

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: 4P Pastures, LLC and Horizon Dairy, LLC
- 2) Enter <u>Customer Number</u>: CN606034338; CN605539436
- 3) Name of facility: Horizon Dairy
- 4) Enter Regulated Entity Number: RN102334661
- 5) Provide your permit Number: WQ0004842000
- 6) Facility Business: The facility confines 5,900 head of cattle in which 4,700 are milking. The facility has twenty-three (23) land management units (LMUs) with the following acreages: LMU #1 102, LMU #1A 36, LMU #2 178, LMU #2A 73, LMU #3 180, LMU #3A 105, LMU #4 58, LMU #5 42, LMU #6 65, LMU #7 65, LMU #8 84, LMU #9 20, LMU #10 120, LMU #11 22, LMU #13 90, LMU#14 77, LMU #15 58, LMU #16 85, LMU #17 85, LMU #18 113, LMU #20 120, LMU #21 24 and LMU #23 90 acres. Four (4) retention control structures (RCSs), one slurry storage pit and four settling basins with concrete bottoms and earthen sidewalls and an anerobic digester and associated equipment. The required capacities are: Digester Operational RCS #1 12.42 ac-ft, RCS #2A 50.79 ac-ft, RCS #2B 116.39 ac-ft and RCS #3 14.19 ac-ft. Digester on Bypass RCS #1 10.61 ac-ft, RCS #2A 7.42 ac-ft, RCS #2B 109.05 ac-ft and RCS #3 14.19. There are twenty-four (24) onsite wells of which six (6) are plugged. The facility is located in the Leon River Below Proctor Lake and the North Bosque River in Segment Nos. 1221 and 1226 of the Brazos River Basin.
- 7) Facility Location: The facility is located on the north side of FM 219 approximately 3.5 miles east of the intersection of US Hwy 281 and FM 219; said intersection is approximately 12 miles north of Hamilton in Hamilton County, Texas
- 8) Application Type: Individual Permit Major Amendment
- 9) Description of your request: Phase 1 is to increase headcount from 5,900 total and 4,700 milking to 10,000 total and 7,500 milking, addition of Parlor A, addition of a X vent Barn, addition of 4 freestall barns, reconfigure LMUs #2 (now #2B & #2C), #2A, #3 (now #3B & #3C), #3A, #4 & #5, addition of LMUs #Mayhugh 1, #Mayhugh 2, #Watson 1 and #Watson 2, total LMU acres increased from 1,892 to 2,326, LMUs #2C, #3A, #3B, #4, #20 and #23 are in the Leon Watershed and General Permit soil sampling rules apply, remove the anerobic digester and associated equipment, reconfigure Drainage Area #1 to divert to the Leon Watershed, addition of Slurry Storage Pit #2 and the addition of Wells #M1 and #W1. Phase 2 is to include the addition of an anerobic digester and associated equipment, addition of RCS #2C and decrease acres in LMU #15.
- 10)Potential pollutant sources at the facility include (list the pollutant sources):
 Manure, manure stockpiles, wastewater, sludge, slurry, compost, burial pit, 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, compost on-site or on-site burial. 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.



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

PERMIT NO. WQ0004842000

APPLICATION. 4P Pastures, L.L.C. and Horizon Dairy, L.L.C., 4483 East Farm-to-Market Road 219, Hico, Texas 76457, have applied to the Texas Commission on Environmental Quality (TCEO) to amend Wastewater Permit No. WO0004842000 (EPA I.D. No. TX0121878) for a Concentrated Animal Feeding Operation (CAFO) to authorize the following amendments in two phases: Phase 1 will include an increase to the headcount from 5,900 total and 4,700 milking to 10,000 total and 7,500 milking; the addition of Parlor A; the addition of an X Vent Barn; the addition of 4 freestall barns; the reconfiguration of LMUs #2 (now #2B & #2C), #2A, #3 (now #3B & #3C), #3A, #4 and #5; the addition of LMUs #Mayhugh 1, #Mayhugh 2, #Watson 1 and #Watson 2; the increase of total LMU acres from 1,892 to 2,326; LMUs #2C, #3A, #3B, #4, #20 and #23 are in the Leon Watershed and General Permit soil sampling rules apply; the removal of the anerobic digester and associated equipment; to reconfigure Drainage Area #1 to divert to the Leon Watershed; the addition of Slurry Storage Pit #2; and the addition of Wells #M1 and #W1; Phase 2 will include the addition of an anaerobic digester and associated equipment; the addition of RCS #2C; and a decrease in acreage of LMU #15. The facility is located at 4483 East Farm-to-Market Road 219, near the city of Hico, in Hamilton County, Texas 76457. TCEQ received this application on September 3, 2025. The permit application will be available for viewing and copying at Texas Agri Life Extension Office, 101 East Henry Street, Hamilton, in Hamilton County, 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=-98.041388,31.868611&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 countywide 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 4P Pastures, L.L.C. and Horizon Dairy, L.L.C. at the address stated above or by calling Mr. David DeJong at 254-918-3156.

