adequate" is indicated, then the lower box will indicate the amount of effluent that must be utilized off-site unless more field acres are added.

The estimated amounts of N, P, and K contained in the effluent are provided in Table 9 for the maximum application rate indicated in Table 8. Supplemental N and K_2O will be applied to achieve the yield goals when recommended by the soil test and the maximum rates of the effluent do not meet the crop requirements. **NOTE:** If additional nitrogen is recommended, the producer should consider collecting soil samples from the 6 - 36 inch layer to see if there is any additional deep nitrogen available. Additional deep nitrogen within the root zone of the crop can be substituted for supplemental commercial nitrogen.

In situations where more land is available than is needed to utilize the maximum application rate on each field, the application rates in Table 10 have been reduced to the level that does not exceed the amount of effluent produced. Table 11 indicates the amount of nutrients provided and, if needed, the supplemental nutrients which **must** be applied when application is made based on the rates in Table 10. These amounts of supplemental nutrients in Table 11 are based on the planned amount of effluent available rather than the **maximum** rate that **"could"** be applied.

The bottom line on the right of Table 10 has a box that will be **"YES"** or **"NO"**. When the reduced rates uses all effluent to be produced in a year, this box will be **"Yes"**. If the percentages are too low, it will be **"No"**. If **"No"** is indicated, either more acreage is needed on which to apply the effluent or the effluent will need to be transported off-site.

Actual application will be based on the quantities produced, as well as, current manure analyses. **Application at the MAXIMUM rates shown in Table 8 will result in a more rapid build-up of phosphorus than if applied at lower rates. A different percentage may be used as long as the rate does not exceed the maximum shown in Table 8 for the field and the proper amount of supplemental nutrients are applied. Applying a lower rate to fields with higher soil test P levels will slow down the P buildup and extend their land application life. Phosphorus will also build up more rapidly on pastureland than on hayland or cropland, since very few nutrients are actually removed by grazing animals.**

The effluent may be applied to the same acreage every year according to Table 2 or 2a. The annual rates in both Table 8 and 10 may be doubled not to exceed the 2X the annual nitrogen requirement or nitrogen removal rate, as applicable, when the full biennial rate has been used, no additional phosphorus fertilizer or animal wastes may be applied in the alternate year. A column in both tables indicates whether the rates given are Annual Rates (A) or Biennial Rates (B). Rates given are based on Table 2 or 2a as applicable. Annual application rate for fields in a TMDL area with a Soil Test P level equal to or greater than 500 ppm or any field in a TMDL area with P Index Rating of Very High is 0.5 annual crop removal rate.

Maximum Hourly Application Rate - The maximum hourly application rate is determined by the texture of the soil layer with the lowest permeability within the upper 24 inches of the of the predominant soil in each field. The hourly application rate must be low enough to avoid runoff and/or ponding. For effluent with 0.5% solids or less, **DO NOT** exceed the rates shown in Table 1 of the attached Job Sheet titled, *"Waste Utilization, Determining Effluent Application Rates"*. If the effluent contains more than 0.5% solids, those values must be reduced by the appropriate amount shown in Table 2 of the attached *"Waste Utilization, Determining Effluent Application Rates"* Job Sheet.

Maximum One-Time Application Rate - The maximum amount of effluent that can be applied to a given field at any one-time is the amount that will bring the top 24 inches of the soil to 100% field capacity. This amount is determined by subtracting the amount of water stored in the soil (estimated by feel and appearance method) from the available water holding capacity (AWC) of the soil. The available water holding capacity of the top 24 inches of the predominant soil of each field receiving effluent and the texture of the most restrictive layer in the upper 24 inches are given in Table 12.

To determine any one-time application amount, the current percent of field capacity (FC) of the upper 24 inches of the predominant soil in the field should be estimated using the guidance in Table 3 of the attached Job Sheet, *"Waste Utilization, Determining Effluent Application Rates, rev 4/06"*. Additional information on estimating soil moisture can be found in the NRCS Program Aid 1619, *"Estimating Soil Moisture by Feel and Appearance"*, or from the University of Nebraska Extension publication No. G84-690-A by the same name. Both of these publications have pictures of various soils at different percentages of field capacity to be used as a guide to estimating soil moisture. Once the current percent of FC is estimated, it is subtracted from the AWC amount in Table 12 for the given field and the difference is the maximum application for those soil conditions on that day. Remember, the maximum hourly application and the maximum one time application rates are only estimates to be used as a guide.

Solids/Effluent Land Application: - Land application of solids and/or effluent should be made at appropriate times to meet crop needs, but can be made at any time as long as the total annual (or biennial) rate, maximum hourly rate, and the maximum one time application rates are not exceeded. Effluent should be surface applied uniformly. No runoff or ponding should occur during application thus frequent observations should be made. Neither effluent or solids will be applied to slopes >8% with a runoff curve >80, or steeper than 16% slope with a runoff curve of 70 or greater, unless the application is part of an erosion control plan. Waste will not be spread at night, during rainfall events, or on frozen or saturated soils if a potential risk for runoff exists. Waste will not be applied to frequently flooded soils during months when the soils typically flood. If frequently flooded soil occur on any potential application field see attached, "Water Features Table", for months when flooding is expected. Solids should be applied with a manure spreader as uniformly as feasible. Surface applications with trucks should only be made when soil conditions are favorable in order to minimize soil compaction.

Managing Runoff -
A minimum 100 ft. setback or vegetated buffer (Filter Strip, Field Border, Riparian Forested Buffer, etc.) will be established and maintained between the application area and all surface water bodies, sink holes, and watercourses as designated on Soil Survey sheets or USGS topographic maps. A minimum application distance from private and public will be 150 ft. and 500 ft. respectively. A minimum application distance from water wells used exclusively for agricultural irrigation will be 100 ft. Table 9 provides a summary of the setbacks and out areas of each field.

Managing Leaching -
When soils with sandy, loamy sand, or gravelly surface textures have a Nitrogen Leaching Index score of >2 appropriate measures will be used to minimize the potential of leaching. These measures will include, split applications of waste, and may include double cropping, or cover crops, and irrigation water management (on fields that receive supplemental or full irrigation).

MORTALITY MANAGEMENT:
All mortality will be disposed of properly within 3 days according to the Texas Commission on Environmental Quality (TCEQ) rules. The preferred method for disposal of routine mortality is by a rendering plant. Before planning this method, contact the facility or its representative to be informed of special handling procedures, equipment needs, scheduling requirements, etc. Maintain a list of contact phone numbers so information will be readily available following a catastrophic die-off. Verify that local companies which have previously picked up and/or rendered dead animals are still doing so. A number of rendering companies across the state have stopped dead animal pick up service, and others have raised their fees significantly. Periodically review the availability and cost of rendering so that the plan can be modified if necessary. This can be an excellent option if mortality can be loaded and transported while still fresh or the mortality can be refrigerated until loaded and transported.

Disposal in a landfill may be an option in some locations. Before planning this option, the closest commercial, regional, county, or municipal landfill should be contacted to determine if the landfill has a permit which would allow acceptance of dead animals (swine, sheep, cattle, etc.). Also ask if there are any restrictions on type and volume of animal mortality that will be accepted at the facility. Landfill fees and transport, offloading, and handling procedures should be discussed with landfill managers and documented for reference when needed. The landfill is not a viable option if the producer does not own or have access to a vehicle capable of transporting mortality quickly in an emergency situation. After a catastrophic die-off is not a good time to find out that a driver and truck to transport mortality will not be available for several weeks **(MAKE ARRANGEMENTS NOW, NOT AFTER THE ANIMALS ARE DEAD).**

On-farm disposal of catastrophic mortality may be considered if site conditions permit. On-farm methods include burial, composting, and incineration. Incinerators and composters are excellent options for routine mortality but usually do not have the capacity to handle mortality volumes associated with catastrophic events. Composting and incineration should not be relied on for catastrophic mortality handling without a documented evaluation of worst anticipated mortality condition (number, type, and weight of animals), and the anticipated capacity of the system (i.e., lb./hr. incineration rate, hrs/day of operation). NRCS Mortality Facility Standard 316 will be used for all mortality management.

See the attached soil interpretation, ENG - Animal Mortality Disposal (Catastrophic) Trench, to make a preliminary assessment of the limitations of the soils on this farm for burial of catastrophic mortality. The attached TX NRCS Technical Guidance, Catastrophic Animal Mortality Management (Burial Method) should be used as a guide to overcome minor limitations and as design criteria for the construction of burial pits for catastrophic mortality. Mortality burial sites shall be located outside the 100 -year floodplain. Mortality burial will not be less than 200 feet from a well, spring, or water course. A FIELD INVESTIGATION BY A QUALIFIED PROFESSIONAL SHOULD BE MADE BEFORE AN AREA IS USED FOR A BURIAL SITE FOR CATASTROPHIC MORTALITY EVENTS. **The TCEQ Industrial and Hazardous Waste Permits Section, MC-130, must be contacted before burial of catastrophic mortality.**

TCEQ
Industrial and Hazardous Waste Permits Section, MC-130
PO Box 13087
Austin, TX 78711-3087
Phone: 512-239-2334 Fax: 512-239-6383

Air Quality:

The following steps should be taken when spreading effluent or solids to reduce problems associated with odor.
1. Avoid spreading effluent or solids when wind will blow odors toward populated areas.
2. Avoid spreading effluent or solids immediately before weekends or holidays, if people are likely to be engaged in nearby outdoor activities.
3. Avoid spreading effluent or solids near heavily traveled highways.
4. Make applications in the morning when the air is warming, rather than in the late afternoon.
5. All materials will be handled in a manner to minimize the generation of particulate matter, odors, and greenhouse gas emissions.

EFFLUENT AND SOLIDS STORAGE & TESTING: Permit #: WQ0004108000

Effluent and solids will be stored in facilities designed, constructed, and maintained according to USDA NRCS Standards and specifications.

Effluent and solids sampling is needed to get a better idea of the nutrients actually being applied. Effluent and/or solids samples will be collected at least annually, or in the year of its use if waste is typically stored for more than 1 year. The samples will be submitted immediately to a lab for testing. If sent to Texas A&M soil lab or SFASU Soil Testing Lab for analysis, use the "plant and forage analysis" form and note the type of operation. Request that the manure be analyzed for percent dry matter, solids, total nitrogen, total phosphorus, and total potassium. Further information on collecting effluent and manure samples for analysis can be found in the TCE publication No. L-5175, *"Managing Crop Nutrients Through Soil, Manure and Effluent Testing"*. **TCEQ sampling rules and testing requirements will be followed on permitted sites.**

COLLECTING SOIL SAMPLES FOR ANALYSIS:

Collect a composite sample for each field (or area of similar soils and management not more than 40 acres in size) comprised of 10 - 15 randomly selected cores. Each core should represent 0 - 6 inches below the surface except for when injection has been done over 6" in depth, then the core should represent the 3-9" layer. Thoroughly mix each set of core samples, and select about a pint of the mixture as the sample for analysis. Label each sample for the field that it represents. Request that the samples be analyzed for nitrate nitrogen, plant-available phosphorus, potassium, sodium, magnesium, calcium, sulfur, boron, conductivity; and pH. Also note on the samples that they are from an effluent or solids application area. **TCEQ sampling rules and testing requirements will be followed on permitted sites.** A weighted average of 0-2 and 2-6 inch layers will be used for calculations on permitted sites.

Further information on collecting soil samples can be found on the TCE Form D-494, p 2, TCE Publication No. L-1793, and TCEQ RG-408. Additional NRCS guidance and requirements can be found in the Nutrient Management (590) standard located in the Texas electronic Field Office Technical Guide (eFOTG) at:

http://efotg.nrcs.usda.gov/efotg_locator.aspx?map=TX

Click the county desired.
Click Section IV in the left column under eFOTG
Type: 590 in the Search Menu above eFOTG and click: **GO**
Click on the desired item under Nutrient Management in the left column

SOIL ANALYSIS:

A soil analysis will be completed for all areas to be used for all effluent or solids application areas. The soil test analysis method will be **Mehlich III with inductively coupled plasma (ICP)**. The area will be tested and analyzed at least annually to monitor P build up.

RECORD KEEPING: Permit #: WQ0004108000

Detailed records should be maintained by the producer for all application of animal waste to land owned and operated by the producer. Records should include date, time, location, amount of application, weather conditions, estimated wind speed and direction, etc. A rain gauge should be in place at the application site and accurate records of rainfall should be maintained at the site. All records must be kept for at least 5 years. **TCEQ requirements will be followed on permitted sites.**

Records should also be kept showing amounts of litter given or sold to others. **A copy of the effluent analysis and/or solids analysis and a Waste Utilization Guidelines Sheet should be given to anyone who will use either the effluent or solids off-site. If they routinely use animal wastes for fertilizer, they should be directed to the local Soil and Water Conservation District or NRCS office to develop a Waste Utilization and Nutrient Management Plan for their land.**

This portion may be completed by producer, if desired or recorded elsewhere.

Record of waste leaving the farm or used as feed. **Estimated Annual Excess**

Date	Amount	Hauler or Recipient

Excess Remaining | | May be continued on additional sheets

OPERATION AND MAINTENANCE: Permit #: WQ0004108000

Application equipment should be maintained in good working order and it should be calibrated annually so that the desired rate and amount of effluent and solids will be applied.

Information on calibrating manure spreaders can be found in the TCE publication No. L-5175, *"Managing Crop Nutrients Through Soil, Manure and Effluent Testing"*. Information on calibrating big gun sprinklers can be found in the Arkansas Extension publication, *"Calibrating Stationary Big Gun Sprinklers for Manure Application"*. For information on calibrating tank spreaders, traveling guns, and additional information on other manure spreading equipment, see Nebraska Extension publication No. G95-1267-A, *"Manure Applicator Calibration"*. Observe and follow manufacturer's recommended maintenance schedules for all equipment and facilities involved in the waste management system. For information on lagoon functions, refer to TCE publication E9, *"Proper Lagoon Management"*.

Any changes in this system should be discussed with the local Soil and Water Conservation District, USDA Natural Resources Conservation Service, or other qualified professional prior to their implementation.

Plan Prepared by:	**Stephen Colby**	Date:	**6/23/2025**
Plan Approved by:		Date:	6/25/25
Producer Signature:	Discussed with Producer	Date:	6/25/25

The producer's signature indicates that this plan has been discussed with him/her.
If this plan is not signed by the producer, indicate how the plan was provided to the producer.

Waste Utilization and Nutrient Management Plan

Table 1 - Estimated Effluent and Solids Quantities Produced Permit #: WQ0004108000

Avg. Number of Animals	Type of Waste
2,000	Dairy Lagoon
	Other Solids

Contact the local Soil and Water Conservation District or USDA Natural Resources Conservation Service office if the total number of animals change by more than 10% so your plan can be revised.

Estimated Acre Inches of Effluent to be Available Annually* **394**

Estimated Tons Solids to be Land Applied Annually (on or off site)* **404,937.5**

*From engineering design.

Estimated Nutrient Availabilty Effluent

	pounds/yr	Pounds / 1000 gal	Pounds / Acre Inch	
N	929	0.09	2.4	**
P2O5	2,045	0.19	5.2	
K2O	3,215	0.30	8.2	

** Effluent Values Based on Analysis dated: October 29, 2024

Estimated Nutrient Availabilty Solids

	pounds / yr	pouuds / ton	
N	680,243	1.7	**
P2O5	370,923	0.9	
K2O	1,000,928	2.5	

** Solids Values Based on Analysis dated: June 5, 2024

Default values were used on all fields for plant removal of nutrients and yield levels.

Waste Utilization and Nutrient Management Plan

TABLE 2. A Nutrient Management Plan (NMP) is required where Soil Test P Level [1/] is:

- **less than 200 ppm statewide or**
- **or < 350 ppm in arid areas 2/ with a named stream > one mile.**

P – Index Rating	Maximum TMDL Annual P Application Rate [5/]	Maximum Annual P Application	Maximum Biennial Application Rate
Very Low, Low	Annual Nitrogen (N) Requirement	Annual Nitrogen (N) Requirement	2.0 Times Annual N Requirement
Medium	2.0 Times Annual Crop P Requirement [3/]	2.0 Times Annual Crop P Requirement [3/]	2.0 Times Annual N Requirement
High [5]	1.5 Times Annual Crop P Requirement [3/]	1.5 Times Annual Crop P Requirement [3/]	Double the Maximum Annual P Application Not to Exceed 2 times the Annual N Requirement
Very High [5]	1.0 Times Annual Crop P Requirement [3/]	1.0 Times Annual Crop P Requirement [3/]	Double the Maximum Annual P Application Not to Exceed 2 times the Annual N Requirement

TABLE 2a. A Nutrient Utilization Plan (NUP) is required by TCEQ where Soil Test P Level [1/] is:

- **equal to or greater than 200 ppm in non-arid areas [2/] or**
- **equal to or greater than 350 ppm in arid areas [2/] with a named stream greater than one mile or**
- **equal to or greater than 200 ppm in arid areas [2/] with a named stream less than one mile.**

P – Index Rating	Maximum TMDL Annual P Application Rate [5/]	Maximum Annual P Application	Maximum Biennial Application Rate
Very Low, Low	1.0 Times Annual Crop P Removal [4/]	Annual N Crop Removal	2.0 Times Annual N Removal
Medium	1.0 Times Annual Crop P Removal [4/]	1.5 Times Annual Crop P Removal [4/]	Double the Maximum Annual P Application Not to Exceed 2 times the Annual N Crop Removal
High [5]	1.0 Times Annual Crop P Removal [4/]	1.0 Times Annual Crop P Removal [4/]	Double the Maximum Annual P Application Not to Exceed 2 times the Annual N Crop Removal
Very High [5]	0.5 Times Annual Crop P Removal [4/]	0.5 Times Annual Crop P Removal [4/]	Double the Maximum Annual P Application Not to Exceed 2 times the Annual N Crop Removal

Footnotes Applicable to both Tables

1/ Soil test P will be Mehlich III by inductively coupled plasma (ICP).

2/ Non-arid areas, counties receiving => 25 inches annual rainfall, will use the 200 ppm P level while arid areas, counties receiving < 25 inches of annual rainfall, will use the 350 ppm P level. See map in TX Agronomy Technical Note 15, Phosphorus Assessment Tool for Texas, for county designations.

3/ Not to exceed the annual nitrogen requirement rate.

4/ Not to exceed the annual nitrogen removal rate.

5/ When soil test phosphorus levels are ≥ 500 ppm, with a P-Index rating of "High" or "Very High", there will be no additional application of phosphorus to a CMU or field.

PI Index by Field

Printed on: 6/23/25 8:47 AM

This plan is based on: Nutrient Management Plan V 5.0

Permit #: WQ0004108000

Client Name: Okee Dairy

Planner: Stephen Colby

Date: 6/23/2025

Location: Hamilton

Rainfall: >25.0 inches

LMU or Fields	Crop	Slope	Runoff Curve	Soil Test P Level	Inorganic P_2O_5 Appl Rate	Organic P_2O_5 Appl Rate	Inorganic Method & Timing	Organic Method & Timing	Proximity of Appl to Named Stream	Runoff Class	Soil Erosion	Total Index Points	P Runoff Potential	Soil Test Date:
1	Coastal GC (30%DM) 9-11T; SG GC 6-7T	3.5%	78	8	0	6	0	4	10	2	0	30	High	10/16/24
2	Coastal GC (30%DM) 9-11T; SG GC 6-7T	2.0%	78	8	0	6	0	0.5	0	2	0	16.5	Medium	10/16/24
3	Coastal GC (30%DM) 9-11T; SG GC 6-7T	2.0%	71	8	0	6	0	4	5	2	0	25	High	10/16/24
4	Coastal GC (30%DM) 9-11T; SG GC 6-7T	1.5%	78	8	0	6	0	4	5	2	0	25	High	10/16/24
5	Coastal GC (30%DM) 9-11T; SG GC 6-7T	3.1%	78	8	0	6	0	0.5	5	2	0	21.5	Medium	10/16/24
6	Silage - Corn16-20T,SG GreenChop-8-9T	3.5%	89	8	0	6	0	0.5	5	2	1.5	23	High	10/16/23
7	Coastal GC (30%DM) 9-11T; SG GC 6-7T	4.1%	78	8	0	6	0	4	5	2	1.5	26.5	High	TBD

Waste Utilization and Nutrient Management Plan

Table 3 - Crop Removal Rates (For Information Only) Permit #: WQ0004108000

LMU or Field No.	Acres	Crop and P Index Level	TCEQ Plan Type	Actual Crop Analysis or Default	Total Est. N Removal lbs/Ac/Yr	Total Est. P_2O_5 Removal lbs/Ac/Yr	Total Est. K_2O Removal lbs/Ac/Yr
1	51.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	NMP	Default	330	104	190
2	26.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NUP	Default	330	104	190
3	45.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	NMP	Default	330	104	190
4	155.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	NMP	Default	330	104	190
5	53.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
6	100.0	Silage - Corn16-20T;SG GreenChop-8-9T H	NMP	Default	387	148	226
7	33.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	NUP	Default	330	104	190

NOTE: When crops are used for grazing, only a portion of the nutrients used by the crop are removed from the field in the live weight gain of the livestock, the remainder is returned to the land in manure and urine. The book "Southern Forages" estimates the N, P, & K removed in 100 pounds live weight gain as follows: **2.5 lbs N, 0.68 lbs P, 0.15 lbs K**

Waste Utilization and Nutrient Management Plan

Table 4 - Maximum Solids Application per Field Permit #: WQ0004108000

Est. Solids Produced Annually (wet tons)	LMU or Field No.	Acres	Crop Management and PI runoff potential	Current Soil Test P Level (ppm)	Max Annual P2O5 lbs/acre	Annual/Biennial	Maximum Solids Allowable Tons/Acre	Maximum Allowable Application Per field (Tons)
404,938	1	51.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	86	218	A	238.1	12144
	2							
	3	45.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	76	218	A	238.1	10715
	4	155.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	85	218	A	238.1	36908
	5							
	6							
	7	33.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	200	104	A	113.3	3739
Total Solids Application Acres								
284								
Application Allowable on-site (tons)								
63505.4								
Not Adequate								
Solids to be used off-site (tons)								
341,432.1								