Issuance Date: September 23, 2025

Leah Whallon

From: Jourdan Mullin <jmullin@enviroag.com>
Sent: Monday, September 15, 2025 1:04 PM

To: Leah Whallon; Corey Mullin

Subject: RE: Application to Amend Permit No. WQ0004842000; Horizon Dairy

Attachments: ADJACENT LANDOWNER LABELS - 1.docx; ADJACENT LANDOWNER LABELS - 2.docx

Follow Up Flag: Follow up Flag Status: Flagged

Good Monday Afternoon Leah,

Attached are the adjacent landowner labels formatted for mailing labels (Avery 5160) in a Word document. The NORI has been reviewed, and everything is 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: Leah Whallon < Leah. Whallon@Tceq.Texas.Gov>

Sent: Friday, September 12, 2025 2:42 PM **To:** Corey Mullin <cmullin@enviroag.com> **Cc:** Jourdan Mullin <jmullin@enviroag.com>

Subject: Application to Amend Permit No. WQ0004842000; Horizon Dairy

CAUTION: This email originated from outside of Enviro-Ag Engineering. Do not click links or open attachments unless you have verified the sender and know the content is safe.

Good Afternoon,

Please see the attached Notice of Deficiency letter dated September 12, 2025, requesting additional information needed to declare the application administratively complete. Please send the complete response by September 26, 2025.

Please let me know if you have any questions.

Thank you,



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

Disclaimer

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CURTIS W WUEMNLING 475 CR 242 HICO TX 76457 DOMINGO CONDE 380 PR 4906 HASLET TX 76052 DWAIN GRAY PO BOX 1537 CELINA TX 75009

HEATH WILLIAMS CASEY TRUSTEE; CRAWFORD RANCH INTER VIVOS 563 CR 130 STEPHENVILLE TX 76401 BILLY & BARBARA BALEY 2515 CR 239 HICO TX 76457 NATHAN HUGGINS 370 CR 3214 HICO TX 76457

KENNETH M & MARGART A DOLSON 2830 CR 207 HICO TX 76457 LAKE M DAVIS PO BOX 466 HICO TX 76457 OENE KUENING 4745 CR 207 HICO TX 76457

DAVID & ANGELA SHELTON 322 GEORGIAN OAK CR LAKE DALLAS TX 76065 GARY & JANA CRABTREE PO BOX 690 GLEN ROSE TX 76043 THE MORNING STAR FAMILY, LP 3628 BEVERLY DRIVE DALLAS TX 75025

JAMES V JR. & KAREN K FELPS 2144 CR 3231 HICO TX 76457 ALBERT L. SHARP 3617 PARK RIDGE FORT WOTH TX 76109 ZZZ FARMS, LLC 2008 SOUTH 57TH STREET TEMPLE TX 76504

BEJAMIN RHODES 2726 WHISPERING TRAIL CIRCLE PANTEGO TX 76013 LONG POINT CATTLE CO. C/O THOMAS SMITH 2110 WARNER RD FORT WORTH TX 76110 WOMAN'S COUNCIL OF HAMILTON COUNTY PO BOX 292 HAMILTON TX 76531

LLOYD J & BETTYE G HUGGINS 370 CR 214 HICO TX 76457 WILLIAM J RICHEY 5020 E FM 219 HICO TX 76457 ROGER D WUEMLING 2606 CR 535 HICO TX 76457

O & B FARMS PO BOX 227 HAMILTON TX 76531 LARRY FRISCH 860 CR 3213 HICO TX 76457 MELODY & CURTIS HALEY 8219 E FM 219 HICO TX 76457

MARISOL HUDSON C/O JACK HUDSON 600 DENNIS CT MERCED, CA 95340 REICH ACRES, LLC 200 TANGLEWOOD DR STEPHENVILLE TX 76401 SEDRAK PARTNERS, LTD
AMIR & ADIA IBRAHIM
3610 GARDENIA
DALWORTHINGTON TX 76016

JAMES HARRISON 3905 MOCKINGBIRD LANE TEMPLE TX 76502 NEEDHAM FARM BOBBY & ANDY NEEDHAM 915 CHESTNUT ST HICO TX 76457 JACKIE & CARLA MONK PO BOX 36 CARLTON TX 76436 TOM & ASHLEIGH COLE PO BOX 128 CARLTON TX 76436 CEBORN CONSTRUCTION CO INC PO BOX 15694 BATON ROUGE LA 70895 PATRICK & BARBARA BRYSON 1756 FM 1744 CARLTON TX 76436

CHARLES UPCHURCH PO BOX 64 CARLTON TX 76436 JM & VICKI TAYLOR 763 CR 127 CARLTON TX 76436

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

Horizon Dairy

Major Amendment

Prepared For:

4P Pastures, LLC 4483 East Farm-to-Market Road 219 Hico, Texas 76457

August 21, 2025

Prepared By:





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.