End of Table 4

Waste Utilization and Nutrient Management Plan

Table 5 - Nutrients Applied/Needs at Maximum Solids Rates Permit #: WQ0004108000

	Nutrients Applied When Application is at Maximum Rates			Supplemental Nutrients Needed When Application is at Maximum Rates			
LMU / Field #	N Lb/ac	P_2O_5 Lb/ac	K_2O Lb/ac	N Lb/ac	P_2O_5 Lb/ac	K_2O Lb/ac	Lime T/Ac
1	400	218	589	0	0	0	0
2							
3	400	218	589	0	0	0	0
4	400	218	589	0	0	0	0
5							
6							
7	190	104	280	0	0	0	0

Waste Utilization and Nutrient Management Plan

Table 6 - Planned Solids Application Rates Permit #: WQ0004108000

LMU or Field No.	Double crop	Acres	Crop Management and PI runoff potential	Current Soil Test P ppm	Annual / Biennial	Max Rate tons/ac	% of Maximum to apply	Planned Solids tons/ac	Planned Solids per field (tons)
1		51.0	Coastal GC (30%DM) 9-11T: SG GC 6-7T H	86	A	238.1	100	238.1	12143.8
2									
3		45.0	Coastal GC (30%DM) 9-11T: SG GC 6-7T H	76	A	238.1	100	238.1	10715.1
4		155.0	Coastal GC (30%DM) 9-11T: SG GC 6-7T H	85	A	238.1	100	238.1	36907.6
5									
6									
7		33.0	Coastal GC (30%DM) 9-11T: SG GC 6-7T H	200	A	113.3	100	113.3	3738.9
Acres		284.0							63505.4
404938			Tons of wet solids produced Annually					Will the planned per acre application rates use all of the Solids?	NO
0			Tons to be used off-site at Max. rates					Tons to be used off-site at planned rates	341432

Waste Utilization and Nutrient Management Plan

Table 7 - Nutrients Applied/Needed at Planned Solids Rates

Permit #: WQ0004108000

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	Nutrients Applied at Planned Rates			Supplemental Nutrients Needed at Planned Rates			
LMU / Field #	N Lb/ac	P_2O_5 Lb/ac	K_2O Lb/ac	N Lb/ac	P_2O_5 Lb/ac	K_2O Lb/ac	Lime T/Ac
1	400	218	589	0	0	0	0
2							
3	400	218	589	0	0	0	0
4	400	218	589	0	0	0	0
5							
6							
7	190	104	280	0	0	0	0

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Plan is based on: 590 Organic Nutrient Management Plan V 5.0

Waste Utilization and Nutrient Management Plan

Table 8 - Maximum Effluent Application Per Field Permit #: WQ0004108000

Est. Available Effluent (ac inches)	LMU or Field No.	Acres	Double crop	Crop Management and PI runoff potential	Current Soil Test P Level (ppm)	Max Annual P_2O_5 (lbs/acre)	Annual/Biennial	Maximum Effluent Allowable (ac in/ac)	Maximum Effluent Allowable / Field (ac in)
394	1								
Source:	2	26.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	269	104	A	20.0	520
	3								
	4								
Dairy Lagoon	5	53.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	72	410	A	79.0	4187
	6	100.0		Silage - Corn16-20T;SG GreenChop-8-9T H	149	285	A	54.9	5490
	7								
Total Effluent Application Acres									
179									
Maximum Effluent Application Allowable On-Site (ac in)									
10197									
Adequate									
Effluent to be used Off-Site (ac in)									
0									

End of Table 8

Waste Utilization and Nutrient Management Plan

Table 9 - Nutrients Applied/Needed at Maximum Effluent Rates Permit #: WQ0004108000

	Nutrients Applied When Application is at Maximum Rates			Supplemental Nutrients Needed When Application is at Maximum Rates			
LMU / Field #	N Lb/ac	P_2O_5 Lb/ac	K_2O Lb/ac	N Lb/ac	P_2O_5 Lb/ac	K_2O Lb/ac	Lime T/Ac
1							
2	47	104	163	335	0	0	0
3							
4							
5	186	410	645	205	0	0	0
6	129	285	448	365	0	0	0
7							

Waste Utilization and Nutrient Management Plan

Table 10 - Planned Effluent Application Rates Permit #: WQ0004108000

LMU or Field No.	Acres	Double crop	Crop Management and PI runoff potential	Current Soil Test P ppm	Annual / Biennial	Maximum Effluent (ac in/ac)	% of Maximum to apply	Planned Effluent (ac in/ac)	Planned Effluent / field (Ac. In)
1									
2	26.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	269	A	20	**10.0**	2.0	52
3									
4									
5	53.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	72	A	79	**10.0**	7.9	419
6	100.0		Silage - Corn16-20T:SG GreenChop-8-9T H	149	A	54.9	**10.0**	5.5	549
7									
Acres	**179.0**					**Will the planned application rates use all of the Effluent?**			**1020** **YES**

Plan is based on: 590 Organic Nutrient Management Plan

Waste Utilization and Nutrient Management Plan

Table 11 - Nutrients Applied/Needed at the Planned Effluent Rates Permit #: WQ0004108000

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	Nutrients Applied at Planned Rates			Supplemental Nutrients Needed at Planned Rates			
LMU / Field #	N Lb/ac	P_2O_5 Lb/ac	K_2O Lb/ac	N Lb/ac	P_2O_5 Lb/ac	K_2O Lb/ac	Lime T/Ac
1							
2	5	10	16	375	0	0	0
3							
4							
5	19	41	64	375	35	0	0
6	13	28	45	480	0	0	0
7							

Waste Utilization and Nutrient Management Plan

Table 12 - Available Water Capacity to 24 inches(or less) of predominant soil in fields receiving effluent and Texture of the most restrictive soil layer in the upper 24 inches Permit #: WQ0004108000

LMU / Field #	AWC (inches)	Restrictive Texture
1		
2	1.72	Brackett Maloterre
3		
4		
5	1.72	Brackett Maloterre
6	1.72	Brackett Maloterre
7		

LMU / Field #	AWC (inches)	Restrictive Texture

Waste Utilization and Nutrient Management Plan

Table 13 - Non Application Areas by Field

Permit #: WQ0004108000

FS = 393-Filter Strip; **FB** = 386-Field Border, **RFB** = 391-Riparian Forest Buffer; **OLEA** = Other Land Excluded Ar

LMU / Field #	FS Acres	FB Acres	RFB Acres	OLEA Acres	Total Excluded
1	0.0	0.0			
2	0.0	0.0			
3	0.0	0.0			
4	0.0	0.0			
5	0.0	0.0			
6	0.0	0.0			
7	0.0	0.0			

LMU / Field #	FS Acres	FB Acres	RFB Acres	OLEA Acres	Total Excluded
Totals	0.0	0.0	0.0	0.0	0.0

See Application Map for location of buffers

Total 590-633 application acres: 463.0

Total 590-633 Field Acres: 463.0

Waste Utilization and Nutrient Management Data Entries

General Data

Date :	6/23/2025
Farmer Name :	Okee Dairy
County in which the Land is located :	Hamilton
Type of Waste Plan :	Other AFO-CAFO Waste Plan
Is this plan in a TMDL watershed for nutrients? Yes or No :	Yes
Is any field PERMITTED by TCEQ? Yes or No :	Yes
Permit # :	WQ0004108000

All other entries on General Page appear on the Cover Page

Animal Information

Plan Year :	2025
Are you receiving waste from another producer?	No
Number of animals :	2000
Approximate Weight :	1400
Days per year in confinement :	365
Hours per day confined :	24
ACRE FEET of effluent to be irrigated* :	32.84
Estimated annual gallons of effluent to be irrigated/applied annually :	10700848.32
For effluent, do you want application rates shown in gallons or acre inches? :	acre inches
Estimated Tons Solids to be Land Applied Annually (on or off site)* :	6479
Is this the first Year of the AFO-CAFO Operation? :	No

Analysis Information

Effluent Information

Date of Analysis:	10/29/2024
Manure Source:	Dairy Lagoon
Nitrogen % From Analysis:	0.0013
Phosphorus % From Analysis:	0.001
Potassium % From Analysis:	0.003
Moisture % From Analysis:	99.9

Manure / Solids Information

Date of Analysis:	6/5/2024	
Manure Source:	Other Solids	Explain Other:
Nitrogen % From Analysis:	6.562	Slurry
Phosphorus % From Analysis:	1.25	
Potassium % From Analysis:	6.437	
Moisture % From Analysis:	98.4	
What will be Applied to Fields on this Farm?	Both Effluent and Solids	
Is this Farm part of an AFO-CAFO?	No	

This plan is based on: rganic Nutrient Management Plan

Printed on: 6/23/25 8:49 AM

Field and Buffer Entries

Permit #: WQ0004108000

Printed on: 6/23/25 8:49 AM

Plan is based on: 590 Organic Nutrient Management Plan

FS = 393-Filter Strip, FB = 386-Field Border, RFB = 391-Riparian Forest Buffer, OLEA = Other Land Exclusion Areas or non-application areas (i.e. headquarters, freq. flooded areas, wooded areas, water bodies, etc)

NOTE: Field Border (FB) is expressed in ACRES on this spreadsheet, but as LINEAR FEET on the CPO.

Field No.	Total LMU or Field Acres	FS	FB	RFB	OLEA	Total Buffer Acres	Actual Application Acres	This Column Intentionally Left Blank
1	51					0.0	51.0	
2	26					0.0	26.0	
3	45					0.0	45.0	
4	155					0.0	155.0	
5	53					0.0	53.0	
6	100					0.0	100.0	
7	33					0.0	33.0	

Soil Test, Crop Information and Plant Analysis Data Entries

Printed on: 6/23/25 8:49 AM Plan is based on: 590 Organic Nutrient Management Plan V 5.0 Permit #: WQ0004108000

Soil Test Analysis				This column only for Dry Poultry	LMU or Field #	Appl. Area Acres	Crop/Land-Use and P Index Runoff Potential VL - L; M; H; or VH	E = Effluent S = Solids	Plant Analysis (Y / N)	Plant Analysis & Yield (optional) Use Only When Crop Removal is Required			
N (ppm)	P (ppm)	K (ppm)	Lime (enter amt or leave blank)							% N	% P	% K	Yield Air Dry Production (lbs/ac/yr)
11.864	85.8	308			1	51.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	S	N				
9.178	269	432			2	26.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	E	N				
8.794	76.1	165			3	45.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	S	N				
6.318	85.4	216			4	155.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	S	N				
3.762	71.5	264			5	53.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	E	N				
2.615	149	605			6	100.0	Silage - Corn16-20T;SG GreenChop-8-9T H	E	N				
200	200	200			7	33.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	S	N				

Solids Application Rate Entries

Solids - Set the Planned Application Rates

Permit #: WQ

404938 "Wet tons" of solids produced Annually

Will the planned rates use all of the

Tons to be used off-site at plann

LMU or Field No.	Acres	Crop Management and PI runoff potential	Current Soil Test P ppm	Crop P_2O_5 Req.	Annual or Biennial Application Cycle	Maximum Solids Allowable Tons/Ac	Enter % of Maximum Planned to Apply
1	51.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	86	205	Annual	238.1	100.0
2							
3	45.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	76	205	Annual	238.1	100.0
4	155.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	85	205	Annual	238.1	100.0
5							
6							
7	33.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	200	205	Annual	113.3	100.0

Effluent Application Rate Entries

Effluent - Set the Planned Application Rates

Permit #: WQ0004108000

10700848	Gallons of Effluent to be used annually				Will the planned rates use all of the effluent?				Yes
394	Acre inches of Effluent to be used annually								
LMU or Field No.	Acres	Crop Management and PI runoff potential	Current Soil Test P (ppm)	Crop P2O5 Req.	Annual or Biennial Application Cycle	Max Effluent Allowable (ac in/ac)	Enter % of Maximum Planned to Apply	Planned Effluent (ac in/ac)	Planned Effluent per field (acre inches)
1									
2	26.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	269	205	Annual	20.0	10.0	2	52
3									
4									
5	53.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	72	205	Annual	79.0	10.0	7.9	419
6	100.0	Silage - Corn16-20T;SG GreenChop-8-9T H	149	190	Annual	54.9	10.0	5.49	549
7									
								Total Effluent This Page	1020

Printed on: 6/23/25 8:49 AM

Plan is based on: 590 Organic Nutrient Management Plan

Available Water Capacity Entries

Printed on: 6/23/25 8:49 AM Plan is based on: 590 Organic Nutrient Management Pla Permit #: WQ0004108000

LMU or Fields receiving Effluent	Texture of the soil layer within the upper 24 inches of the soil profile that has the lowest permeability (Don't Abbreviate)	Depth of First Layer (inches)		AWC of First Layer (in/in)		Depth of Second Layer (inches)		AWC of Second Layer (in/in)		Depth of Third Layer (inches)		AWC of Third Layer (in/in)		Depth of Fourth Layer (inches)		AWC of Fourth Layer (in/in)		Available Water Holding Capacity (AWC) of the upper 24 inches of the soil profile (Inches)
EXAMPLE ENTRIES		0	3	0.12	0.2	3	14	0.16	0.21	14	18	0.08	0.12	18	24	0	0	
		Enter Data for the top 24" only																
2	Brackett Maloterre	0	4	0.1	0.16	4	14	0.08	0.16	14	60	0	0	60				1.72
5	Brackett Maloterre	0	4	0.1	0.16	4	14	0.08	0.16	14	60	0	0	60				1.72
6	Brackett Maloterre	0	4	0.1	0.16	4	14	0.08	0.16	14	60	0	0	60				1.72

SOIL MONITORING REPORT FOR CAFO INDIVIDUAL PERMITS IN THE SOLE SOURCE IMPAIRMENT ZONES

A. Sample collection

1) Samples were collected for the land management unit (LMU) identified below.

☑ Yes, complete this form and Tables 1 and 2 below. **Attach a copy of the laboratory analyses to this soil monitoring report form.**

☐ No, provide the facility information for the LMU below with the exception of the tables.

2) Reporting Year: 2024 Sample Collection Date: 10/16/2024

B. Facility Information

1) Permit Number: WQ0004108000
2) Site Name: Okee Dairy
3) Name of LMU (**LMU Name should correspond to field designation located on the Map included in the PPP**): 1
4) Name of Owner/Operator: Oene Keuning
5) Mailing Address for Owner/Operator: 4745 CR 207, Hico, TX 76457

Table 1. Soil Analysis Report Where Manure, Sludge and Wastewater are not Incorporated

Soil Sample Parameter	0-2 inches soil depth	2-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO_3-N), ppm			
Phosphorus (extractable), ppm			
Potassium (extractable), ppm			
Sodium (extractable), ppm			
Magnesium (extractable), ppm			
Calcium (extractable), ppm			
Electrical Conductivity/Soluble Salts, dS/m			
pH, SU			

Table 2. Soil Analysis Report Where Manure, Sludge and Wastewater are Incorporated

Soil Sample Parameter	0-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO_3-N), ppm	11.864	3.257
Phosphorus (extractable), ppm	85.8	13.1
Potassium (extractable), ppm	308	257
Sodium (extractable), ppm	35.6	72.7
Magnesium (extractable), ppm	449	286
Calcium (extractable), ppm	19219	15965
Electrical Conductivity/Soluble Salts, dS/m	0.167	0.2
pH, SU	7.36	7.61

Note: ppm = parts per million, considered to be equivalent to milligrams per liter (mg/l); dS/m = decisiemins per meter, equivalent to millimhols per centimeter (mmhols/cm); SU = standard units.

C. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name and Title of Responsible Official or Authorized Agent: Oene Keuning, Owner

Signature:

Date: 2-21-25

Telephone Number: 254/796-4491

D. How to Submit

The soil monitoring report with attached soil analyses should be included in the Annual Report that is required to be submitted by March 31 of each year. For State Only CAFOs, submit this soil monitoring report form to the TCEQ, Enforcement Division (MC-224), P.O. Box 13087, Austin, Texas 78711-3087 and provide a copy to the TCEQ Regional Office.

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By e-mail: CAFO@tceq.texas.gov or call (512) -239-4671

SOIL MONITORING REPORT FOR CAFO INDIVIDUAL PERMITS IN THE SOLE SOURCE IMPAIRMENT ZONES

A. Sample collection

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☑ Yes, complete this form and Tables 1 and 2 below. **Attach a copy of the laboratory analyses to this soil monitoring report form.**

☐ No, provide the facility information for the LMU below with the exception of the tables.

2) Reporting Year: 2024 Sample Collection Date: 10/16/2024

B. Facility Information

1) Permit Number: WQ0004108000
2) Site Name: Okee Dairy
3) Name of LMU (**LMU Name should correspond to field designation located on the Map included in the PPP**): 2
4) Name of Owner/Operator: Oene Keuning
5) Mailing Address for Owner/Operator: 4745 CR 207, Hico, TX 76457

Table 1. Soil Analysis Report Where Manure, Sludge and Wastewater are not Incorporated

Soil Sample Parameter	0-2 inches soil depth	2-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO_3-N), ppm	9.178	9.031	5.497
Phosphorus (extractable), ppm	269	149	24.1
Potassium (extractable), ppm	432	530	317
Sodium (extractable), ppm	36.8	60.3	87.9
Magnesium (extractable), ppm	529	527	368
Calcium (extractable), ppm	7191	9596	17737
Electrical Conductivity/Soluble Salts, dS/m	0.268	0.306	0.505
pH, SU	7.19	7.41	7.64

Table 2. Soil Analysis Report Where Manure, Sludge and Wastewater are Incorporated

Soil Sample Parameter	0-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO_3-N), ppm		
Phosphorus (extractable), ppm		
Potassium (extractable), ppm		
Sodium (extractable), ppm		
Magnesium (extractable), ppm		
Calcium (extractable), ppm		
Electrical Conductivity/Soluble Salts, dS/m		
pH, SU		

Note: ppm = parts per million, considered to be equivalent to milligrams per liter (mg/l); dS/m = decisiemins per meter, equivalent to millimhols per centimeter (mmhols/cm); SU = standard units.

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Print Name and Title of Responsible Official or Authorized Agent: Oene Keuning, Owner

Signature: [signature] for [signature]

Date: 2-21-25

Telephone Number: 254/796-4491

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SOIL MONITORING REPORT FOR CAFO INDIVIDUAL PERMITS IN THE SOLE SOURCE IMPAIRMENT ZONES

A. Sample collection

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☑ Yes, complete this form and Tables 1 and 2 below. **Attach a copy of the laboratory analyses to this soil monitoring report form.**

☐ No, provide the facility information for the LMU below with the exception of the tables.

2) Reporting Year: 2024 Sample Collection Date: 10/16/2024

B. Facility Information

1) Permit Number: WQ0004108000
2) Site Name: Okee Dairy
3) Name of LMU (**LMU Name should correspond to field designation located on the Map included in the PPP**): 3
4) Name of Owner/Operator: Oene Keuning
5) Mailing Address for Owner/Operator: 4745 CR 207, Hico, TX 76457

Table 1. Soil Analysis Report Where Manure, Sludge and Wastewater are not Incorporated

Soil Sample Parameter	0-2 inches soil depth	2-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO_3-N), ppm			
Phosphorus (extractable), ppm			
Potassium (extractable), ppm			
Sodium (extractable), ppm			
Magnesium (extractable), ppm			
Calcium (extractable), ppm			
Electrical Conductivity/Soluble Salts, dS/m			
pH, SU			

Table 2. Soil Analysis Report Where Manure, Sludge and Wastewater are Incorporated

Soil Sample Parameter	0-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO_3-N), ppm	8.794	2.457
Phosphorus (extractable), ppm	76.1	13.8
Potassium (extractable), ppm	165	193
Sodium (extractable), ppm	56.0	88.3
Magnesium (extractable), ppm	396	240
Calcium (extractable), ppm	16721	16309
Electrical Conductivity/Soluble Salts, dS/m	0.264	0.437
pH, SU	7.43	7.62

Note: ppm = parts per million, considered to be equivalent to milligrams per liter (mg/l); dS/m = decisiemins per meter, equivalent to millimhols per centimeter (mmhols/cm); SU = standard units.

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Print Name and Title of Responsible Official or Authorized Agent: Oene Keuning, Owner

Signature: [signature] for →

Date: 2-21-25

Telephone Number: 254/796-4491

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SOIL MONITORING REPORT FOR CAFO INDIVIDUAL PERMITS IN THE SOLE SOURCE IMPAIRMENT ZONES

A. Sample collection

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☑ Yes, complete this form and Tables 1 and 2 below. **Attach a copy of the laboratory analyses to this soil monitoring report form.**

☐ No, provide the facility information for the LMU below with the exception of the tables.

2) Reporting Year: 2024 Sample Collection Date: 10/16/2024

B. Facility Information

1) Permit Number: WQ0004108000

2) Site Name: Okee Dairy

3) Name of LMU (**LMU Name should correspond to field designation located on the Map included in the PPP**): 4

4) Name of Owner/Operator: Oene Keuning

5) Mailing Address for Owner/Operator: 4745 CR 207, Hico, TX 76457

Table 1. Soil Analysis Report Where Manure, Sludge and Wastewater are not Incorporated

Soil Sample Parameter	0-2 inches soil depth	2-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO_3-N), ppm	6.318	5.358	2.525
Phosphorus (extractable), ppm	85.4	25.4	3.47
Potassium (extractable), ppm	216	214	200
Sodium (extractable), ppm	27.8	49.6	82.2
Magnesium (extractable), ppm	359	306	206
Calcium (extractable), ppm	10090	12715	20864
Electrical Conductivity/Soluble Salts, dS/m	0.296	0.381	0.416
pH, SU	7.27	7.5	7.67

Table 2. Soil Analysis Report Where Manure, Sludge and Wastewater are Incorporated

Soil Sample Parameter	0-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO_3-N), ppm		
Phosphorus (extractable), ppm		
Potassium (extractable), ppm		
Sodium (extractable), ppm		
Magnesium (extractable), ppm		
Calcium (extractable), ppm		
Electrical Conductivity/Soluble Salts, dS/m		
pH, SU		

Note: ppm = parts per million, considered to be equivalent to milligrams per liter (mg/l); dS/m = decisiemins per meter, equivalent to millimhols per centimeter (mmhols/cm); SU = standard units.

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Print Name and Title of Responsible Official or Authorized Agent: Oene Keuning, Owner

Signature: [signature] for [signature]

Date: 2-21-25

Telephone Number: 254/796-4491

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SOIL MONITORING REPORT FOR CAFO INDIVIDUAL PERMITS IN THE SOLE SOURCE IMPAIRMENT ZONES

A. Sample collection

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☐ No, provide the facility information for the LMU below with the exception of the tables.

2) Reporting Year: 2024 Sample Collection Date: 10/16/2024

B. Facility Information

1) Permit Number: WQ0004108000
2) Site Name: Okee Dairy
3) Name of LMU (**LMU Name should correspond to field designation located on the Map included in the PPP**): 5
4) Name of Owner/Operator: Oene Kuining
5) Mailing Address for Owner/Operator: 4745 CR 207, Hico, TX 76457

Table 1. Soil Analysis Report Where Manure, Sludge and Wastewater are not Incorporated

Soil Sample Parameter	0-2 inches soil depth	2-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO_3-N), ppm	3.762	0.934	2.043
Phosphorus (extractable), ppm	71.5	23.0	5.34
Potassium (extractable), ppm	264	236	204
Sodium (extractable), ppm	48.3	74.5	90.7
Magnesium (extractable), ppm	373	302	186
Calcium (extractable), ppm	13668	14018	18418
Electrical Conductivity/Soluble Salts, dS/m	0.088	0.184	0.192
pH, SU	7.27	7.72	7.73

Table 2. Soil Analysis Report Where Manure, Sludge and Wastewater are Incorporated

Soil Sample Parameter	0-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO_3-N), ppm		
Phosphorus (extractable), ppm		
Potassium (extractable), ppm		
Sodium (extractable), ppm		
Magnesium (extractable), ppm		
Calcium (extractable), ppm		
Electrical Conductivity/Soluble Salts, dS/m		
pH, SU		

Note: ppm = parts per million, considered to be equivalent to milligrams per liter (mg/l); dS/m = decisiemins per meter, equivalent to millimhols per centimeter (mmhols/cm); SU = standard units.

C. Certification

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Print Name and Title of Responsible Official or Authorized Agent: Oene Keuning, Owner

Signature: [signature] for

Date: 2-21-25

Telephone Number: 254/796-4491

D. How to Submit

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By e-mail: CAFO@tceq.texas.gov or call (512) -239-4671

16

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Chain of Custody Record

55768

Location: Okee Dairy
(Do not fill in this shaded area if the facility information must be confidential)

Permit #: 4108

Region:	Organization #:	PCA Code:	Program:	Sampler telephone number: (254)552-1900
E-Mail ID:	Sampler: (signature)			Sampler: (please print clearly)

Lab ID Number	Sample ID	Date	Time	# of Bottles	Grab/ Comp.	Matrix L,S,M,O,T	CL2	pH	Cond.	Analyses Requested	REMARKS
14249	-01	10/16/24	1305							See RFA	CMU 1 (0-6)
14250	-02	10/16/24	1305								CMU 1 (6-24)
14251	-03	10/16/24	1230								CMU 2 (0-2)
14252	-04	10/16/24	1230								CMU 2 (2-6)
14253	-05	10/16/24	1230								CMU 2 (6-24)
14254	-06	10/16/24	1250								CMU 3 (0-6)
14255	-07	10/16/24	1250								CMU 3 (6-24)
14256	-08	10/16/24	1210								CMU 4 (0-2)
14257	-09	10/16/24	1210								CMU 4 (2-6)
14258	-10	10/16/24	1210								CMU 4 (6-24)

Relinquished by:	Date	Time	Received by:	For Laboratory Use:
Delous Wilson	10/18/24	9:27	11-19-24	
Relinquished by:	Date	Time	Received by:	Received on ice: Y N deg. C
Relinquished by:	Date	Time	Received by:	Preservatives: Y N
Relinquished by:	Date	Time	Received by:	COC Seal: Y N
Shipper name: Fed Ex	Shipper Number: 7700 3341 5181			Seals Intact: Y N

TCEQ-10065 (11/02) White (Original) -Lab Yellow-Lab Pink-Contract Lab Manager Goldenrod-Collector Copy

Report for Samples analyzed Under Contract Number: 582-10-99518

Report ID: 055768a-45667
Print Date: 10-Jan-25

Texas A&M AgriLife Extension Service Soil, Water and Forage Testing Laboratory
108 Soil Testing Laboratory, 2478 TAMU
College Station, TX 77843-2478
979-862-4955

Client Name: Okee Dairy
Client address: not provided

Standard Sample Report TCEQ COC# 055768

Laboratory ID:	TCEQ/client Sample ID:	Sample Depth (inches)	Sample Coll. Date:	Collector Name:	TCEQ Region #	Date Received	Sample Type:	Sample opened Date	Sample Ground Date	Process Tech.
14249	55768-01	0-6	10/16/2024	not recorded	4	11/19/2024	soil	11/25/2024	12/4/2024	TLP
14250	55768-02	6-24	10/16/2024	not recorded	4	11/19/2024	soil	11/25/2024	12/4/2024	TLP
14251	55768-03	0-2	10/16/2024	not recorded	4	11/19/2024	soil	11/25/2024	12/4/2024	TLP
14252	55768-04	2-6	10/16/2024	not recorded	4	11/19/2024	soil	11/25/2024	12/4/2024	TLP
14253	55768-05	6-24	10/16/2024	not recorded	4	11/19/2024	soil	11/25/2024	12/4/2024	TLP
14254	55768-06	0-6	10/16/2024	not recorded	4	11/19/2024	soil	11/25/2024	12/4/2024	TLP
14255	55768-07	6-24	10/16/2024	not recorded	4	11/19/2024	soil	11/25/2024	12/4/2024	TLP
14256	55768-08	0-2	10/16/2024	not recorded	4	11/19/2024	soil	11/25/2024	12/4/2024	TLP
14257	55768-09	2-6	10/16/2024	not recorded	4	11/19/2024	soil	11/25/2024	12/4/2024	TLP
14258	55768-10	6-24	10/16/2024	not recorded	4	11/19/2024	soil	11/25/2024	12/4/2024	TLP

Methods and Sample Preparation:

Receiving of samples Processing - SWFTL0097R0.SOP

Upon opening of sample chests, all samples are identified and organized as listed on COC to insure completeness and condition of shipment. Individually each sample is spread across a non-reactive tray where foreign materials is physically removed and discarded. The sample(s) are then placed inside a 65C drying oven and allow to remain until dry. Individual samples were then removed from drying oven and pulverized with an Agvise soil pulzerized fitted with a shaking 2mm screen. Every attempt was again made to remove any remaining plant tissue in the pulverized sample(s). Soil was then transferred to the laboratory sample cups and while additional sample was stored.

Analytical Methods:

Soil pH, 2:1 DI water:soil SOIL pH AND CONDUCTIVITY - SWFTL0015R1.SOP

Schofield, R.K. and A.W. Taylor. 1955. The measurement of soil pH. Soil Sci. Soc. Am. Proc. 19:164-167.

Soil Conductivity, 2:1 DI Water:Soil SOIL pH AND CONDUCTIVITY - SWFTL0015R1.SOP

Rhoades, J.D. 1982. Soluble salts. p. 167-178. In: A.L. Page, et al. (ed.). Methods of Soil Analysis: Part 2. Agronomy Monogr. 9. 2nd ed. ASA and SSSA, Madison, WI.

Soil Nitrate-N KCl Extractable with Cd-Reduction Analyses NO3-N EXTRACTION - SWFTL0014R5.SOP/NO3-N ANALYSIS - SWFTL0089R1.SOP

Keeney, D.R. and D.W. Nelson. 1982. Nitrogen - inorganic forms. p. 643-687. In: A.L. Page, et al. (ed.). Methods of Soil Analysis: Part 2. Agronomy Monogr. 9. 2nd ed. ASA and SSSA, Madison, WI.

Soil P, K, Ca, Mg, S and Na -- Mehlich III by ICP M3 EXTRACTION - SWFTL0079R1.SOP/M3 ANALYSIS - SWFTL0081R2.SOP

Mehlich-3 soil test extractant: a modification of Mehlich-2 extractant. Commun. Soil Sci. Plant Anal. 15(12):1409-1416

Report ID: 055768a-45667 Print Date: 10-Jan-25

Standard Sample Report TCEQ COC# 055768

Laboratory ID:	TCEQ/client Sample ID:	Mehlich III P conc.	Mehlich III P units	Mehlich III K conc.	Mehlich III K units	Mehlich III Ca conc.	Mehlich III Ca units	Mehlich III Mg conc.	Mehlich III Mg units	Mehlich III S conc.	Mehlich III S units	Mehlich III Na conc.	Mehlich III Na units
14249	55768-01	85.8	ppm	308	ppm	19219	ppm	449	ppm	168	ppm	35.6	ppm
14250	55768-02	13.1	ppm	257	ppm	15965	ppm	286	ppm	130	ppm	72.7	ppm
14251	55768-03	239	ppm	432	ppm	7191	ppm	529	ppm	71.8	ppm	36.8	ppm
14252	55768-04	149	ppm	530	ppm	9596	ppm	527	ppm	90.5	ppm	60.3	ppm
14253	55768-05	24.1	ppm	317	ppm	17737	ppm	368	ppm	67	ppm	87.9	ppm
14254	55768-06	76.1	ppm	165	ppm	16721	ppm	396	ppm	149	ppm	56.0	ppm
14255	55768-07	13.8	ppm	193	ppm	16309	ppm	240	ppm	37	ppm	88.3	ppm
14256	55768-08	85.4	ppm	216	ppm	10090	ppm	359	ppm	90.7	ppm	27.8	ppm
14257	55768-09	25.4	ppm	214	ppm	12715	ppm	306	ppm	108	ppm	49.6	ppm
14258	55768-10	3.47	ppm	200	ppm	20864	ppm	206	ppm	173	ppm	82.2	ppm

Laboratory ID:	Mehlich III P conc.	Mehlich III P units	Mehlich III K conc.	Mehlich III K units	Mehlich III Ca conc.	Mehlich III Ca units	Mehlich III Mg conc.	Mehlich III Mg conc.	Mehlich III S conc.	Mehlich III S units	Mehlich III Na conc.	Mehlich III Na units
Detection Limit	0.2367	ppm	0.1308	ppm	0.0436	ppm	0.0250	ppm	0.0010	ppm	0.0269	ppm
Reporting Limit	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm

Laboratory ID:	TCEQ/client Sample ID:	Mehlich III Extract Date	Mehlich III Extract Tech	Mehlich III Anal.Date	Mehlich III Anal. Tech
14249	55768-01	1/8/2025	FMR	1/9/2025	JLP
14250	55768-02	1/8/2025	FMR	1/9/2025	JLP
14251	55768-03	1/8/2025	FMR	1/9/2025	JLP
14252	55768-04	1/8/2025	FMR	1/9/2025	JLP
14253	55768-05	1/8/2025	FMR	1/9/2025	JLP
14254	55768-06	1/8/2025	FMR	1/9/2025	JLP
14255	55768-07	1/8/2025	FMR	1/9/2025	JLP
14256	55768-08	1/8/2025	FMR	1/9/2025	JLP
14257	55768-09	1/8/2025	FMR	1/9/2025	JLP
14258	55768-10	1/8/2025	FMR	1/9/2025	JLP

Report ID: 055768a-45667 Print Date: 10-Jan-25

Standard Sample Report TCEQ COC# 055768

Laboratory ID:	TCEQ/client Sample ID:	pH	pH units	Conductivity	Conductivity units	Nitrate-N	Nitrate-N units
14249	55768-01	7.36	NA	0.167	dS/M	11.864	ppm
14250	55768-02	7.61	NA	0.2	dS/M	3.257	ppm
14251	55768-03	7.19	NA	0.268	dS/M	9.178	ppm
14252	55768-04	7.41	NA	0.306	dS/M	9.031	ppm
14253	55768-05	7.64	NA	0.505	dS/M	5.497	ppm
14254	55768-06	7.43	NA	0.264	dS/M	8.794	ppm
14255	55768-07	7.63	NA	0.437	dS/M	2.457	ppm
14256	55768-08	7.27	NA	0.296	dS/M	6.318	ppm
14257	55768-09	7.5	NA	0.381	dS/M	5.358	ppm
14258	55768-10	7.67	NA	0.416	dS/M	2.525	ppm

Laboratory ID:	pH	pH units	Conductivity	Conductivity units	Nitrate-N	Nitrate-N units
Detection Limit	0.01	na	0.001	dS/M	0.01	ppm
Reporting Limit	0.1	na	0.001	dS/M	1	ppm

Laboratory ID:	TCEQ/client	pH/Conductivity prep		pH Analysis		Conductivity		Nitate-N Extract		Nitrate-N Analysis	
	Sample ID:	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
14249	55768-01	12/13/2024	DEC	12/16/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW
14250	55768-02	12/13/2024	DEC	12/16/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW
14251	55768-03	12/13/2024	DEC	12/16/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW
14252	55768-04	12/13/2024	DEC	12/16/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW
14253	55768-05	12/13/2024	DEC	12/16/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW
14254	55768-06	12/13/2024	DEC	12/16/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW
14255	55768-07	12/13/2024	DEC	12/16/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW
14256	55768-08	12/13/2024	DEC	12/16/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW
14257	55768-09	12/13/2024	DEC	12/16/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW
14258	55768-10	12/13/2024	DEC	12/16/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW

Report ID: 055768a-45667 Print Date: 10-Jan-25
Quality Control Report TCEQ COC# 055768

Laboratory ID:		Mehlich III P conc.	Mehlich III P units	Mehlich III K conc.	Mehlich III K units	Mehlich III Ca conc.	Mehlich III Ca units	Mehlich III Mg conc.	Mehlich III Mg conc.	Mehlich III S conc.	Mehlich III S units	Mehlich III Na conc.	Mehlich III Na units
14259	IC10223	50.8	ppm	325	ppm	2594	ppm	365	ppm	41.2	ppm	50.0	ppm
14260	IC1024	49.6	ppm	319	ppm	2378	ppm	358	ppm	40.1	ppm	50.2	ppm
	Mean IC	0	ppm	0	ppm	0	ppm	0	ppm	0	ppm	0	ppm
	IC Lower	45.9	ppm	305.0	ppm	2320.0	ppm	335.0	ppm	27.0	ppm	30.0	ppm
	IC Upper	53.4	ppm	365.0	ppm	2645.0	ppm	409.0	ppm	49.0	ppm	55.0	ppm
	blk221	<0.237	ppm	<0.131	ppm	<0.0436	ppm	<0.0250	ppm	<0.0100	ppm	<0.513	ppm

Laboratory ID:	Mehlich III P conc.	Mehlich III P units	Mehlich III K conc.	Mehlich III K units	Mehlich III Ca conc.	Mehlich III Ca units	Mehlich III Mg conc.	Mehlich III Mg conc.	Mehlich III S conc.	Mehlich III S units	Mehlich III Na conc.	Mehlich III Na units
Detection Limit	0.2367	ppm	0.1308	ppm	0.0436	ppm	0.0250	ppm	0.0010	ppm	0.0269	ppm
Reporting Limit	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm

Laboratory ID:	Mehlich III Extract Date	Mehlich III Extract Tech	Mehlich III Anal.Date	Mehlich III Anal. Tech
IC10223	1/8/2025	FMR	1/9/2025	JLP
IC1024	1/8/2025	FMR	1/9/2025	JLP
blk221	1/8/2025	FMR	1/9/2025	JLP

Report ID: 055768a-45667 Print Date: 10-Jan-25

Quality Control Report TCEQ COC# 055768

Laboratory ID:		pH	pH units	Conducitity conc.	Conducitity units	Nitrate-N conc.	Nitrate-N units	Nitrate-N % recovery
14259	IC10223	5.9	na	0.254	dS/M	3.961	ppm	
14260	IC1024	5.9	na	0.257	dS/M	4.569	ppm	
	Mean IC	5.88	na	0.2555	dS/M	4.265	ppm	
14260spike	Spiked sample	-	-	-	-	3.9	ppm	88.1
	IC lower	5.760	na	0.241	dS/M	3.5	ppm	
	IC Upper	5.990	na	0.299	dS/M	5.5	ppm	
	blk221	-	na	0	dS/M	0.614	ppm	

Laboratory ID:	pH	pH units	Conducitity conc.	Conducitity units	Nitrate-N conc.	Nitrate-N units
Detection Limit	0.01	na	0.001	dS/M	0.01	ppm
Reporting Limit	0.1	na	0.001	dS/M	1	ppm

Laboratory ID:	pH/Conductivity prep		pH Analysis		Conductivity		Nitate-N Extract		Nitrate-N Analysis	
	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
IC10223	12/13/2024	DEC	12/16/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW
IC1024	12/13/2024	DEC	12/16/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW
blk221	12/13/2024	DEC	12/16/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Chain of Custody Record

55769

Location: Okee Dairy (Do not fill in this shaded area if the facility information must be confidential)

Permit #: 4108

Region:	Organization #:	PCA Code:	Program:	Sampler telephone number: (254) 552-1900
E-Mail ID:	Sampler: (signature) Vanessa Galan			Sampler: (please print clearly)

Lab ID Number	Sample ID	Date	Time	# of Bottles	Grab/ Comp.	Matrix L,S,M,O,T	CL2	pH	Cond.	Analyses Requested	REMARKS
14261	-01	10/16/24	1145							See RFA	LMU 5 (0-2)
14262	-02	10/16/24	1145								LMU 5 (2-6)
14263	-03	10/16/24	1145								LMU 5 (6-24)
	-04										~~LMU 6 (0-2)~~
	-05										~~LMU 6 (2-6)~~
	-06										~~LMU 6 (6-24)~~
	-07										
	-08										
	-09										
	-10										

Relinquished by:	Date	Time	Received by:
Delores Nielsen	10/18/24	9:27	10-FA-24
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:
Shipper name: Fed Ex	Shipper Number: 7700 3341 5181		

For Laboratory Use:

Received on ice:	Y	N	deg. C
Preservatives:	Y	N	
COC Seal:	Y	N	
Seals Intact:	Y	N	

TCEQ-10065 (11/02) White (Original) -Lab Yellow-Lab Pink-Contract Lab Manager Goldenrod-Collector Copy

Report for Samples analyzed Under Contract Number: 582-10-99518

Report ID: 055769a-45667
Print Date: 10-Jan-25

Texas A&M AgriLife Extension Service Soil, Water and Forage Testing Laboratory
108 Soil Testing Laboratory, 2478 TAMU
College Station, TX 77843-2478
979-862-4955

Client Name: Okee Dairy
Client address: not provided

Standard Sample Report TCEQ COC# 055769

Laboratory ID:	TCEQ/client Sample ID:	Sample Depth (inches)	Sample Coll. Date:	Collector Name:	TCEQ Region #	Date Received	Sample Type:	Sample opened Date	Sample Ground Date	Process Tech.
14261	55769-01	0-2	10/16/2024	Vanessa Gardner	4	11/19/2024	soil	11/25/2024	12/4/2024	TLP
14262	55769-02	2-6	10/16/2024	Vanessa Gardner	4	11/19/2024	soil	11/25/2024	12/4/2024	TLP
14263	55769-03	6-24	10/16/2024	Vanessa Gardner	4	11/19/2024	soil	11/25/2024	12/4/2024	TLP

Methods and Sample Preparation:

Receiving of samples Processing - SWFTL0097R0.SOP

Upon opening of sample chests, all samples are identified and organized as listed on COC to insure completeness and condition of shipment. Individually each sample is spread across a non-reactive tray where foreign matertals is physically removed and discarded. The sample(s) are then placed inside a 65C drying oven and allow to remain until dry. Individual samples were then removed from drying oven and pulverized with an Agvise soil pulzerized fitted with a shaking 2mm screen. Every attempt was again made to remove any remaining plant tissue in the pulverized sample(s). Soil was then transferred to the laboratory sample cups and while additional sample was stored.

Analytical Methods:

Soil pH 2:1 DI water:soil SOIL pH AND CONDUCTIVITY - SWFTL0015R1.SOP

Schofield, R.K. and A.W. Taylor. 1955. The measurement of soil pH. Soil Sci. Soc. Am. Proc. 19:164-167.

Soil Conductivity 2:1 DI Water:Soil SOIL pH AND CONDUCTIVITY - SWFTL0015R1.SOP

Rhoades, J.D. 1982. Soluble salts. p. 167-178. In: A.L. Page, et al. (ed.). Methods of Soil Analysis: Part 2. Agronomy Monogr. 9. 2nd ed. ASA and SSSA, Madison, WI.

Soil Nitrate-N KCl Extractable with Cd-Reduction Analyses NO3-N EXTRACTION - SWFTL0014R5.SOP/NO3-N ANALYSIS - SWFTL0089R1.SOP

Keeney, D.R. and D.W. Nelson. 1982. Nitrogen - inorganic forms. p. 643-687. In: A.L. Page, et al. (ed.). Methods of Soil Analysis: Part 2. Agronomy Monogr. 9. 2nd ed. ASA and SSSA, Madison, WI.

Soil P, K, Ca, Mg, S and Na -- Mehlich III by ICP M3 EXTRACTION - SWFTL0079R1.SOP/M3 ANALYSIS - SWFTL0081R2.SOP

Mehlich-3 soil test extractant: a modification of Mehlich-2 extractant. Commun. Soil Sci. Plant Anal. 15(12):1409-1416

Report ID: 055769a-45667 Print Date: 10-Jan-25

Standard Sample Report TCEQ COC# 055769

Laboratory ID:	TCEQ/client Sample ID:	Mehlich III P conc.	Mehlich III P units	Mehlich III K conc.	Mehlich III K units	Mehlich III Ca conc.	Mehlich III Ca units	Mehlich III Mg conc.	Mehlich III Mg units	Mehlich III S conc.	Mehlich III S units	Mehlich III Na conc.	Mehlich III Na units
14261	55769-01	71.5	ppm	264	ppm	13668	ppm	373	ppm	121	ppm	48.3	ppm
14262	55769-02	23.0	ppm	236	ppm	14018	ppm	302	ppm	120	ppm	74.5	ppm
14263	55769-03	5.34	ppm	204	ppm	18418	ppm	186	ppm	155	ppm	90.7	ppm

Laboratory ID:	Mehlich III P conc.	Mehlich III P units	Mehlich III K conc.	Mehlich III K units	Mehlich III Ca conc.	Mehlich III Ca units	Mehlich III Mg conc.	Mehlich III Mg conc.	Mehlich III S conc.	Mehlich III S units	Mehlich III Na conc.	Mehlich III Na units
Detection Limit	0.2367	ppm	0.1308	ppm	0.0436	ppm	0.0250	ppm	0.0010	ppm	0.0269	ppm
Reporting Limit	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm

Laboratory ID:	TCEQ/client Sample ID:	Mehlich III Extract Date	Mehlich III Extract Tech	Mehlich III Anal.Date	Mehlich III Anal. Tech
14261	55769-01	1/8/2025	FMR	1/9/2025	JLP
14262	55769-02	1/8/2025	FMR	1/9/2025	JLP
14263	55769-03	1/8/2025	FMR	1/9/2025	JLP

Report ID: 055769a-45667 Print Date: 10-Jan-25

Standard Sample Report TCEQ COC# 055769

Laboratory ID:	TCEQ/client Sample ID:	pH	pH units	Conductivity	Conductivity units	Nitrate-N	Nitrate-N units
14261	55769-01	7.27	NA	0.088	dS/M	3.762	ppm
14262	55769-02	7.72	NA	0.184	dS/M	0.934	ppm
14263	55769-03	7.73	NA	0.192	dS/M	2.043	ppm

Laboratory ID:	pH	pH units	Conductivity	Conductivity units	Nitrate-N	Nitrate-N units
Detection Limit	0.01	na	0.001	dS/M	0.01	ppm
Reporting Limit	0.1	na	0.001	dS/M	1	ppm

Laboratory ID:	TCEQ/client	pH/Conductivity prep		pH Analysis		Conductivity		Nitate-N Extract		Nitrate-N Analysis	
	Sample ID:	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
14261	55769-01	12/18/2024	DEC	12/18/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW
14262	55769-02	12/18/2024	DEC	12/18/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW
14263	55769-03	12/18/2024	DEC	12/18/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW

Report ID: 055769a-45667 Print Date: 10-Jan-25
Quality Control Report TCEQ COC# 055769

Laboratory ID:		Mehlich III P conc.	Mehlich III P units	Mehlich III K conc.	Mehlich III K units	Mehlich III Ca conc.	Mehlich III Ca units	Mehlich III Mg conc.	Mehlich III Mg conc.	Mehlich III S conc.	Mehlich III S units	Mehlich III Na conc.	Mehlich III Na units
14279	IC1025	48.2	ppm	323	ppm	2503	ppm	360	ppm	40.8	ppm	48.7	ppm
14280	IC1026	46.5	ppm	309	ppm	2328	ppm	345	ppm	39.1	ppm	47.9	ppm
	Mean IC	0	ppm	0	ppm	0	ppm	0	ppm	0	ppm	0	ppm
	IC Lower	45.9	ppm	305.0	ppm	2320.0	ppm	335.0	ppm	27.0	ppm	30.0	ppm
	IC Upper	53.4	ppm	365.0	ppm	2645.0	ppm	409.0	ppm	49.0	ppm	55.0	ppm
	blk221	<0.237	ppm	<0.131	ppm	<0.0436	ppm	<0.0250	ppm	<0.0100	ppm	<0.513	ppm

Laboratory ID:	Mehlich III P conc.	Mehlich III P units	Mehlich III K conc.	Mehlich III K units	Mehlich III Ca conc.	Mehlich III Ca units	Mehlich III Mg conc.	Mehlich III Mg conc.	Mehlich III S conc.	Mehlich III S units	Mehlich III Na conc.	Mehlich III Na units
Detection Limit	0.2367	ppm	0.1308	ppm	0.0436	ppm	0.0250	ppm	0.0010	ppm	0.0269	ppm
Reporting Limit	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm

Laboratory ID:	Mehlich III Extract Date	Mehlich III Extract Tech	Mehlich III Anal.Date	Mehlich III Anal. Tech
IC1025	1/8/2025	FMR	1/9/2025	JLP
IC1026	1/8/2025	FMR	1/9/2025	JLP
blk221	1/8/2025	FMR	1/9/2025	JLP

Report ID: 055769a-45667 Print Date: 10-Jan-25

Quality Control Report TCEQ COC# 055769

Laboratory ID:		pH	pH units	Conducitity conc.	Conducitity units	Nitrate-N conc.	Nitrate-N units	Nitrate-N % recovery
14279	IC1025	5.9	na	0.254	dS/M	4.34	ppm	
14280	IC1026	5.9	na	0.255	dS/M	4.446	ppm	
	Mean IC	5.855	na	0.2545	dS/M	4.393	ppm	
14280spike	Spiked sample	-	-	-	-	3.9	ppm	88.1
	IC lower	5.760	na	0.241	dS/M	3.5	ppm	
	IC Upper	5.990	na	0.299	dS/M	5.5	ppm	
	blk221	-	na	0	dS/M	0.614	ppm	

Laboratory ID:	pH	pH units	Conducitity conc.	Conducitity units	Nitrate-N conc.	Nitrate-N units
Detection Limit	0.01	na	0.001	dS/M	0.01	ppm
Reporting Limit	0.1	na	0.001	dS/M	1	ppm

Laboratory ID:	pH/Conductivity prep		pH Analysis		Conductivity		Nitate-N Extract		Nitrate-N Analysis	
	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
IC1025	12/18/2024	DEC	12/18/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW
IC1026	12/18/2024	DEC	12/18/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW
blk221	12/18/2024	DEC	12/18/2024	DEC	12/16/2024	DEC	12/16/2024	FMR	12/17/2024	JW

SOIL MONITORING REPORT FOR CAFO INDIVIDUAL PERMITS IN THE SOLE SOURCE IMPAIRMENT ZONES

A. Sample collection

1) Samples were collected for the land management unit (LMU) identified below.

☑ Yes, complete this form and Tables 1 and 2 below. **Attach a copy of the laboratory analyses to this soil monitoring report form.**

☐ No, provide the facility information for the LMU below with the exception of the tables.

2) Reporting Year: 2023 Sample Collection Date: 11/16/2023

B. Facility Information

1) Permit Number: WQ0000410800
2) Site Name: Okee Dairy
3) Name of LMU (**LMU Name should correspond to field designation located on the Map included in the PPP**): 6
4) Name of Owner/Operator: Oene Keuning
5) Mailing Address for Owner/Operator: 4745 CR 207, Hico, TX 76457

Table 1. Soil Analysis Report Where Manure, Sludge and Wastewater are not Incorporated

Soil Sample Parameter	0-2 inches soil depth	2-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO_3-N), ppm			
Phosphorus (extractable), ppm			
Potassium (extractable), ppm			
Sodium (extractable), ppm			
Magnesium (extractable), ppm			
Calcium (extractable), ppm			
Electrical Conductivity/Soluble Salts, dS/m			
pH, SU			

Table 2. Soil Analysis Report Where Manure, Sludge and Wastewater are Incorporated

Soil Sample Parameter	0-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO_3-N), ppm	2.615	35.569
Phosphorus (extractable), ppm	149	1
Potassium (extractable), ppm	605	200
Sodium (extractable), ppm	137	174
Magnesium (extractable), ppm	567	265
Calcium (extractable), ppm	12128	28180
Electrical Conductivity/Soluble Salts, dS/m	0.272	0.071
pH, SU	7.73	7.76

Note: ppm = parts per million, considered to be equivalent to milligrams per liter (mg/l); dS/m = decisiemins per meter, equivalent to millimhols per centimeter (mmhols/cm); SU = standard units.

C. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name and Title of Responsible Official or Authorized Agent: Oene Keuning , Owner

Signature: Maeleigh Beijsel for →

Date: 02 / 14 / 2024

Telephone Number: 254/796-4991

D. How to Submit

The soil monitoring report with attached soil analyses should be included in the Annual Report that is required to be submitted by March 31 of each year. For State Only CAFOs, submit this soil monitoring report form to the TCEQ, Enforcement Division (MC-224), P.O. Box 13087, Austin, Texas 78711-3087 and provide a copy to the TCEQ Regional Office.

If you have any additional questions about this form or soil sample collection and soil analyses requirements, contact:

By e-mail: CAFO@tceq.texas.gov or call (512) -239-4671

Samples analyzed Under Contract Number: 582-10-99518

Report ID: 055766a-45315
Print Date: 24-Jan-24

AgriLife Extension Service Soil, Water and Forage Testing Laboratory
sting Laboratory, 2478 TAMU
tion, TX 77843-2478
55

e: Okee Dairy
ess: not provided

ample Report TCEQ COC# 055766

D:	TCEQ/client Sample ID:	Sample Depth (inches)	Sample Coll. Date:	Collector Name:	TCEQ Region #	Date Received	Sample Type:	Sample opened Date	Sample Ground Date	Proc Tec
	55766-01	0-6	11/16/2023	Chris Whitefield	4	12/6/2023	soil	12/7/2023	12/15/2023	TL
	55766-02	6-24	11/16/2023	Chris Whitefield	4	12/6/2023	soil	12/7/2023	12/15/2023	TL

Sample Preparation:

amples Processing - SWFTL0097R0.SOP

Upon opening of sample chests, all samples are identified and organized as listed on COC to insure completeness and condition of shipment. Individually each sample is spread across a non-rea tray where foreign materials is physically removed and discarded. The sample(s) are then placed inside a 65C drying oven and allow to remain until dry. Individual samples were then remov drying oven and pulverized with an Agvise soil pulzerized fitted with a shaking 2mm screen. Every attempt was again made to remove any remaining plant tissue in the pulverized sample(s). then transferred to the laboratory sample cups and while additional sample was stored.

thods:

Soil pH 2:1 DI water:soil SOIL pH AND CONDUCTIVITY - SWFTL0015R1.SOP

Schofield, R.K. and A.W. Taylor. 1955. The measurement of soil pH. Soil Sci. Soc. Am. Proc. 19:164-167.

Soil Conductivity 2:1 DI Water:Soil SOIL pH AND CONDUCTIVITY - SWFTL0015R1.SOP

Rhoades, J.D. 1982. Soluble salts. p. 167-178. In: A.L. Page, et al. (ed.). Methods of Soil Analysis: Part 2. Agronomy Monogr. 9. 2nd ed. ASA and SSSA, Madison, WI.

Soil Nitrate-N KCl Extractable with Cd-Reduction Analyses NO3-N EXTRACTION - SWFTL0014R5.SOP/NO3-N ANALYSIS - SWFTL0089R1.SOP

Keeney, D.R. and D.W. Nelson. 1982. Nitrogen - inorganic forms. p. 643-687. In: A.L. Page, et al. (ed.). Methods of Soil Analysis: Part 2. Agronomy Monogr. 9. 2nd ed. ASA and SSSA, Madison, WI.

Soil P, K, Ca, Mg, S and Na -- Mehlich III by ICP M3 EXTRACTION - SWFTL0079R1.SOP/M3 ANALYSIS - SWFTL0081R2.SOP

Mehlich-3 soil test extractant: a modification of Mehlich-2 extractant. Commun. Soil Sci. Plant Anal. 15(12):1409-1416

t ID: 055766a-45315 Print Date: 24-Jan-24
ample Report TCEQ COC# 055766

ID:	TCEQ/client Sample ID:	Mehlich III P conc.	Mehlich III P units	Mehlich III K conc.	Mehlich III K units	Mehlich III Ca conc.	Mehlich III Ca units	Mehlich III Mg conc.	Mehlich III Mg units	Mehlich III S conc.	Mehlich III S units	Mehlich III Na conc.	Mehlic Na ur
	55766-01	149	ppm	605	ppm	12128	ppm	567	ppm	92.1	ppm	137	ppr
	55766-02	1	ppm	200	ppm	28180	ppm	265	ppm	163	ppm	174	ppr

ID:	Mehlich III P conc.	Mehlich III P units	Mehlich III K conc.	Mehlich III K units	Mehlich III Ca conc.	Mehlich III Ca units	Mehlich III Mg conc.	Mehlich III Mg conc.	Mehlich III S conc.	Mehlich III S units	Mehlich III Na conc.	Mehlich III Na units
nit	0.0177	ppm	0.1405	ppm	0.2130	ppm	0.0733	ppm	0.2616	ppm	0.0312	ppm
nit	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm

ID:	TCEQ/client Sample ID:	Mehlich III Extract Date	Mehlich III Extract Tech	Mehlich III Anal.Date	Mehlich III Anal. Tech
	55766-01	1/9/2024	FMR	1/10/2024	JLP
	55766-02	1/9/2024	FMR	1/10/2024	JLP

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Chain of Custody Record

55766

n: Okee Dairy (Do not fill in this shaded area if the facility information must be confidential)

Permit #: 4108

:	Organization #:	PCA Code:	Program:	Sampler telephone number: (254) 552-1900
ID:	Sampler: (signature) Chris Whitefield			Sampler: (please print clearly) Chris Whitefield

er	Sample ID	Date	Time	# of Bottles	Grab/ Comp.	Matrix L,S,M,O,T	CL2	pH	Cond.	Analyses Requested	REMARKS
407	-01	11/16/23	10:30							Sel RFA 1	LMU 6 10
408	-02	11/16/23	10:30								LMU 6 (6
	-03										
	-04										
	-05										
	-06										
	-07										
	-08										
	-09										
	-10										

quished by:	Date	Time	Received by:	For Laboratory Use:
	12/5/23	8:15	12-6-23	
quished by:	Date	Time	Received by:	Received on ice: Y N
quished by:	Date	Time	Received by:	Preservatives: Y N
quished by:	Date	Time	Received by:	COC Seal: Y N
er name: dex	Shipper Number: 7743 5123 9793			Seals Intact: Y N

0065 (11/02) White (Original) -Lab Yellow-Lab Pink-Contract Lab Manager Goldenrod-Collector Copy

ID: 055766a-45315 Print Date: 24-Jan-24

trol Report TCEQ COC# 055766

D:		pH	pH units	Conducitity conc.	Conducitity units	Nitrate-N conc.	Nitrate-N units	Nitrate-N % recovery
	IC985	5.8	na	0.251	dS/M	5.404	ppm	
	IC986	5.9	na	0.251	dS/M	5.071	ppm	
	Mean IC	5.835	na	0.251	dS/M	5.2375	ppm	
e	Spiked sample	-	-	-	-	4.6	ppm	83.5
	IC lower	5.760	na	0.238	dS/M	4.9	ppm	
	IC Upper	5.990	na	0.301	dS/M	6.9	ppm	
	blk212	-	na	0	dS/M	-3.293	ppm	

D:	pH	pH units	Conducitity conc.	Conducitity units	Nitrate-N conc.	Nitrate-N units
mit	0.01	na	0.001	dS/M	0.01	ppm
mit	0.1	na	0.001	dS/M	1	ppm

D:	pH/Conductivity prep		pH Analysis		Conductivity		Nitate-N Extract		Nitrate-N Analysis	
	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
	1/5/2024	DEC	1/5/2024	DEC	1/5/2024	DEC	1/10/2024	FMR	1/12/2024	JW
	1/5/2024	DEC	1/5/2024	DEC	1/5/2024	DEC	1/10/2024	FMR	1/12/2024	JW
	1/5/2024	DEC	1/5/2024	DEC	1/5/2024	DEC	1/10/2024	FMR	1/12/2024	JW

D: 055766a-45315 Print Date: 24-Jan-24
ntrol Report TCEQ COC# 055766

D:	Mehlich III P conc.	Mehlich III P units	Mehlich III K conc.	Mehlich III K units	Mehlich III Ca conc.	Mehlich III Ca units	Mehlich III Mg conc.	Mehlich III Mg conc.	Mehlich III S conc.	Mehlich III S units	Mehlich III Na conc.	Mehlich III Na units
IC985	49.4	ppm	309	ppm	2265	ppm	359	ppm	35.9	ppm	52.2	ppm
IC986	49.8	ppm	315	ppm	2284	ppm	366	ppm	36.1	ppm	49.3	ppm
Mean IC	0	ppm	0	ppm	0	ppm	0	ppm	0	ppm	0	ppm
IC Lower	45.3	ppm	300.0	ppm	1931.0	ppm	304.0	ppm	28.3	ppm	33.0	ppm
IC Upper	55.0	ppm	375.0	ppm	2440.0	ppm	388.0	ppm	47.3	ppm	57.0	ppm
blk212	<0.007702	ppm	<0.0840	ppm	<0.106	ppm	<0.0336	ppm	<0.001069	ppm	0.18	ppm

D:	Mehlich III P conc.	Mehlich III P units	Mehlich III K conc.	Mehlich III K units	Mehlich III Ca conc.	Mehlich III Ca units	Mehlich III Mg conc.	Mehlich III Mg conc.	Mehlich III S conc.	Mehlich III S units	Mehlich III Na conc.	Mehlich III Na units
mit	0.0177	ppm	0.1405	ppm	0.2130	ppm	0.0733	ppm	0.2616	ppm	0.0312	ppm
mit	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm

ID:	Mehlich III Extract Date	Mehlich III Extract Tech	Mehlich III Anal.Date	Mehlich III Anal. Tech
	1/9/2024	FMR	1/10/2024	JLP
	1/9/2024	FMR	1/10/2024	JLP
	1/9/2024	FMR	1/10/2024	JLP

D: 055766a-45315 Print Date: 24-Jan-24
ample Report TCEQ COC# 055766

TCEQ/client Sample ID:	pH	pH units	Conductivity	Conductivity units	Nitrate-N	Nitrate-N units
55766-01	7.73	NA	0.272	dS/M	2.615	ppm
55766-02	7.76	NA	0.071	dS/M	35.569	ppm

D:	pH	pH units	Conductivity	Conductivity units	Nitrate-N	Nitrate-N units
mit	0.01	na	0.001	dS/M	0.01	ppm
mit	0.1	na	0.001	dS/M	1	ppm

D:	TCEQ/client	pH/Conductivity prep		pH Analysis		Conductivity		Nitate-N Extract		Nitrate-N Analysis	
	Sample ID:	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
	55766-01	1/5/2024	DEC	1/5/2024	DEC	1/5/2024	DEC	1/10/2024	FMR	1/12/2024	JW
	55766-02	1/5/2024	DEC	1/5/2024	DEC	1/5/2024	DEC	1/10/2024	FMR	1/12/2024	JW

servi tech
6921 S. Bell • Amarillo, TX 79109
www.servitech.com

Phone: 806.677.0093
800.557.7509
Fax: 806.677.0329

Lab No.: **3492**

LABORATORY ANALYSIS REPORT

Report Date: 06/26/2024 09:15 pm

Send To: 6224

ENVIRO-AG ENGINEERING INC
3404 AIRWAY BLVD
AMARILLO, TX 79118

Amy Meier
Data Review Coordinator

Results For: OKEE DAIRY
Sample ID: SLURRY

Received: 06/11/2024
Sampled: 06/05/2024
Invoice No: 425751
P.O. #: RICHARD GEORGE

		Analysis (dry basis)	Analysis (as rec'd)	Total content lbs per Acre-In	Total content lbs per 1000 gal	Estimated available first year* lbs per Acre-In	Estimated available first year* lbs per 1000 gal
NUTRIENTS							
Nitrogen							
Total Nitrogen	%	6.562	0.105	14877	9.4	175.7	7.0
Organic Nitrogen	%	3.562	0.057	8076.2	5.1	66.9	2.7
Ammonium Nitrogen	%	3.00	0.048	6801.0	4.3	108.8	4.3
Nitrate+Nitrite Nitrogen	%	<0.0010	<0.0010	0	<0.1	<0.1	<0.1
Major and Secondary Nutrients							
Phosphorus	%	1.25	0.020				
Phosphorus as P2O5	%	2.875	0.046	6517.6	4.1	93.9	3.7
Potassium	%	6.437	0.103				
Potassium as K2O	%	7.75	0.124	17569	11.2	281.1	11.2
OTHER PROPERTIES							
Moisture	%		98.4				
Total Solids	%		1.6	226700	144		
Organic Matter	%	62.5	1.0	141688	90		
Ash	%		0.6		54		
C:N Ratio	ratio		5.5				
Density	lbs/gal	512.5	8.2				

* Assumes 52% of organic nitrogen available during first crop year after application. Assumes 100% of ammonium and nitrate nitrogen available, but should be adjusted for potential field losses at application site.

Your opinion is valuable to us. Please let us know what you think about our services! Send an email to feedback@servitech.com.

ENVIRO-AG ENGINEERING, INC.
EAE
AMARILLO - STEPHENVILLE - ARTESIA
Enviro-Ag Engineering, Inc.
3404 Airway Blvd,. Amarillo, TX 79118
Tel. 806-353-6123 Fax 806-353-4132

MANURE CHAIN OF CUSTODY RECORD

Producer/Facility: Okee Dairy

County: Hamilton

Date Sampled: 6/5/2024

Date Shipped: 6/10/2024

Project Manager: Richard George

Sample Type	Sample ID	Number of Containers	Test Package	Proper Preservation	Matrix
Slurry	Slurry	1 3492	EAE TX CO KS SLURRY	Y	SL

Relinquished By: Ref. Internal COC
Company: EAE

Relinquished By: Lisa Postmus
Company: EAE
Date/Time: 6/11 6:7/6.7

Relinquished By:
Company: ServiTech Lab

Received By:

servi tech
6921 S. Bell • Amarillo, TX 79109
www.servitech.com

Phone: 806.677.0093
800.557.7509
Fax: 806.677.0329

Lab No: **841**

LABORATORY ANALYSIS REPORT

Report Date: 11/13/2024 04:04 pm

Send To: 6224	ENVIRO-AG ENGINEERING INC 3404 AIRWAY BLVD AMARILLO, TX 79118		Ashleigh Laugesen Signer
Client Name:	OKEE DAIRY	**Received:**	11/08/2024
Sample ID:	RCS #2	**Sampled:**	10/29/2024
Location	HAMILTON COUNTY	**Invoice No:**	426892

	Analysis results		lbs/acre-in	meq/L
NUTRIENTS				
Nitrogen				
Total Nitrogen	13	ppm	3	0.9
Organic Nitrogen	9	ppm	2	0.6
Ammonium Nitrogen	4.3	ppm	1	0.3
Nitrate+Nitrite Nitrogen	<0.20	ppm	0	0
Major and Secondary Nutrients				
Phosphorus	<10	ppm		
Phosphorus as P2O5	<20	ppm	0	
Potassium	30	ppm		0.8
Potassium as K2O	40	ppm	9	
OTHER PROPERTIES				
Moisture	99.9	%		
Total Solids	<0.10	%	0	
Organic Matter	<0.10	%	0	
Ash	<0.10	%		
C:N Ratio	44.5	ratio		

Your opinion is valuable to us. Please let us know what you think about our services! Send an email to feedback@servitech.com.

ENVIRO-AG ENGINEERING, INC.
EAE
AMARILLO · STEPHENVILLE · ARTESIA

Enviro-Ag Engineering, Inc.
3404 Airway Blvd,. Amarillo, TX 79118
Tel. 806-353-6123 Fax 806-353-4132

WASTEWATER CHAIN OF CUSTODY RECORD

Producer/Facility: Okee Dairy

County: Hamilton

Date Sampled: 10/29/2024

Date Shipped: 11/4/2024

Project Manager: Richard George

Sample Type	Sample ID	Number of Containers	Test Package	Proper Preservation	Matrix
Wastewater	RCS #2	2	EAE TX CO KS LAGOON	Y	OT

0841

Relinquished By: Ref. Internal COC
Company: EAE

Relinquished By: Lisa Postmus
Company: EAE
Date/Time:
Received By:

Relinquished By:
Company: ServiTech Lab

5.0 RECHARGE FEATURE CERTIFICATION

CERTIFICATION

I certify that potential Recharge Features in the form of artificial penetrations and natural features exist on property utilized under this application as defined in 30 TAC §321.32(50). The protective measures in the form of best management practices identified in this report, when implemented, are designed to avoid adverse impacts to these features and associated groundwater formations.

All information presented on this page and in the following supporting documents is true and accurate to the best of my knowledge.

Norman Mullin 7/3/25

Norman Mullin, P.E.

Enviro-Ag Engineering, Inc.

Firm #F-2507

5.1 General

This recharge feature certification report was authorized by Mr. Oene Keuning representing Okee Dairy. The findings and recommendations contained herein were compiled by Ms. Jourdan Mullin and Mr. Norman Mullin, P.E., of Enviro-Ag Engineering, Inc., Amarillo, Texas.

5.2 Purpose of Report

Okee Dairy is applying for a major amendment of current TPDES #4108 under 30 TAC, Chapter 321, Subchapter B, Concentrated Animal Feeding Operations. The purpose of this report is to determine if the subject property has any natural or artificial features, either on or beneath the ground surface, which would provide a significant pathway for effluent or solids from the facility into the underlying aquifer. At a minimum, the records and/or maps of the following entities/agencies were reviewed to locate any artificial recharge features: A) Texas Railroad Commission, B) local water district, C) Texas Water Development Board, D) TCEQ, E) Natural Resource Conservation Service (NRCS), F) current land owners and G) onsite inspection. The TCEQ Regulatory Guidance RG-433 was followed to identify recharge features and recommend best management practices.

5.3 Property Under Evaluation

The property under evaluation consists of approximately 587 acres in Hamilton County, Texas.

5.4 Definition of Waste Production

The processes by which wastewater is produced at a dairy begins with the use of fresh water to clean manure from the milking parlor and equipment sanitization. Wastewater from the milking parlor is direct to settling pond #1 and then to RCS #1 and RCS #2 for storage and disposal through beneficial land application.

The second process of wastewater production involves the accumulation of manure solids in the open confinement lots. Rain falling on the open lots comes into contact with the manure layer and absorbs some of the excreted nutrients present in manure. The nutrient enriched runoff is considered wastewater, which flows by designed slopes from the open lots toward the settling ponds and into the RCSs.

Manure solids accumulated in the open confinement lots are collected at least annually and hauled off-site to farmland by a waste transporter. While in the open lots, manure becomes compacted and slowly permeable due to hoof action by the cattle. This compacted manure layer results in an increase of the overall runoff volume during rainfall events. Infiltration of nutrients downward through the manure layer into the underlying soils is considered minimal as a result of pen surface compaction (Sweeten, 1990).

5.5 Definition of Recharge Feature

TCEQ rules define a "Recharge Feature" as: *"Those natural or artificial features either on or beneath the ground surface at the site under evaluation that provide or create a significant hydrologic connection between the ground surface and the underlying groundwater within an aquifer. Significant artificial features include, but are not limited to, wells and excavation or material pits. Significant natural hydrologic connections include, but are not limited to: faults, fractures, sinkholes or other macro pores that allow direct surface infiltration; a permeable or shallow soil material that overlies and aquifer; exposed geologic formations that are identified as an aquifer; or a water course bisecting an aquifer."* (30 TAC §321.32(50))

The TCEQ Regulatory Guidance RG-433 further defines a "recharge feature" as: *"A natural or artificial feature either on or beneath the ground surface that provides or creates a significant hydrologic connection (or pathway) between the ground surface and the underlying groundwater within an aquifer."*

The guidance document also defines a "significant pathway" as: *"A significant pathway between the land surface and the subsurface has the ability to transmit waste, wastewater, or precipitation mixed with waste to groundwater. The wastewater may impact the groundwater quality within an aquifer or migrate laterally to discharge as seeps that may impact surface water quality. Recharge features with significant pathways include geomorphologic, geologic, soil, and artificial features. Agricultural practices may also enhance existing recharge features."*

EVALUATION OF NATURAL FEATURES

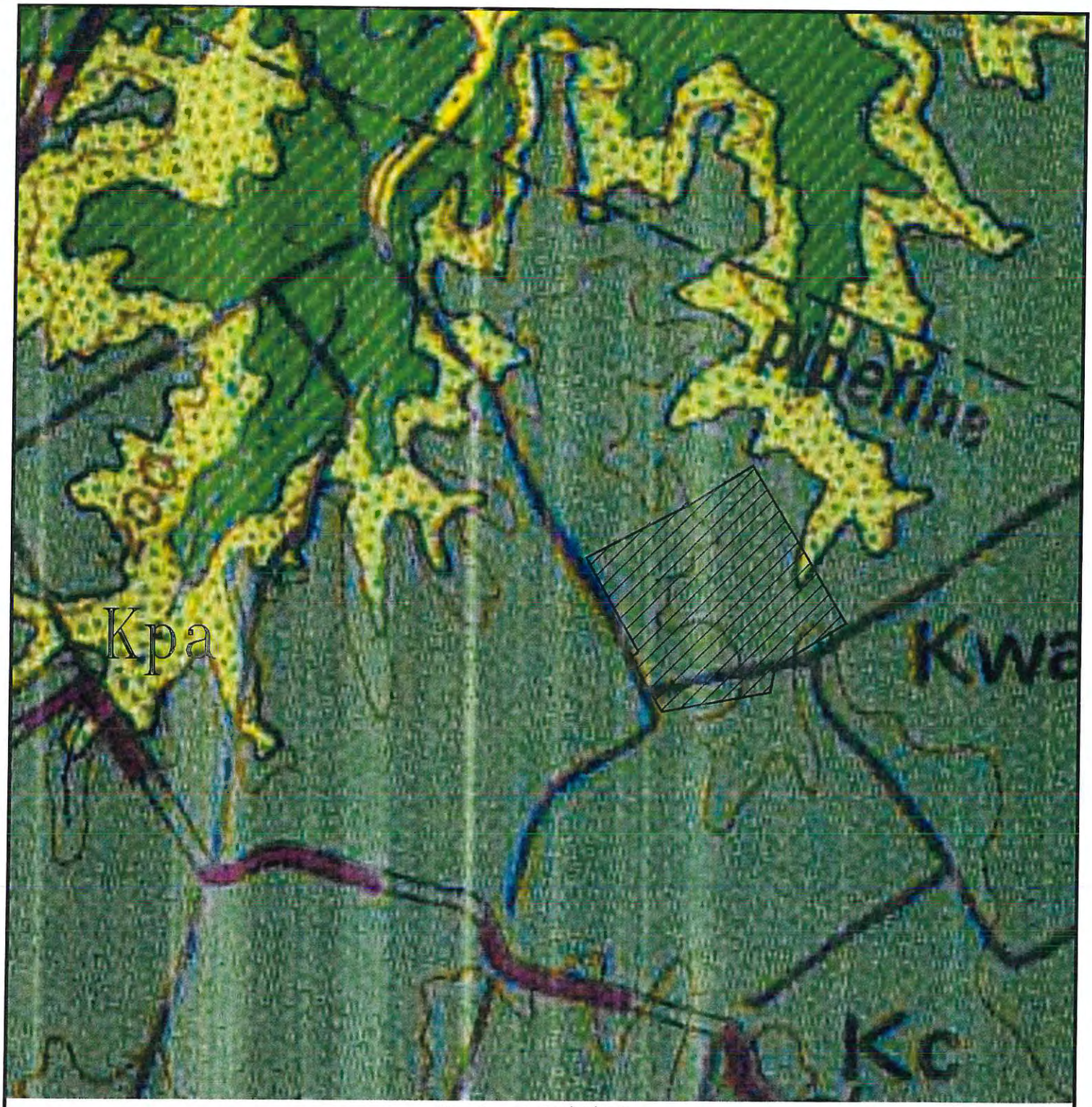
5.6 Geomorphologic/Geologic Features

The clay loam soils in this area of Hamilton County are immediately underlain by the Paluxy and Walnut Formations and by recently deposited Alluvium in the area of the North Bosque River, as shown in Figure 5.1, Geologic Atlas. Allluvium consists of floodplain deposits, including low terrace deposits near floodplain level and bedrock locally in stream channels; gravel, sand, silt, clay and organic matter up to 35 feet thick. The Paluxy Formation consists of sandstone interbedded with claystone and siltstone, up to 100 feet thick, thinning southward. The Glen Rose Formation of Cretaceous age consists of alternating limestone and claystone with some sandstone, up to 250 feet thick in the southeastern area of the formation. (Geologic Atlas, 1976).

The Walnut Formation comprises the beds of clay and nonchalky limestones at the base of the Fredericksburg division. They consist of alternations of calcareous laminated clays, weathering yellow on oxidation, semicrystalline limestone flags, and shell agglomerate, all of which grade upward without break into the more chalky beds of the Edwards limestone. In places they weather into rich black soils and make extensive agricultural belts (Hill, 1901).

Forming the upper unit of the Trinity Group, the Paluxy Formation consists of up to 400 feet of predominantly fine to coarse-grained sand interbedded with clay and shale. Underlying the Paluxy, the Glen Rose Formation forms a gulfward-thickening wedge of marine carbonates consisting primarily of limestone. Paluxy bedrock outcrops along the northeast portion of this site. Limiting application rates of wastewater and manure will protect this feature form adverse impacts.

The basal unit of the Trinity Group consists of the Twin Mountains and Travis Peak formations, which are laterally separated by a facies change. To the north, the Twin Mountains Formation consists mainly of medium-to coarse-grained sands, silty clays, and conglomerates (Ashworth, 1995).



Map Generated 6/16/2025

Legend:
Denotes Okee Dairy
Kwa – Cretaceous Walnut Formation
Kpa – Cretaceous Paluxy Formation

N
W E
S

No Scale

Source: Geologic Atlas of Texas, Brownwood Sheet, 1976.

Okee Dairy Hico, Texas Hamilton County	Geologic Atlas of Texas Figure 5.1 Page 20	ENVIRO–AG EAE ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Blvd. AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

5.6.1 Outcrops/Stream Interception

An inspection of the CAFO property and review of the USGS topographic map of the area shows two tributaries of Long Branch Creek located in LMUs #1, #3, #4, #5 and #7 and freshwater ponds located in LMUs #3 and #4. No land application is proposed in these areas and required buffer zones will be maintained.

5.6.2 Excessive Slopes

No slopes of greater than 8 percent are present on the property.

5.6.3 Other Large-Scale Conduits

No faults, fractured sediments, caves, sinkholes, solution cavities, vugs or concentrated or extensive animal burrowing was observed during an on-site visit, nor is identified on the geologic atlas, soil surveys or USGS maps.

5.6.4 Surface Water

The "water in the state" designation is based on Enviro-Ag Engineering, Inc., site inspections, the permittee's knowledge of the property and the USDA-FSA aerial photograph (2025). The buffer zones and LMU boundaries in Figure 6.1 (Refer to Section 6) are submitted with this application for TCEQ approval.

5.6.5 Aquifer

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

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

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

Recharge to the Trinity aquifer is generally as precipitation that falls on aquifer outcrop areas and as seepage from streams and ponds where the head gradient is downward. In the Hill Country, water might flow laterally into the Trinity aquifer form the adjacent Edwards-Trinity aquifer. The aquifer discharges by evapotranspiration, spring discharges, diffuse lateral or upward leakage into shallower aquifers, and withdrawals from wells (USGS, 2003). Land application at agronomic rates and maintain permanent cover crops will protect the feature from adverse impacts associated with this operation.

5.7 Soil Features

Soil mapping units included in this section for the production area and land application areas were taken from the electronic NRCS Soil Survey for Hamilton County. Soils descriptions are included in the supporting documentation and were obtained from the most current version of the NRCS electronic soil information database for Hamilton County available on the NRCS Web Soil Survey.

5.7.1 Production Area

Soils underlying the pen and pond areas are predominately of the Brackett-Maloterre (BxD) and Slidell (SsB) series. The RCSs have been certified as meeting TCEQ guidelines for soil liner (30 TAC §321.38(g). Best management practices pertaining to surface drainage, surface compaction and manure management within the open lot confinement area will be followed. Steve Evans, Ph.D., soil physicist with the USDA Agricultural Research Service in Bushland, Texas, stated that his work with lysimeters and potential evapotranspiration indicated limited infiltration and even less deep percolation will occur on areas with sloped surfaces (1996). Work performed by the NRCS calculated the feedlot surface curve number (potential for runoff) as 90 on a scale of 100.

5.7.2 Land Application Areas

Soils underlying the land application areas are primarily of the Brackett-Maloterre (BxD), Pidcoke (PkB), Slidell (SsB) and Topsey (ToC) series. The application of wastewater and/or manure will be performed at agronomic rates according to an approved NUP/NMP. No pooling or ponding is anticipated due to application through sprinklers.

Figure 5.2 shows the soils underlying the property as delineated from the electronic NRCS Soil Survey map for Hamilton County. The electronic version of the soil survey is considered the most current soils information available. Table 5.1 is a summary of the estimated physical properties of the soils in the subject area, obtained from the NRCS Web Soil Survey.

Table 5.1: Estimated Soil Properties

Soil Series (Map ID)	Slope (%)	HSG	Depth (in)	USDA Soil Texture	Permeability / Infiltration Rate (in/hr)	Available Water Capacity (in/in of soil)
Brackett (BxD)	-----	C	0-4	Gravelly Clay	0.6-2.0	0.11-0.16
			4-14	Loam	0.6-2.0	0.08-0.16
			14-60		0.06-2.0	-----
Maloterre	-----	D	0-5	Gravelly Clay	0.6-2.0	0.11-0.13
			5-80	Loam	0.06-0.6	-----
Pidcoke – PkB	1-3	D	0-11	Gravelly Clay	0.6-2.0	0.11-0.15
			11-18	Loam	0.6-2.0	0.11-0.15
			18-80		0.06-0.6	-----
Slidell – SsB	1-3	D	0-19	Clay	.001-0.06	0.10-0.18
			19-32		.001-0.06	0.10-0.18

Topsey – ToC	1-5	C	0-12 12-18 18-32	Clay Loam	0.6-2.0 0.6-2.0 0.20-2.0	0.12-0.20 0.10-0.20 0.10-0.20
Krum – KrB	1-5	C	0-8 8-36	Silty Clay	0.06-0.20 0.06-0.20	0.13-0.20 0.12-0.18
Nuff – NuC	2-6	C	0-5 5-13 13-23 23-33	Stony, Silty Clay Loam	0.6-2.0 0.20-0.6 0.06-0.20 0.06-0.20	0.08-0.11 0.07-0.11 0.11-0.16 0.11-0.16
Oglesby – OgB	1-3	D	0-17 17-35	Gravelly Silty Clay	0.06-0.20 0.06-2.0	0.10-0.15 -----
Wise – WsC	3-5	C	0-5 5-11 11-26	Clay Loam	0.6-2.0 0.6-2.0 0.6-2.0	0.15-0.20 0.15-0.24 0.15-0.24

The major soil series within each LMU are identified in Table 5.2. All soils at the site that have been identified by NRCS as being at high risk for various limitations are presented in Table 5.3. Associated best management practices will be implemented, as appropriate, based on physical and economic conditions.

Table 5.2: Major Soil Types

LMU ID	Major Soil Type
1, 2, 4, 5, 6	Brackett-Maloterre (BxD)
3, 7	Topsey (ToC)

Table 5.3: Potential Soil Limitations for Land Application

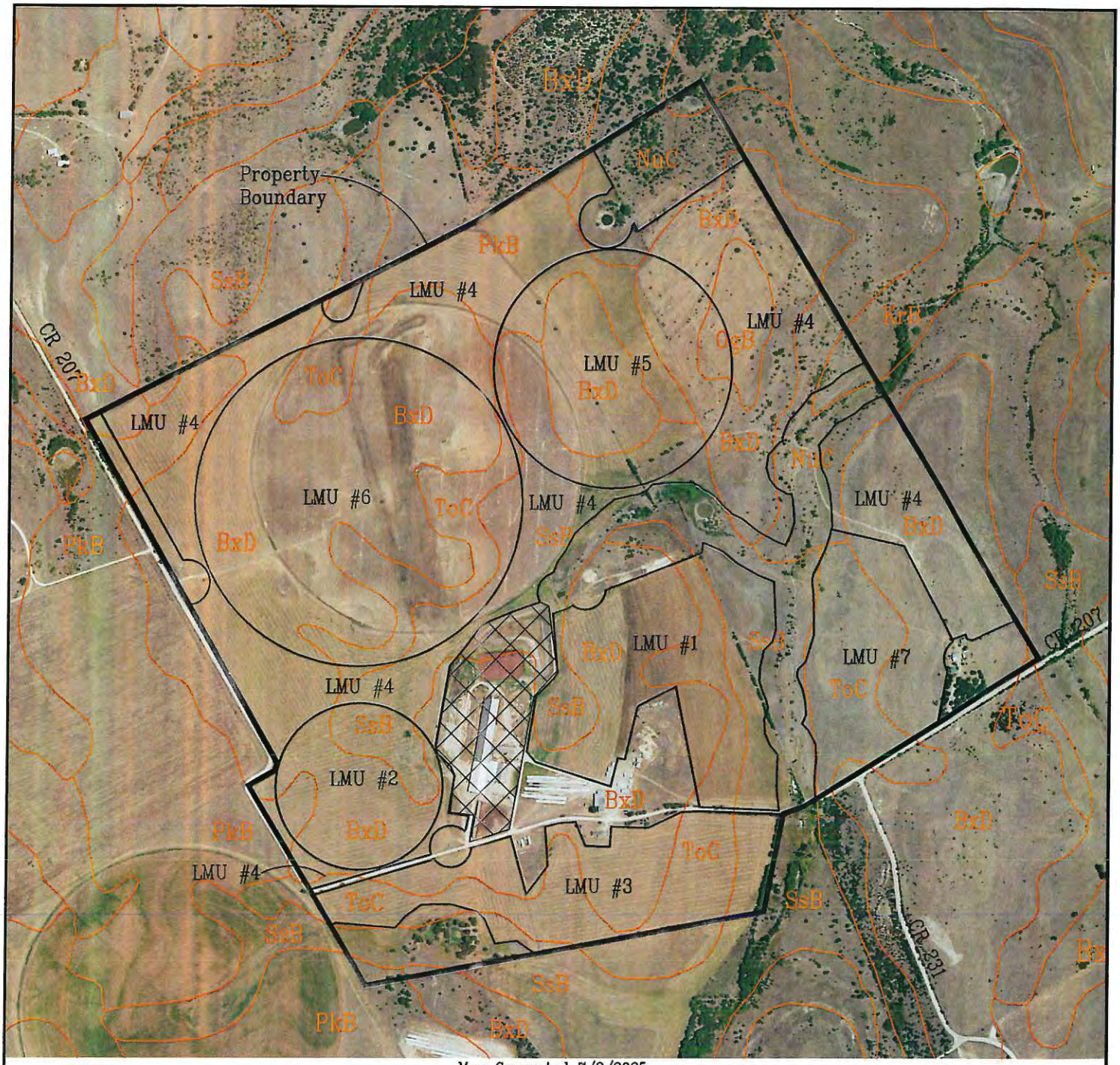
Soil Series	Potential Soil Limitations	Best Management Practices
BxD, OgB	Droughty Depth to Hard Bedrock Depth to Soft Bedrock	– Land Application not to exceed agronomic rates for nutrients and soil hydraulic rates (refer to NMP) – Irrigation events will be managed to assist in maintaining soil moisture levels within the range of the available water holding capacity of that Land Management Unit. -No land application to inundated soils
PkB	Droughty Depth to Bedrock	– Land Application will be based upon the AWC (refer to NMP) of the soil and will not exceed agronomic rates for nutrients. – Irrigation events will be managed to assist in maintaining soil moisture levels within the range of the available water holding capacity of that Land Management Unit. -No land application to inundated soils

Soil Series	Potential Soil Limitations	Best Management Practices
KrB, SsB	Slow Water Movement	- Land Application will be based upon the AWC (refer to NMP) of the soil ond will not exceed agronomic rotes for nutrients. -No land application to inundated soils
ToC, WsC	Depth to Soft Bedrock	- Land Application will be based upon the AWC (refer to NMP) of the soil and will not exceed agronomic rates for nutrients. - Irrigation events will be managed to assist in maintaining soil moisture levels within the range of the available water holding capacity of that Land Management Unit. -No land application to inundated soils
NuC	Large Surface Stones Slow Water Movement	- Land Application will be based upon the AWC (refer to NMP) of the soil and will not exceed agronomic rates for nutrients. - Irrigation events will be managed to assist in maintaining soil moisture levels within the range of the available water holding capacity of that Land Management Unit. -No land application to inundated soils

5.7.3 Erosion

Figure 5.2 shows the onsite soils classified by NRCS as Highly Erodible Land (HEL), including Pidcoke (PkB). LMUs will be protected with typical conservation farming practices within the standards of the NRCS. The following methods will be used to control/prevent erosion of exposed soils in the production area:

- Seeding/sprigging exposed areas with forage or cover crops,
- Constructing terraces or berms (shortening the length and steepness of slopes),
- Covering erosive areas with road surfacing materials,
- Implementing reduced tillage practices,
- Maintaining a cover of plants or crop residue.



Map Generated 7/2/2025

LEGEND:

Denotes Production Area

For specifics on soils, refer to Table 5.1

N

W E

S

500' 0 500' 1000'

SCALED AS SHOWN

Source: USDA–NRCS Soil Survey, Soil Survey Geographic Database for (Hamilton County, TX). Available at: http://websoilsurvey.nrcs.usda.gov. Accessed July, 2017.

Okee Dairy Hico, Texas Hamilton County	NRCS Soils Map Figure 5.2 Page 26	ENVIRO–AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Blvd. AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

ARTIFICIAL FEATURES

5.8 Railroad Commission Records

A search of the RRC database files was performed and a search of the online RRC map viewer was conducted. No proposed locations or existing penetrations for oil and gas were identified on the subject property. Railroad Commission database information is included as an attachment to this document.

5.9 Ground Water Conservation District Records

There is no groundwater conservation district for Hamilton County; therefore, no data is available at this time. Should an abandoned penetration be encountered anywhere on the subject property at any time, the penetration will be marked, inspected and properly sealed to prevent a potential impact to the underlying aquifer. Appropriate well plugging reports shall be submitted as required to the Texas Department of Licensing and Regulation (TDLR) and will be maintained in the onsite PPP.

5.10 GeoSearch

GeoSearch was not utilized in this application.

5.11 Texas Water Development Board Water Data Interactive (WDI)

The TWDB WDI online database was reviewed for artificial penetrations. The database revealed water wells registered with the TWDB as being located on the subject property. The wells that could be correlated with onsite wells are shown on Table 5.4.

5.12 Natural Resource Conservation Service

The historical NRCS Soil Survey of Hamilton County (2006) was reviewed for locations of potential recharge features. No potential recharge features were identified.

5.13 Other Artificial Features

Numerous features, such as irrigation tail water pits and stock ponds, exist on the subject property and are shown to be buffered on Figure 5.3. These areas shall be buffered during land application events or backfilled prior to the first land application event. The facility has one burial site designated on Figure 5.3 for the disposal of dead animals. The location of the burial site on the property meets NRCS soil recommendations for large animal mortality burial.

5.14 Previous/Current Landowner

Mr. Oene Keuning was contacted regarding then presence of any potential recharge features on the property. Mr. Keuning is considered the most knowledgeable about the property. The previous landowner could not be located. Mr. Keuning confirmed the locations of all active water wells.

5.15 Onsite Inspection

The property has been inspected both on the ground and by historical mapping. All active water wells were documented on the property during the onsite inspection and are shown on Figure 5.3. The BMPs for all wells are listed in Table 5.4. Should any open well or test hole be encountered, it will be marked, reported to the Engineer, included on Figure 5.3 and properly plugged (30 TAC §321.34(f)(3)(B)). Well plugging reports shall be submitted as required to the Texas Department of Licensing and Registration (Well Drillers Board) and will be maintained in the onsite PPP.

All well data listed in Table 5.4 is based on information received from the water district, TCEQ and TWDB files, onsite inspection, and interviews of persons knowledgeable of the property. The map number corresponds to the location shown in Figure 5.3. The well identification number corresponds to the database number or drilling report number used by the water district, TCEQ or TWDB Commission.

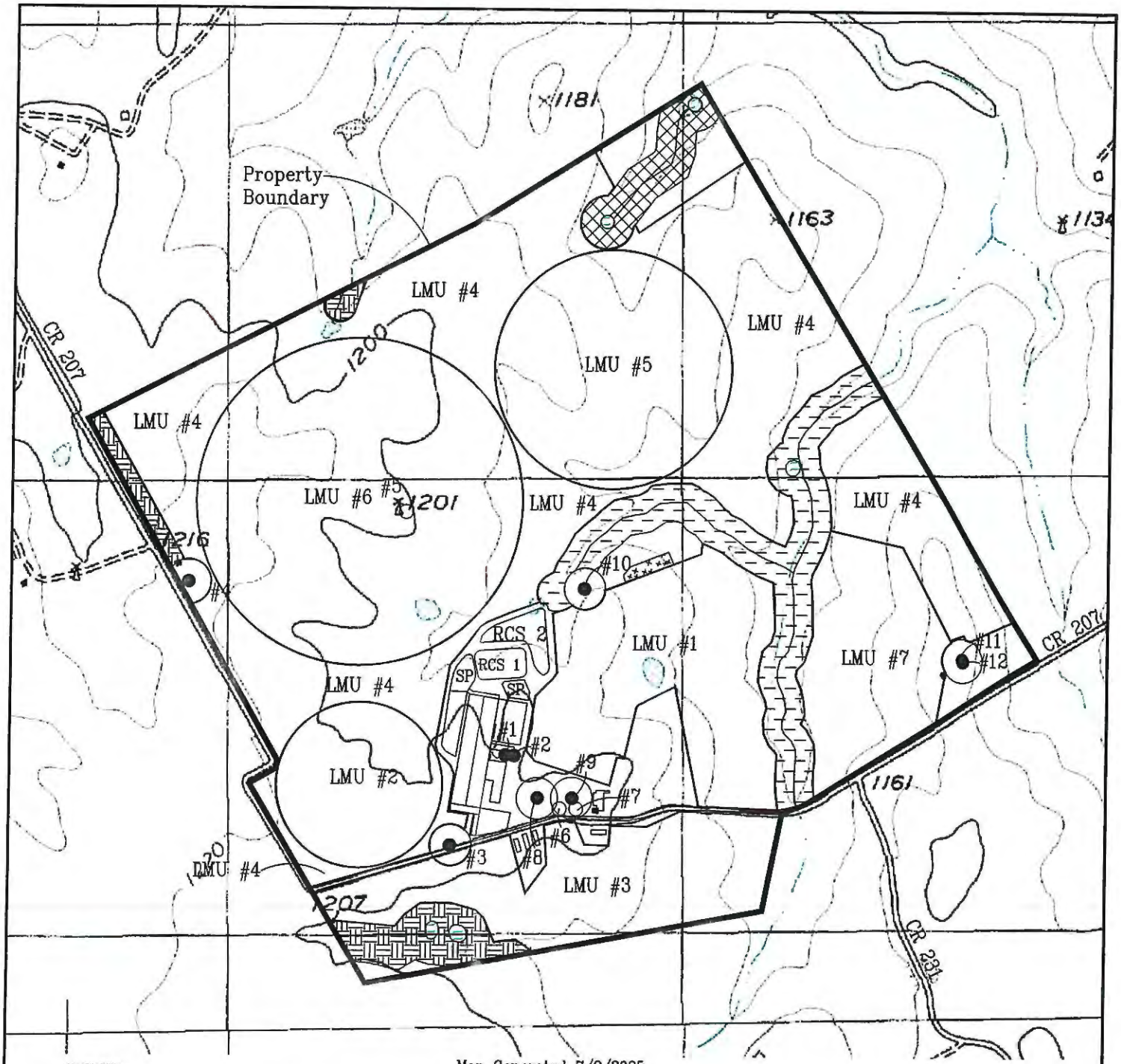
Table 5.4: Well Information

Map No.	Well ID	Best Management Practices
1	N/A	• See approved well variance.
2	N/A	• See approved well variance.
3	N/A	• Maintain 150-ft buffer
4	N/A	• Maintain 150-ft buffer
5	N/A	• See attached plugging report
6	N/A	• See attached plugging report
7	N/A	• See attached plugging report
8	478079	• Maintain 150-ft buffer
9	N/A	• Maintain 150-ft buffer
10	627628	• Maintain 150-ft buffer
11	N/A	• Maintain 150-ft buffer
12	N/A	• Maintain 150-ft buffer

Note: A copy of the well logs for onsite wells are attached.

No public water supply wells are located within 500 feet of the property boundary. All off-site wells within the required buffer distances required by this authorization are shown (on the Site Map) with their appropriate buffers. Wells outside the required buffer distances are shown for reference only.

All irrigation systems or water distribution systems into which any type of chemical or foreign substance, such as wastewater, is distributed into the water pumped from the well are required by 16 TAC §76 to install an in-line, automatic quick-closing check valve capable of preventing pollution of groundwater.



LEGEND:

- Denotes Plugged Water Well
- Denotes Well 150-ft Buffer
- Denotes Well
- Denotes 128ft Buffer
- Denotes 136ft Buffer
- Denotes 142ft Buffer
- Denotes Burial Site
- Denotes Fresh Water Pond

Map Generated 7/2/2025

N W E S

500' 0 500' 1000'

SCALED AS SHOWN

Source: USDA-NRCS. Geospatial Data Gateway. Available at: http://datagateway.nrcs.usda.gov/. Digital Raster Graphic County Mosaic by NRCS - Accessed July, 2017.

Note: Refer to Figure 1.4 for a detailed production area map.

Okee Dairy Hico, Texas Hamilton County	Recharge Feature Map Figure 5.3 Page 29	ENVIRO-AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Blvd. AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

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RUSLE2 Related Attributes

This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. The report includes the map unit symbol, the component name, and the percent of the component in the map unit. Soil property data for each map unit component include the hydrologic soil group, erosion factor Kf for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the mineral surface horizon. Missing surface data may indicate the presence of an organic layer.

Report—RUSLE2 Related Attributes

Soil properties and interpretations for erosion runoff calculations. The surface mineral horizon properties are displayed or the first mineral horizon below an organic surface horizon. Organic horizons are not displayed.

RUSLE2 Related Attributes–Hamilton County, Texas

Map symbol and soil name	Pct. of map unit	Slope length (ft)	Hydrologic group	Kf	T factor	Representative value		
						% Sand	% Silt	% Clay
BxD—Brackett-Maloterre complex, 2 to 12 percent slopes								
Brackett	55	161	D	.24	2	32.0	40.0	28.0
Maloterre	30	200	D	.28	1	31.0	39.0	30.0
KrB—Krum silty clay, cool, 1 to 5 percent slopes								
Krum, cool	85	200	C	.28	5	7.0	48.0	45.0
NuC—Nuff very stony silty clay loam, 2 to 6 percent slopes								
Nuff	85	180	C	.28	5	17.0	49.0	34.0
OgB—Oglesby gravelly silty clay, 1 to 3 percent slopes								
Oglesby	100	200	D	.28	1	7.2	47.8	45.0
PkB—Pidcoke gravelly clay loam, 1 to 3 percent slopes								
Pidcoke	85	200	D	.24	1	34.0	37.0	29.0
SsB—Slidell clay, 1 to 3 percent slopes								
Slidell	85	298	D	.17	5	22.0	28.0	50.0
ToC—Topsey clay loam, 1 to 5 percent slopes								
Topsey	85	200	C	.15	3	30.0	40.0	30.0

RUSLE2 Related Attributes–Hamilton County, Texas								
Map symbol and soil name	Pct. of map unit	Slope length (ft)	Hydrologic group	Kf	T factor	Representative value		
						% Sand	% Silt	% Clay
WsC—Wise clay loam, 3 to 5 percent slopes, moderately eroded								
Wise, moderately eroded	85	151	C	.32	3	29.0	43.0	28.0

Data Source Information

Soil Survey Area: Hamilton County, Texas
Survey Area Data: Version 21, Aug 30, 2024

Selected Soil Interpretations

This report allows the customer to produce a report showing the results of the soil interpretation(s) of his or her choice. It is useful when a standard report that displays the results of the selected interpretation(s) is not available.

When customers select this report, they are presented with a list of interpretations with results for the selected map units. The customer may select up to three interpretations to be presented in table format.

For a description of the particular interpretations and their criteria, use the "Selected Survey Area Interpretation Descriptions" report.

Report—Selected Soil Interpretations

Selected Soil Interpretations–Hamilton County, Texas							
Map symbol and soil name	Pct. of map unit	AWM - Irrigation Disposal of Wastewater		AWM - Land Application of Municipal Sewage Sludge		ENG - Sewage Lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
BxD—Brackett-Maloterre complex, 2 to 12 percent slopes							
Brackett	55	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Droughty	1.00	Droughty	1.00	Slope	0.68
		Seepage, porous bedrock	0.50			Seepage	0.50
		Too steep for surface application	0.32				
Maloterre	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Droughty	1.00	Droughty	1.00	Slope	0.08
		Slow water movement	0.68	Slow water movement	0.68		
		Seepage, porous bedrock	0.50				
KrB—Krum silty clay, cool, 1 to 5 percent slopes							
Krum, cool	85	Very limited		Very limited		Somewhat limited	
		Slow water movement	1.00	Slow water movement	1.00	Slope	0.08
		Seepage, porous bedrock	0.30				

Selected Soil Interpretations–Hamilton County, Texas							
Map symbol and soil name	Pct. of map unit	AWM - Irrigation Disposal of Wastewater		AWM - Land Application of Municipal Sewage Sludge		ENG - Sewage Lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
NuC—Nuff very stony silty clay loam, 2 to 6 percent slopes							
Nuff	85	Very limited		Very limited		Very limited	
		Large stones on the surface	1.00	Large stones on the surface	1.00	Large stones	1.00
		Slow water movement	1.00	Slow water movement	1.00	Slope	0.32
		Too steep for surface application	0.08				
OgB—Oglesby gravelly silty clay, 1 to 3 percent slopes							
Oglesby	100	Very limited		Very limited		Very limited	
		Droughty	1.00	Droughty	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Seepage	0.21
		Slow water movement	1.00	Slow water movement	1.00		
PkB—Pidcoke gravelly clay loam, 1 to 3 percent slopes							
Pidcoke	85	Very limited		Very limited		Very limited	
		Droughty	1.00	Droughty	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Seepage	0.50
		Slow water movement	0.68	Slow water movement	0.68		
		Seepage, porous bedrock	0.50				
SsB—Slidell clay, 1 to 3 percent slopes							
Slidell	85	Very limited		Very limited		Not limited	
		Slow water movement	1.00	Slow water movement	1.00		
ToC—Topsey clay loam, 1 to 5 percent slopes							
Topsey	85	Somewhat limited		Somewhat limited		Very limited	
		Droughty	0.40	Droughty	0.40	Depth to soft bedrock	1.00
		Slow water movement	0.37	Slow water movement	0.37	Seepage	0.50
		Depth to bedrock	0.29	Depth to bedrock	0.29	Slope	0.08
				Shallow to densic materials	0.29		

Selected Soil Interpretations–Hamilton County, Texas							
Map symbol and soil name	Pct. of map unit	AWM - Irrigation Disposal of Wastewater		AWM - Land Application of Municipal Sewage Sludge		ENG - Sewage Lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WsC—Wise clay loam, 3 to 5 percent slopes, moderately eroded							
Wise, moderately eroded	85	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.80	Depth to bedrock	0.80	Depth to soft bedrock	1.00
		Droughty	0.17	Shallow to densic materials	0.79	Seepage	0.50
		Too steep for surface application	0.08	Droughty	0.17	Slope	0.32

Data Source Information

Soil Survey Area: Hamilton County, Texas
Survey Area Data: Version 21, Aug 30, 2024

Physical Soil Properties

This table shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In this table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In this table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (Ksat), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at 1/3- or 1/10-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates in the table are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity (Ksat) is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In this table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The content of organic matter in a soil can be maintained by returning crop residue to the soil.

Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and Ksat. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind and/or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the "National Soil Survey Handbook."

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Reference:
United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. (http://soils.usda.gov)

Report—Physical Soil Properties

Physical Soil Properties–Hamilton County, Texas														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
BxD—Brackett-Maloterre complex, 2 to 12 percent slopes														
Brackett	0-4	20-32-45	20-40-53	27-28-35	1.25-1.40	4.00-14.00	0.11-0.16	2.1-5.4	1.0-3.0	.24	.24	2	4L	86
	4-14	20-35-45	20-40-53	20-25-35	1.40-1.46	4.00-14.00	0.08-0.16	0.5-5.1	0.5-2.0	.32	.32			
	14-60	—	—	—	—	0.42-14.00	—	—	—					
Maloterre	0-5	22-31-42	26-39-50	28-30-34	1.36-1.47	4.00-14.00	0.11-0.13	2.4-4.3	0.5-1.0	.15	.28	1	5	56
	5-80	—	—	—	—	0.42-4.00	—	—	—					
KrB—Krum silty clay, cool, 1 to 5 percent slopes														
Krum, cool	0-8	2-7-15	40-48-58	40-45-55	1.00-1.40	0.42-1.40	0.13-0.20	5.5-13.6	1.0-5.0	.28	.28	5	4	86
	8-36	2-5-33	25-45-58	40-50-60	1.15-1.45	0.42-1.40	0.12-0.18	4.8-12.5	1.0-4.0	.24	.24			
	36-48	2-5-33	25-45-58	40-50-60	1.15-1.50	0.42-1.40	0.12-0.18	4.5-10.8	0.1-2.0	.28	.28			
	48-80	2-5-33	25-48-63	35-47-60	1.30-1.55	0.42-4.00	0.07-0.18	3.1-10.2	0.1-1.0	.32	.32			

Physical Soil Properties–Hamilton County, Texas														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
NuC—Nuff very stony silty clay loam, 2 to 6 percent slopes														
Nuff	0-5	10-17- 20	40-49- 59	27-34- 40	1.28-1.39	4.00-14.00	0.08-0.11	1.6-4.7	2.0-4.0	.10	.28	5	6	48
	5-13	10-19- 20	40-45- 59	27-36- 40	1.29-1.43	1.40-4.00	0.07-0.11	1.6-4.5	1.5-2.5	.10	.32			
	13-23	1- 6- 11	40-48- 59	40-46- 59	1.41-1.44	0.42-1.40	0.11-0.16	4.7-10.3	0.5-1.0	.32	.32			
	23-33	1- 6- 11	40-48- 59	40-46- 59	1.41-1.44	0.42-1.40	0.11-0.16	4.7-10.3	0.5-1.0	.32	.32			
	33-80	21-26- 31	10-29- 39	40-45- 60	1.31-1.45	0.42-1.40	0.12-0.18	5.3-10.2	0.3-0.8	.24	.24			
OgB—Oglesby gravelly silty clay, 1 to 3 percent slopes														
Oglesby	0-17	- 7-	-48-	40-45- 50	1.25-1.45	0.42-1.40	0.10-0.15	6.0-8.9	1.0-3.0	.15	.28	1	5	56
	17-35	—	—	—	—	0.42-14.00	—	—	—					
PkB—Pidcoke gravelly clay loam, 1 to 3 percent slopes														
Pidcoke	0-11	22-34- 44	22-37- 50	28-29- 35	1.28-1.39	4.00-14.00	0.11-0.15	2.6-5.8	1.0-3.0	.17	.24	1	5	56
	11-18	5-34- 44	21-37- 60	28-29- 35	1.37-1.52	4.00-14.00	0.11-0.15	2.0-5.5	0.5-1.0	.24	.32			
	18-80	—	—	—	—	0.42-4.00	—	—	—					

Physical Soil Properties–Hamilton County, Texas														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
SsB—Slidell clay, 1 to 3 percent slopes														
Slidell	0-19	0-22- 35	20-28- 40	40-50- 60	1.10-1.45	0.01-0.42	0.10-0.18	7.0-16.0	1.0-4.0	.17	.17	5	4	86
	19-32	0-22- 35	20-28- 60	40-50- 60	1.10-1.45	0.01-0.42	0.10-0.18	6.6-17.0	1.0-3.0	.24	.24			
	32-49	0-22- 35	20-28- 60	40-50- 60	1.20-1.55	0.01-0.42	0.10-0.18	4.9-13.0	0.1-1.0	.24	.24			
	49-80	0-22- 35	20-28- 60	40-50- 60	1.20-1.55	0.01-0.42	0.10-0.18	4.9-10.8	0.1-1.0	.24	.24			
ToC—Topsey clay loam, 1 to 5 percent slopes														
Topsey	0-12	20-30- 45	24-40- 53	27-30- 35	1.32-1.50	4.00-14.00	0.12-0.20	1.1-4.5	2.0-5.0	.15	.15	3	4L	86
	12-18	10-30- 45	20-40- 65	20-30- 35	1.32-1.50	4.00-14.00	0.10-0.20	0.3-4.5	1.0-3.0	.28	.28			
	18-32	10-30- 45	20-40- 68	20-30- 40	1.50-1.65	1.40-14.00	0.10-0.20	0.3-5.4	1.0-2.0	.32	.32			
	32-80	5-15- 30	24-47- 65	30-38- 50	1.65-1.90	1.40-4.00	0.02-0.10	0.6-5.9	0.5-1.0	.32	.32			
WsC—Wise clay loam, 3 to 5 percent slopes, moderately eroded														
Wise, moderately eroded	0-5	20-29- 45	26-43- 53	27-28- 35	1.30-1.46	4.00-14.00	0.15-0.20	3.0-4.3	0.5-2.0	.32	.32	3	4L	86
	5-11	15-32- 50	15-40- 68	15-28- 35	1.41-1.46	4.00-14.00	0.15-0.24	1.3-3.8	0.5-1.0	.37	.37			
	11-26	15-32- 50	15-40- 68	15-28- 35	1.36-1.58	4.00-14.00	0.15-0.24	1.3-3.7	0.2-0.5	.43	.43			
	26-80	15-30- 80	5-50- 83	2-20- 35	1.66-1.75	1.40-14.00	0.01-0.14	0.0-4.3	0.1-0.5	.55	.55			

Data Source Information

Soil Survey Area: Hamilton County, Texas
Survey Area Data: Version 21, Aug 30, 2024

Okee Dairy - 5/2025

Texas Water Development Board

May 7, 2025

Plugging Reports

Well Reports

TWDB Groundwater

0 0.15 0.3 0.6 mi

0 0.23 0.45 0.9 km

1:18,056

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

TEXAS WATER DEVELOPMENT BOARD

June 18, 2025

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Maxar

Public GIS Viewer Legend

Well Number

Well Locations

- Permitted Location
- Dry Hole
- Oil
- Gas
- Oil / Gas
- Plugged Oil
- Plugged Gas
- Canceled / Abandoned Location
- Plugged Oil / Gas
- Injection / Disposal
- Core Test
- Sulfur Test
- Storage from Oil
- Storage from Gas
- Shut-In Oil
- Shut-In Gas
- Injection / Disposal from Oil
- Injection / Disposal from Gas
- Injection / Disposal from Oil / Gas
- Geothermal
- Brine Mining
- Water Supply
- Water Supply from Oil
- Water Supply from Gas
- Water Supply from Oil / Gas
- Observation
- Observation from Oil
- Observation from Gas
- Observation from Oil / Gas
- Storage
- Service
- Service from Oil
- Service from Gas
- Service from Oil / Gas
- Storage from Oil / Gas
- Injection / Disposal from Storage
- Injection / Disposal from Storage / Oil
- Injection / Disposal from Storage / Gas
- Injection / Disposal from Storage / Oil / Gas
- Observation from Storage
- Observation from Storage / Oil
- Observation from Storage / Gas
- Observation from Storage / Oil / Gas
- Service from Storage
- Service from Storage / Oil
- Service from Storage / Gas
- Service from Storage / Oil / Gas
- Plugged Storage
- Plugged Storage / Oil

Public GIS Viewer Legend

- Plugged Storage / Gas
- Plugged Storage Oil / Gas
- Brine Mining
- Brine Mining / Oil
- Brine Mining / Gas
- Brine Mining / Oil / Gas
- Injection / Disposal from Brine Mining
- Injection / Disposal from Brine Mining / Oil
- Injection / Disposal from Brine Mining / Gas
- Injection / Disposal from Brine Mining / Oil / Gas
- Observation from Brine Mining
- Observation from Brine Mining / Oil
- Observation from Brine Mining / Gas
- Observation from Brine Mining / Oil / Gas
- Service from Brine Mining
- Service from Brine Mining / Oil
- Service from Brine Mining / Gas
- Service from Brine Mining / Oil / Gas
- Plugged Brine Mining
- Plugged Brine Mining / Oil
- Plugged Brine Mining / Gas
- Plugged Brine Mining / Oil / Gas
- Storage / Brine Mining
- Storage / Brine Mining / Oil
- Storage / Brine Mining / Gas
- Storage / Brine Mining / Oil / Gas
- Injection / Disposal from Storage / Brine Mining
- Injection / Disposal from Storage / Brine Mining / Oil
- Injection / Disposal from Storage / Brine Mining / Gas
- Injection / Disposal from Storage / Brine Mining / Oil / Gas
- Observation from Storage / Brine Mining
- Observation from Storage / Brine Mining / Oil
- Observation from Storage / Brine Mining / Gas
- Observation from Storage / Brine Mining / Oil / Gas
- Plugged Storage / Brine Mining
- Plugged Storage / Brine Mining / Oil
- Plugged Storage / Brine Mining / Gas
- Plugged Storage / Brine Mining / Oil / Gas

Orphan Wells

Commercial Disposal

Injection/Disposal

HCTS Deeper than 15,000 ft.

Public GIS Viewer Legend

High Cost Tight Sands

EOR H13 Oil Wells

Well Logs

Horiz/Dir Surface Locations

- Horizontal Well
- Directional Well

Horizontal/Directional Lines

LPGAS Sites

QPipelines

Pipelines

Bay Tracts

Offshore Areas

Offshore Tracts

Water Lines

Subdivisions

Railroads

Surveys

Quads

Alert Areas

Water

City Limits

Counties

Operator Cleanup Program Sites

- Active
- Closed

Voluntary Cleanup Program Sites

- VCP, Accepted
- VCP, Closed

Brownfield Response Program Sites

- Brownfield, Accepted
- Brownfield, Closed

Commercial Waste Disposal Sites & Discharge Permits

- Commercial Waste Disposal
- Discharge Permits

Oil and Gas Districts

AED Districts

Pipeline Safety Regions

runoff during the design rainfall event, the manure or sludge areas must be located within the drainage area of a RCS and accounted for in the design calculations of the RCS.

(3) Manure or sludge stored for more than thirty (30) days must be stored within the drainage area of a RCS or stored in a manner (i.e. storage shed, bermed area, tarp covered area, etc.) that otherwise prevents contaminated storm water runoff from leaving the storage area. All storage sites and structures located outside the drainage area shall be designated on the site map.

(4) Temporary storage of manure or sludge shall not exceed thirty (30) days and is allowed only in a LMU or a RCS drainage area. Temporary storage of manure and sludge, near water courses or near recharge features is prohibited unless protected by berms or other structures to prevent inundation or damage that may occur.

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

7. Site Specific Conservation Practice.

(a) Well Protection Requirements

(1) The permittee shall not locate or operate a new RCS, holding pen, or LMU within the following buffer zones:

(i) public water supply wells 500 feet;

(ii) wells used exclusively for private water supply 150 feet; or

(iii) wells used exclusively for agriculture irrigation 100 feet.

(2) Irrigation of wastewater directly over a well head will require a structure protective of the wellhead that will prevent contact from irrigated wastewater.

(3) Construction of any new water wells must be done by a licensed water well driller.

(4) All abandoned and unuseable wells shall be plugged according to 16 TAC §76.104.

(5) The permittee may continue the operation and use of any existing holding pens and RCSs located within the required well buffer zones provided they are in accordance with the facility's approved recharge feature evaluation and certification. Buffer zone variance documentation must be kept on-site and made available to TCEQ personnel upon request. Well Buffer Exception requests for Wells #1 and #2 were submitted to and approved by the TCEQ Water Quality Assessment Team. Permittee shall implement the requirements of the Well Buffer Exceptions approval by TCEQ. Table 3 below shows the status of all wells on the facility and the best management practices (BMPs) used to protect them.

Table 3: Well Status and Best Management Practices

Well Number*	Status	BMPs
1	Producing	Steel sleeve, concrete surface slab
2	Producing	Steel sleeve, concrete surface slab
3	Producing	Maintain 150 ft buffer
4**	Producing	Maintain 150 ft buffer

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Email address: [illegible]

This form must be completed and filed with the department within 30 days following the plugging of the well.

PLUGGING REPORT

A. WELL IDENTIFICATION AND LOCATION DATA

1) OWNER

Name	Address	City	State	Zip
Jewel Alt	299 CR 4135	Canton	Tx	75103

2) WELL LOCATION

County	Physical Address	City	State	Zip
Hamilton	County Road 207			

3) Owner's Well No.	Long.	Lat.	Grid #

4) Type of Well ☒ Water ☐ Monitor ☐ Injection ☐ De-Watering

5) NT

Drill, Pump Installer, or Landowner performing the plugging operations must locate and identify the location of the well within a specific grid on a full scale gridded map available from Texas Natural Resource Information Service. The location of the well should be denoted within the grid by placing a corresponding dot in the square to the right. The legal description is optional.

B) HISTORICAL DATA ON WELL TO BE PLUGGED (If available)

6) Driller	License No.
Unknown	

7) Drilled	8) Diameter of hole	9) Total depth of well
Unknown	2 inches	String Wt. 45 feet. * 207

C. CURRENT PLUGGING DATA

10) Date well plugged 07 / 25 / 05

12) Name of Driller/Pump Installer or Well Owner performing the plugging

J Alt

License No.

11) REMOVE ALL REMOVEABLE CASING

Please check box beside the method of plugging used

☐ Trammie pipe cement from bottom to top.

☐ Trammie pipe bentonite from bottom to 2 feet from From surface, cement top 2 feet.

☒ Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, cement top 2 feet.

☐ Large diameter well filled with clay material from top to bottom.

13) CASING AND CONSTRUCTION DATA RELATIVE TO THE PLUGGING OPERATIONS

CASING LEFT IN WELL

DIAMETER (inches)	FROM (feet)	TO (feet)

CEMENT/BENTONITE PLUG(S) PLACED IN WELL

FROM (feet)	TO (feet)	SACKS
0-2 ft	concrete	partial
2-43	bentonite	3

D. VALIDATION OF INFORMATION INCLUDED IN FORM

I certify that I plugged this well (or the well was plugged under my supervision) and that all of the statements herein are true and correct. I understand that failure to complete items 1 through 13 will result in the report(s) being returned for completion and resubmitted.

Company or individual's Name (type or print)	Jewel Alt			
Address 299 CR 4135	City Canton	State Tx	Zip 75103	
Signature [signature]	Date 7/26/05	Signature		Date
Licensed Driller/Pump Installer		Apprentice		

TDLR FORM 1004WWD White - TDLR Yellow - Owner Pink - Driller/Pump Installer

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department within 30 days following the plugging of the well

PLUGGING REPORT

A. WELL IDENTIFICATION AND LOCATION DATA

1) OWNER

Name	Address	City	State	Zip
Jewel Alt	299 CR 4135	Canton	Tx.	75103

2) WELL LOCATION

County	Physical Address	City	State	Zip
Hamilton	County Road 207			

3) Owner's Well No.	Long.	Lat.	Grid #

4) Type of Well ☒ Water ☐ Monitor ☐ Injection ☐ De-Watering

5) NT

Drill, Pump Installer, or Landowner performing the plugging operations must locate and identify the location of the well within a specific grid on a full scale gridded map available from Texas Natural Resource Information Service. The location of the well should be denoted within the grid by placing a corresponding dot in the square to the right. The legal description is optional.

B) HISTORICAL DATA ON WELL TO BE PLUGGED (if available)

6) Driller Unknown Driller License No.

7) Drilled Unknown 8) Diameter of hole 4 inches inches 9) Total depth of well String weight at 40 feet. 207

C. CURRENT PLUGGING DATA

10) Date well plugged 07 25 '05

12) Name of Driller/Pump Installer or Well Owner performing the plugging
J Alt

License No.

13) CASING AND CEMENTING DATA RELATIVE TO THE PLUGGING OPERATIONS

CASING LEFT IN WELL

DIAMETER (inches)	FROM (feet)	TO (feet)

CEMENT/BENTONITE PLUG(S) PLACED IN WELL

FROM (feet)	TO (feet)	SACKS
0-2	feet concrete - partial sack	
2-40	feet bentonite	5

11) REMOVE ALL REMOVEABLE CASING

Please check box beside the method of plugging used

☐ Tremmie pipe cement from bottom to top.

☐ Tremmie pipe bentonite from bottom to 2 feet from From surface, cement top 2 feet.

☒ Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, cement top 2 feet.

☐ Large diameter well filled with clay material from top to bottom.

D. VALIDATION OF INFORMATION INCLUDED IN FORM

I certify that I plugged this well (or the well was plugged under my supervision) and that all of the statements herein are true and correct. I understand that failure to complete items 1 through 13 will result in the report(s) being returned for completion and resubmitted.

Company or individual's Name (type or print) Jewel Alt

Address 299 CR 4135 City Canton State Tx Zip 75103

Signature	Date	Signature	Date
Licensed Driller/Pump Installer	7/26/05	Apprentice	

TDLR FORM e004WWD White - TDLR Yellow - Owner Pink - Driller/Pump Installer

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Email address: [illegible]

This form must be completed and filed with the department within 30 days following the plugging of the well.

PLUGGING REPORT

A. WELL IDENTIFICATION AND LOCATION DATA

1) OWNER

Name	Address	City	State	Zip
Jewel Alt	299 CR 4135	Canton	Tx.	75103

2) WELL LOCATION

County	Physical Address	City	State	Zip
Hamilton	County Road 207			

3) Owner's Well No. | Long. | | Lat. | | Grid #

4) Type of Well: [X] Water [ ] Monitor [ ] Injection [ ] De-Watering

5) NT

Drill, Pump Installer, or Landowner performing the plugging operations must locate and identify the location of the well within a specific grid on a full scale gridded map available from Texas Natural Resource Information Service. The location of the well should be denoted within the grid by placing a corresponding dot in the square to the right. The legal description is optional.

DEC 07

B. HISTORICAL DATA ON WELL TO BE PLUGGED (If available)

6) Driller: Driller unknown-old windmill well | License No.

7) Drilled: unknown | 8) Diameter of hole: 4 inches/inches | 9) Total depth of well: String weight at 35 ft. feet.

C. CURRENT PLUGGING DATA

10) Date well plugged: 11 / 11 / 06

12) Name of Driller/Pump Installer or Well Owner performing the plugging: J.Alt

License No.

13) CASING LEFT IN WELL

[illegible]	FROM (feet)	TO (feet)

11) REMOVE ALL REMOVEABLE CASING

Please check box beside the method of plugging used

- [ ] Tremmie pipe cement from bottom to top.
- [ ] Tremmie pipe bentonite from bottom to 2 feet from From surface, cement top 2 feet.
- [X] Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, cement top 2 feet.
- [ ] Large diameter well filled with clay material from top to bottom.

CEMENT/BENTONITE PLUG(S) PLACED IN WELL

FROM (feet)	TO (feet)	SACKS
35	top	5

D. VALIDATION OF INFORMATION INCLUDED IN FORM

I certify that I plugged this well (or the well was plugged under my supervision) and that all of the statements herein are true and correct. I understand that failure to complete items 1 through 13 will result in the report(s) being returned for completion and resubmitted.

Company or individual's Name (type or print): Jewel Alt

Address: 299 CR 4135 | City: Canton | State: Tx | Zip: 75103

Signature of Licensed Driller or Apprentice Driller	Date	Signature of Driller-in-Training	Date
[signature]			

TDLR FORM 1005WWD White - TDLR Yellow - Owner Pink - Driller/Pump Installer

STATE OF TEXAS WELL REPORT for Tracking #478079

Owner:	**Oene Keuning**	Owner Well #:	**No Data**
Address:	**4548 CR 207** **Hico, TX 76457**	Grid #:	**41-08-9**
Well Location:	**4548 CR 207** **Hico, TX 76457**	Latitude:	**31° 52' 46.79" N**
		Longitude:	**098° 01' 52.2" W**
Well County:	**Hamilton**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Irrigation**

Drilling Start Date: **4/12/2017** Drilling End Date: **4/12/2017**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
14	0	5
12.25	5	600

Drilling Method: **Air Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
320	600	Gravel	12/20

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	320	Cement 95 Bags/Sacks

Seal Method: **Tremie**

Sealed By: **Driller**

Distance to Property Line (ft.): **150+**

Distance to Septic Field or other concentrated contamination (ft.): **150+**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **Owner**

Surface Completion: **Steel Cased** **Surface Completion by Driller**

Water Level: **440 ft.** below land surface on **2017-04-13**

Packers: **No Data**

Type of Pump: **Submersible** Pump Depth (ft.): **546**

Well Tests: **Jetted** **Yield: 100+ GPM with unknown ft. drawdown after 1 hours**

Water Quality:

Strata Depth (ft.)	Water Type
310 - 577	2nd trinity

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Associated Well Services, Inc.**

PO Box 16
Stephenville, TX 76401

Driller Name: **Russelll Langford** License Number: **56062**

Comments: **No Data**

Report Amended on 5/1/2018 by Request #24979

Report Amended on 6/5/2018 by Request #25224

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	1	Topsoil
1	10	Tan Clay Shale & Limestone
10	68	Grey Clay, Shale & Limestone
68	105	Grey Sandy Clay with Streaks of sand
105	310	Grey CLay, Shale & Limestone
310	455	Blue Sandy Clay & Sand
455	490	Red Clay
490	577	Sand, Blue Sandy Clay & Tiny Gravel
577	600	Yellow Clay & Shale

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
8.625	Blank	New Steel	0.25	0	417
8.625	Screen	New Rod Base Stainless Steel	.250 0.020	417	580
8.625	Blank	New Steel	0.25	580	600

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #627628

Owner:	**Oene Keuning**	Owner Well #:	**No Data**
Address:	**4547 CR 207** **Hico, TX 76457**	Grid #:	**41-08-9**
Well Location:	**4547 CR 207** **Hico, TX 76457**	Latitude:	**31° 53' 01.57" N**
		Longitude:	**098° 01' 47.46" W**
Well County:	**Hamilton**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **12/12/2022** Drilling End Date: **12/14/2022**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
12.25	**0**	**575**

Drilling Method: **Air Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
290	**575**	**Sand**	**12/20**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**290**	**Cement 95 Bags/Sacks**

Seal Method: **Positive Displacement**

Sealed By: **Driller**

Distance to Property Line (ft.): **50+**

Distance to Septic Field or other concentrated contamination (ft.): **100+**

Distance to Septic Tank (ft.): **50+**

Method of Verification: **Customer**

Surface Completion: **Steel Cased** **Surface Completion by Driller**

Water Level: **392 ft.** below land surface on **2022-12-14**

Packers: **No Data**

Type of Pump: **Submersible** Pump Depth (ft.): **546**

Well Tests: **Jetted** **Yield: 100+ GPM with Unk ft. drawdown after 1 hours**

Water Quality:

Strata Depth (ft.)	Water Type
360 - 553	Trinity

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Associated Well Services, Inc.**

PO Box 16
Stephenville, TX 76401

Driller Name: **Colton Aardal** License Number: **55034**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	2	Topsoil
2	15	Caliche
15	40	Limestone & Gray Shale
40	95	Sandy Blue Clay, Sand & Gray Shale
95	280	Limestone & Gray Shale
280	330	Sandy Blue Clay, Gray Shale & Sand
330	340	Red Clay & Blue Sandy Clay
340	360	Blue Sandy Clay
360	390	Blue Sandy Clay & Sand
390	430	Sand & Gravel & Sandstone
430	495	Red Clay & Blue Sandy Clay
495	553	Sand, Gravel, Sandstone & Limestone Streaks
553	575	Hard Yellow Shale & Limestone

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
8	Blank	New Steel	Sch 40	0	396
8	Screen	New Rod Base Stainless Steel	0.020	396	555
8	Blank	New Steel	Sch 40	555	575

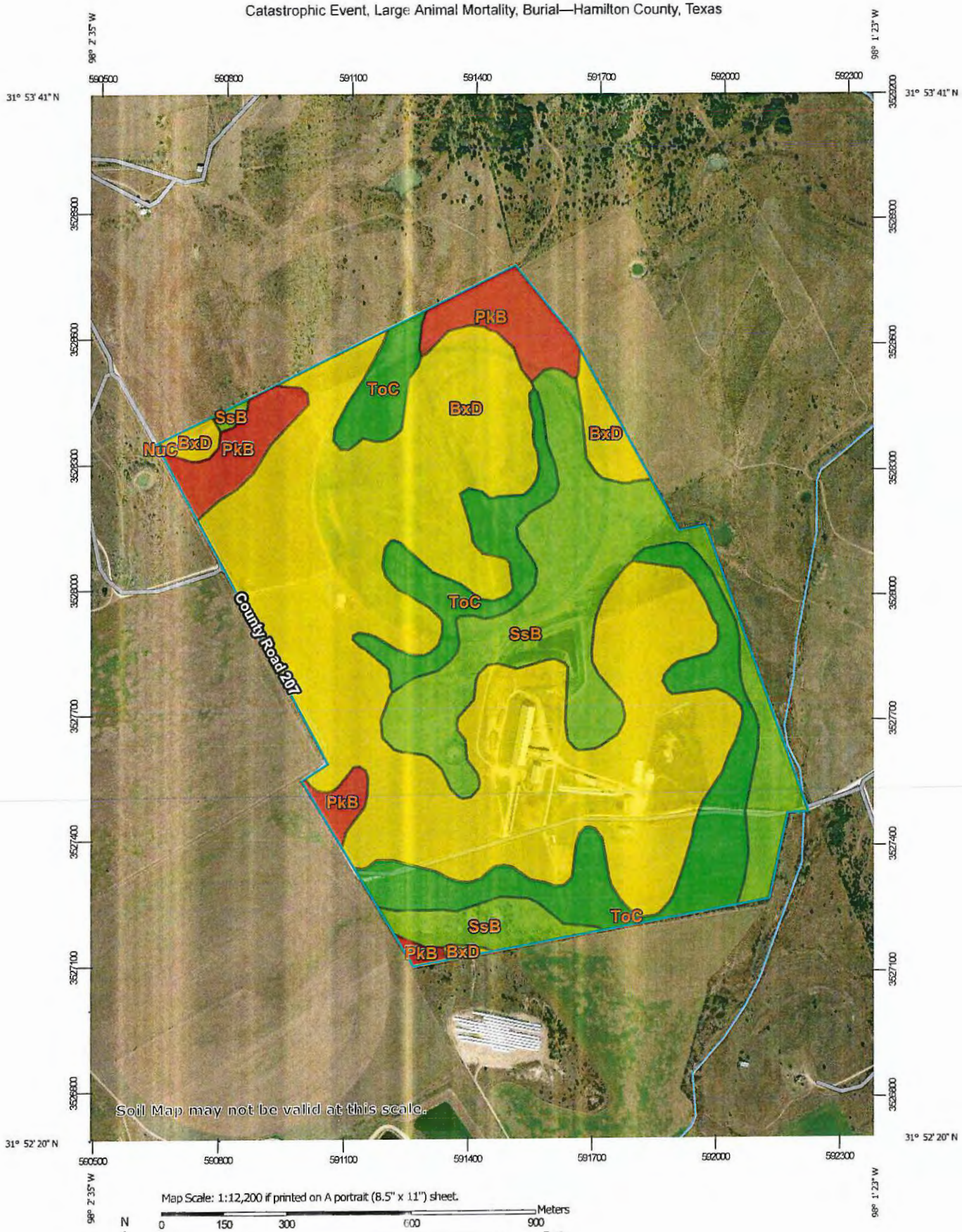
IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

Catastrophic Event, Large Animal Mortality, Burial—Hamilton County, Texas



MAP LEGEND

Area of interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Very severely limited
- Severely limited
- Somewhat limited
- Slightly limited
- Not limited
- Not rated or not available

Soil Rating Lines
- Very severely limited
- Severely limited
- Somewhat limited
- Slightly limited
- Not limited
- Not rated or not available

Soil Rating Points
- Very severely limited
- Severely limited
- Somewhat limited
- Slightly limited
- Not limited
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hamilton County, Texas
Survey Area Data: Version 17, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 26, 2016—Dec 13, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Catastrophic Event, Large Animal Mortality, Burial

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
BxD	Brackett-Maloterre complex, 2 to 12 percent slopes	Somewhat limited	Brackett (60%)	Seepage, porous bedrock (0.50) Slope (0.16)	219.5	56.3%
NuC	Nuff silty clay loam, 2 to 6 percent slopes, very stony	Not limited	Nuff (100%)		0.0	0.0%
PkB	Pidcoke gravelly clay loam, 1 to 3 percent slopes	Very severely limited	Pidcoke (100%)	Depth to bedrock (1.00) Seepage, porous bedrock (0.50)	27.0	6.9%
SsB	Slidell clay, 1 to 3 percent slopes	Slightly limited	Slidell (85%)	Water gathering surface (0.20)	78.0	20.0%
ToC	Topsey clay loam, 1 to 5 percent slopes	Not limited	Topsey (85%)		65.2	16.7%
Totals for Area of Interest					**389.8**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Somewhat limited	219.5	56.3%
Slightly limited	78.0	20.0%
Not limited	65.2	16.7%
Very severely limited	27.0	6.9%
Totals for Area of Interest	**389.8**	**100.0%**

Description

"Catastrophic Event, Large Animal Mortality, Burial", is a method of disposing of deceased animals as a result of a large scale natural disaster such as a hurricane. The animals are disposed of by placing the carcasses in successive layers in an excavated and sloped pit. The carcasses are spread, compacted, and covered daily with a thin layer of soil that is excavated from the pit. When the pit is full, a final cover of soil material at least 2 feet thick is placed over the burial pit.

Soils are rated based on their limitation for burial of large animals following a catastrophic event. Catastrophic events include, but are not limited to, hurricanes, wildfires, flooding, and tornados. Limitations for burial of large animals during a catastrophic event are based primarily on contamination of groundwater, trafficability of excavation equipment, site selection, and site reclamation.

While some general observations may be made, onsite evaluation is required before the final site is selected. Improper site selection, design, or installation may cause contamination of ground water, seepage, and contamination of stream systems from surface drainage or floodwater. Potential contamination may be reduced or eliminated by installing systems designed to overcome or reduce the effects of the limiting soil property. The rating is for soils in their present condition and does not consider present land use.

Ratings are based on properties and qualities to the depth normally observed during soil mapping (approximately 6 or 7 feet). However, because pits may be as deep as 15 feet or more, geologic investigations are needed to determine the potential for pollution of ground water as well as to determine the design needed. These investigations, which are generally arranged by the pit developer, include the examination of stratification, rock formations, and geologic conditions that might lead to the conducting of leachates to aquifers, wells, watercourses, and other water sources. The presence of hard, nonrippable bedrock, bedrock crevices, or highly permeable strata in or immediately underlying the proposed pit bottom is undesirable because of the difficulty in excavation and the potential contamination of underground water.

Properties that influence the risk of contamination of groundwater, ease of excavation, trafficability, and revegetation are major considerations. Soils that flood or have a water table within the depth of excavation present a potential contamination hazard and are difficult to excavate. Slope is an important consideration because it affects the work involved in road construction, the performance of the roads, and the control of surface water around the pit. It may also cause difficulty in constructing pits for which the pit bottom must be kept level and oriented to follow the contour.

The ease with which the pit is dug and with which a soil can be used as daily and final covers is based largely on texture and consistence of the soil. The texture and consistence of a soil determine the degree of workability of the soil both when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and difficult to place as a uniformly thick cover over

a layer of carcasses. The uppermost part of the final cover should be soil material that is favorable for the growth of plants. It should not contain excess sodium or salt and should not be too acid. In comparison with other horizons, the A horizon in most soils has the best workability and the highest content of organic matter. Thus, for a Large Animal Disposal, Burial operation it may be desirable to stockpile the surface layer for use in the final blanketing of the filled pit area.

Numerical ratings indicate the severity of the individual limitations. The ratings are shown in decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses.

Not limited (rating index equals 0) - The limitation for large animal disposal during a catastrophic event is insignificant. This soil is able to support standard excavation equipment, the soil has minimal contamination of groundwater, and soil reclamation using conventional processes is possible. Not limited soils have features that are very favorable for the specified use. Very good performance and very low maintenance can be expected of a properly designed and installed system.

Slightly limited (rating index greater than 0 but less than 0.30) - The limitation for large animal disposal during a catastrophic event is slightly limited. There are one or more soil properties that pose a slight limitation for contamination of groundwater, site reclamation, or excavation equipment. Slightly limited indicates the soil have features that are favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Good performance and low maintenance can be expected.

Somewhat limited (greater than 0.30 but less than 0.80) - The limitation for large animal disposal during a catastrophic event is somewhat limited. There are more than one soil properties that pose a limitation for contamination of groundwater, site reclamation, or excavation equipment. Any corrective measures taken to overcome these limitations are considered economical however, special care must be taken to overcome limitations. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected.

Severely limited (greater than 0.80 but less than 0.99) - The limitation for large animal disposal during a catastrophic event is severely limited. There are many soil properties that pose a limitation for contamination of groundwater, site reclamation, or excavation equipment. Additionally, corrective measures will be needed to overcome these limitations. Corrective measures taken may be costly to overcome limitations that pose a severely limited rating. Severely limited indicates that the soil has features that are unfavorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation however, it is costly to do so. Poor performance and high maintenance can be expected.

Very severely limited (rating index equals 1.0) - The limitation for large animal disposal during a catastrophic event is severely limited. There are one or more soil properties that pose a very severe limitation for contamination of groundwater, site reclamation, or excavation equipment. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Very poor performance and very high maintenance can be expected.

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Large Animal Disposal, Pit

"Large Animal Disposal, Pit," is a method of disposing of dead animals by placing the carcasses in an excavated pit. The number of livestock that can be buried is highly dependent on the space. Fourteen square feet of surface area should be allowed for an adult cow carcass. Five adult hogs or sheep can be considered equivalent to one bovine for this purpose. Multiple layers or stacking more than one animal deep should be avoided. When the pit is full, a final cover of soil material at least 3 feet thick is placed over the burial pit to prevent scavenging by other animals. The cap should be vegetated as soon as possible. Great care in site selection is needed because decomposing carcasses release material that can pollute ground water.

The interpretation is applicable to both heavily populated and sparsely populated areas. While some general observations may be made, onsite evaluation is required before the final site is selected. Improper site selection, design, or installation may cause contamination of ground water, seepage, and contamination of stream systems from surface drainage or floodwater. The risk of contamination can be reduced or eliminated by installing systems designed to eliminate or reduce the adverse effects of limiting soil properties. Ratings are for soils in their present condition. The present land use is not considered in the ratings.

Ratings are based on properties and qualities to the depth normally observed during soil mapping (approximately 6 feet). However, because pits may be as deep as 15 feet or more, geologic investigations are needed to determine the potential for pollution of ground water and to determine the design needed. These investigations, which are generally arranged by the pit developer, include the examination of stratification, rock formations, and geologic conditions that might lead to the conducting of leachates to aquifers, wells, watercourses, and other water sources. The presence of hard, nonrippable bedrock, bedrock crevices, or highly permeable strata in or immediately underlying the proposed pit bottom is undesirable because of the difficulty in excavation and the potential pollution of underground water.

Properties that influence the risk of pollution and ease of excavation are major considerations. Soils that are subject to flooding or that have a water table within the depth of excavation present a potential pollution hazard and are difficult to excavate. The leaching and seepage potential of the soil is considered. When this rate is high, transmission of fluids through the soil and underlying materials is unimpeded and leaching and seepage may become environmental, health, and performance concerns. Slope is an important consideration because it affects the work involved in road construction, the performance of the roads, and the control of surface water around the pit. It may also cause difficulty in constructing pits for which the pit bottom must be kept level and oriented to follow the contour.

The ease with which the pit is dug and with which a soil can be used as daily or final cover is based largely on texture and consistence of the soil. Large stones on the soil surface and in the soil fabric can cause excavation problems. The texture and consistence of a soil determine the degree of workability of the soil both when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and difficult to place as a uniformly thick cover over a layer of carcasses. The uppermost part of the final cover should be soil material that is favorable for the growth of plants. It should not contain excess sodium or salt and should not be too acid. In comparison with other horizons, the A horizon in most soils has the best workability and the highest content of organic matter. Thus, it may be desirable to stockpile the surface layer for use in the final blanketing of the filled pit area. Regulatory requirements for large animal disposal are provided in the Department of Homeland Security publications

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected if the system is properly designed and installed. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of the individual limitations. The ratings are shown in decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Report—Large Animal Disposal, Pit

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. The table shows only the five most limiting features for any given soil. The soil may have additional limitations.]

Large Animal Disposal, Pit–Hamilton County, Texas			
Map symbol and soil name	Pct. of map unit	Large Animal Disposal, Pit	
		Rating class and limiting features	Value
BxD—Brackett-Maloterre complex, 2 to 12 percent slopes			
Brackett	60	Somewhat limited	
		Seepage, porous bedrock	0.50
		Slope	0.16
		Clay content	0.01
Maloterre	30	Very limited	
		Depth to bedrock	1.00
		Seepage, porous bedrock	0.50
		Slope	0.16
NuC—Nuff silty clay loam, 2 to 6 percent slopes, very stony			
Nuff	100	Somewhat limited	
		Clay content	0.04
PkB—Pidcoke gravelly clay loam, 1 to 3 percent slopes			
Pidcoke	100	Very limited	
		Depth to bedrock	1.00
		Seepage, porous bedrock	0.50
		Clay content	0.01
SsB—Slidell clay, 1 to 3 percent slopes			
Slidell	85	Somewhat limited	
		Clay content	0.21
		Water gathering surface	0.20
ToC—Topsey clay loam, 1 to 5 percent slopes			
Topsey	85	Somewhat limited	
		Clay content	0.01

Data Source Information

Soil Survey Area: Hamilton County, Texas
Survey Area Data: Version 17, Jun 11, 2020

Supporting Documentation

USDA Soil Descriptions & Limitations

Texas Railroad Commission Map

Water District Well Location Map (if available)

Onsite Well Logs (if available)

Catastrophic Event, Large Animal Mortality Burial

6.0 SURFACE WATER & TMDL ASSESSMENT

6.1 Surface Water Assessment

Figure 6.1, Aerial Photograph, shows the existing land features, production area, Land Management Unit boundaries, and areas designated as "water in the state," as defined by 30 TAC §321.32(63). Buffer zones between waters in the state and LMUs will be maintained as required in 30 TAC §321.40(h) plus additional filter strips specified by NRCS Code 393, as required in 30 TAC §321.42(w)(2). Based on NRCS Code 393, Appendix 3, Table 1, and LMU slope and soil types, the buffer zones shown in the attached map will be maintained. According to NRCS, Codes 601 (applied to severely eroded areas) and 332 (applied to cropland) are not currently applicable to the LMUs at this facility. Should field conditions or cropping systems change, Codes 601 and 332 will be implemented as necessary.

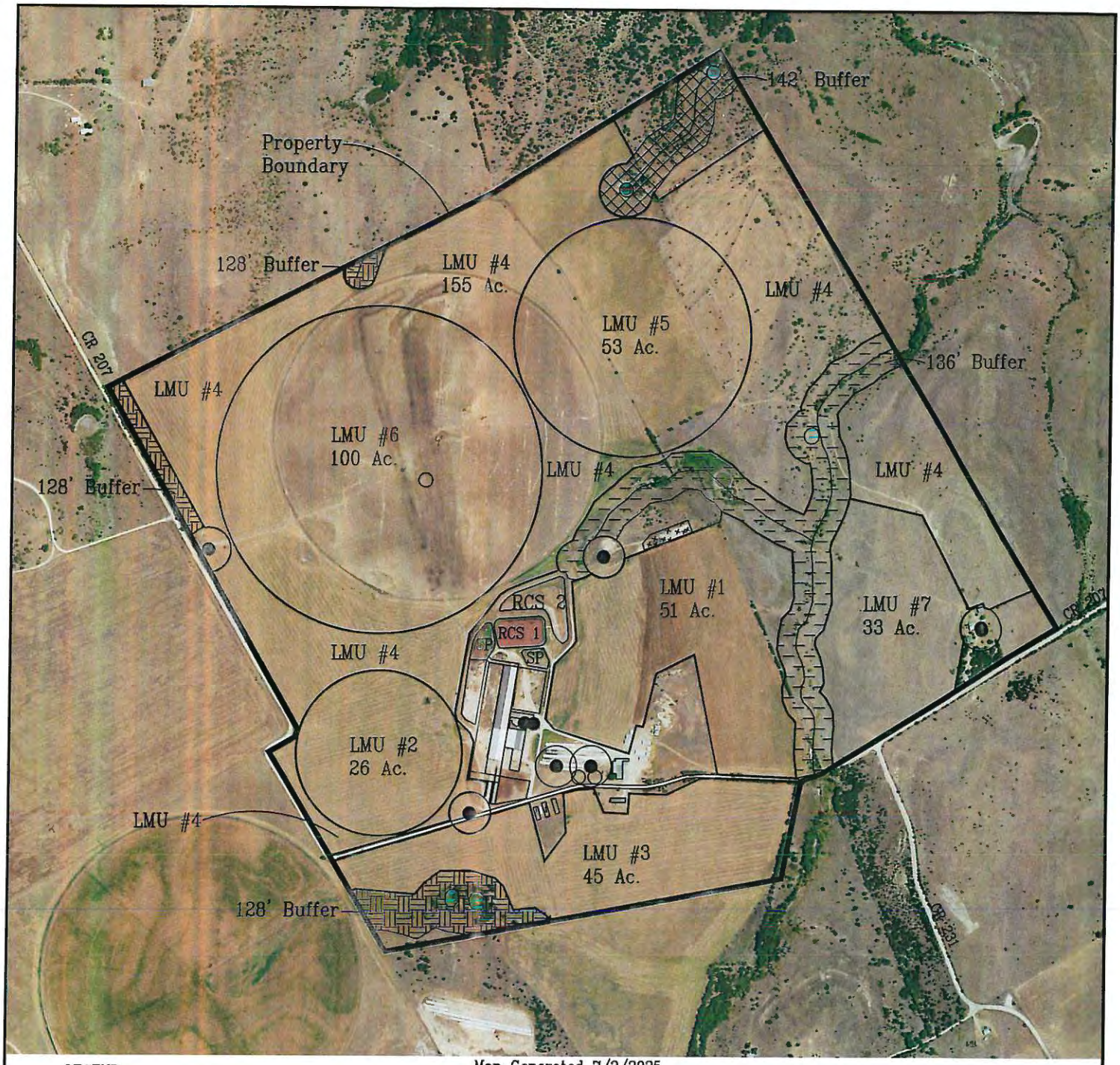
The "water in the state" designation is based on Enviro-Ag Engineering, Inc., site inspections, the permittee's knowledge of the property and the USDA-FSA aerial photograph (2025). The buffer zones and LMU boundaries in Figure 6.1 are submitted with this application for TCEQ approval.

6.2 TMDL Assessment

Okee Dairy is located in Segment 1226, North Bosque River, Brazos River Basin, which is a 303(d)-listed watershed. To demonstrate that Okee Dairy is designed and will be constructed and operated in a manner that is consistent with the Phosphorus Total Maximum Daily Load (TMDL) and Implementation Plan approved in 2001 and to address the other listed impairments for this segment, the following practices have been or will be implemented:

1. Implement a Nutrient Utilization Plan that limits P application to crop requirement and incorporates a P reduction component on fields over 200 ppm P.
2. Limit maximum P level in soils to 200 ppm.
3. Perform annual soil sampling in accordance with the provisions of 30 TAC §321.42(k)-(m) and with Texas Cooperative Extension guidelines for composite sampling.
4. Implement a certified Comprehensive Nutrient Management Plan that meets the NRCS requirements for a whole-farm Resource Management System.
5. Maintain contracts with owners of third-party fields in accordance with 30 TAC §321.42(j)(1)-(4) and with applicable requirements of 30 TAC §321.36 and §321.40.
6. Operate the facility in accordance with 30 TAC §321.42 with additional Best Management Practices as follows:
    a. Scrape freestalls and cattle lanes to reduce or eliminate the need for flushing
    b. Excluding extraneous drainage areas from the RCSs (roof areas, etc.)

c. Reduce the potential for soil erosion and downgradient sediment deposition by maintaining permanent pastures and additional filter strips adjacent to waters in the state, as described above in Section 6.1



Map Generated 7/2/2025

LEGEND:

- Denotes Plugged Water Well
- Denotes Well 150-ft Buffer
- Denotes Well
- Denotes 128ft Buffer
- Denotes 136ft Buffer
- Denotes 142ft Buffer
- Denotes Burial Site
- Denotes Fresh Water Pond

N
W E
S

500' 0 500' 1000'

SCALED AS SHOWN

Source: USDA-NRCS. Geospatial Data Gateway. Available at: http://datagateway.nrcs.usda.gov/. National Ag. Imagery Program Mosaic – Accessed April, 2025.

Note: Refer to Figure 1.4 for a detailed production area map.

Okee Dairy Hico, Texas Hamilton County	Aerial Photograph Figure 6.1 Page 33	ENVIRO-AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Blvd. AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

7.0 AIR STANDARD PERMIT REQUIREMENTS

7.1 Permit Requirements

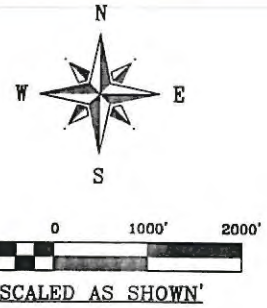
This facility was constructed prior to August 19, 1998. The facility meets the ¼-mile buffer option required in 30 TAC §321.43(j)(2) for facility expansion. The facility is designed, and will be operated, in accordance with the provisions and emissions limitations of the air standard permit in 30 TAC §321.43(j) regarding abatement of nuisance conditions, wastewater treatment, dust control and maintenance and housekeeping procedures. The facility uses an anaerobic treatment pond to minimize odors from process generated wastewater in accordance with §321.43(j)(3).

An Area Land Use Map (Figure 7.1) is attached depicting the locations of all occupied residences or business structures, schools (including associated recreational areas), churches, or public parks within 1 mile of the permanent odor sources of the facility. The map includes a north arrow, direction of prevailing wind, and scale. For the purposes of this application, the measurement of buffer distances is from the nearest edge of the permanent odor source to the occupied structure or designated recreational area identified on the Area Land Use Map (30 TAC §321.32(43)).

7.2 Odor control Plan

Per 30 TAC §321.43(j)(2)(F), the following Best Management Practices have been or will be implemented to control and reduce odors, dust and other air contaminants at Okee Dairy.

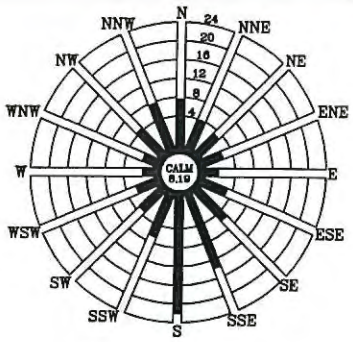
- Pen surfaces will be maintained to reduce ponding.
- The manure in the confinement pens will be removed on a regular basis (at least once annually) to prevent the manure from building up in the pens.
- Removal of manure and pond solids will be done in favorable wind conditions carrying odors away from nearby receptors. The TCEQ must be notified prior to RCS cleanout.
- Land application shall only occur from one hour after sunrise until one hour before sunset, unless written consent is obtained from current occupants of all residences within ¼-mile of the LMU boundary that receives waste or wastewater.
- Dust will be controlled on facility roads with the use of a portable water truck on an as-needed basis to minimize fugitive dust emissions.
- Dead animals will be collected within 24-hours and composted on-site or disposed by on-site burial.



Legend:
- ■ Denotes Occupied Structure
- ⊡ Denotes Applicant Owned Structure

Site Visit – June 12, 2025
Map Generated – June 16, 2025

Source: USDA–NRCS. Geospatial Data Gateway. Available at: http://datagateway.nrcs.usda.gov/. National Ag. Imagery Program Mosaic–Accessed Nov., 2017.



ANNUAL WIND ROSE
LOCATION: STEPHENVILLE, TEXAS
PERIOD OF RECORD: 1984 – 1992
SOURCE: TCEQ WINDROSE DATA

Note:
Hatched area represents permanent odor sources. These include, but are not limited to, pens, confinement buildings, lagoons, RCSs, manure stockpile areas, separators. Permanent odor sources do not include any feed handling facilities, land application equipment or fields.

Okee Dairy Hico, Texas Hamilton County	Area Land Use Map Figure 7.1 Page 35	ENVIRO–AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Blvd. AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132