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?
oxtimes 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.



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: <u>781707 & 781708</u>

Copy of Payment Voucher enclosed? Yes \boxtimes

SECTION 2. TYPE OF APPLICATION

A.	Coverage:	State Only □	TPDES ⊠
В.	Media Type:	Water Quality □	Air and Water Quality $\ oxtimes$
C.	Application 7	Type: New □	Major Amendment $\ oxtimes$
		Renewal □	Minor Amendment □

D. For amendments, describe the proposed changes: 4P Pastures, LLC is submitting a major amendment application in two phases in order to maintain compliance throughout the transition. Phase 1 will included the increase headcount from 5,900 total and 4,700 milking to 10,000 total and 7,500 milking, addition of Parlor A, addition of a X Vent Barn, addition of 4 freestall barns, reconfigure LMUs #2 (now #2B & #2C), #2A, #3 (now #3B & #3C), #3A, #4 & #5, addition of LMUs #Mayhugh 1, #Mayhugh 2, #Watson 1 and #Watson 2, total LMU acres increased from 1,892 to 2,326, LMUs #2C, #3A, #3B, #4, #20 and #23 are in the Leon Watershed and General Permit soil sampling rules apply, remove the anerobic digester and associated equipment, reconfigure Drainage Area #1 to divert to the Leon Watershed, addition of Slurry Storage Pit #2 and addition of Wells #M1 and #W1. Phase 2 will include the addition of an anaerobic digester and associated equipment, addition of RCS #2C and

Questions or Comments >>

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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: 781707

Trace Number: 582EA000683369

Date: 09/02/2025 09:54 AM

Payment Method: CC - Authorization 000002437G

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: HORIZON DAIRY

Site Location: 4483 FM 219 HICO TX 76457

Customer Information

Customer Name: 4P PASTURES LLC

Customer Address: 4483 EAST FM 219, HICO, TX 76457

Other Information -

Program Area ID: 4842

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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: 781708

Trace Number: 582EA000683369

Date: 09/02/2025 09:54 AM

Payment Method: CC - Authorization 000002437G

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

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decrease acres in LMU #15.

E. For existing permits:

What is the permit number? <u>WQ0004842000</u>

What is the EPA I.D. Number? TX 0121878

SECTION 3. FACILITY OWNER (APPLICANT) INFORMATION

Α.	What is	the leg	al name	of the	facility	owner?

4P Pastures, LLC

- **B.** If the applicant is an existing TCEQ customer, provide the Customer Number (CN) issued to this entity? CN 606034338
- **C.** What is the contact information for the owner?

Mailing Address: 4483 FM 219

City, State and Zip Code: Hico, TX 76457

Phone Number: 254/918-3156 Fax Number: n/a

E-mail Address: david@horizondairy.farm

D.	Indicate the type	pe of customer:				
	Individual				Federal Governr	nent
	Limited Partne	ership			County Governm	nent
	General Partn	ership			State Governme	ent
	Trust				City Governmen	nt
	Sole Proprieto	orship (D.B.A.)			Other Governme	ent
\boxtimes	Corporation				Other, specify:	
	Estate					
	If the customer type is individual, complete Attachment 1. Is this customer an independent entity?					
	⊠ Yes	□ No gov	ernment, subsidi	ary,	or part of a large	r corporation
G.	Number of emp ⊠ 0-20	ployees: □ 21-100	□ 101-250		□ 251-500	□ 501 or higher
H.	For Corporations and Limited Partnerships:					
	What is the Tax	x Identification	Number issued b	y th	e State Comptrol	ler: 32083742083

SECTION 4. CO-APPLICANT INFORMATION

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

What is the Charter Filing Number issued by the Texas Secretary of State: 0804500516

A.	What is the legal name of the co-applicant?					
	Horizon Dairy, LLC					
В.	If the applicant is an existing TCEQ customer, provide the Customer Number (CN) issued to this entity? CN $\underline{605539436}$					
C.	What is the contact information for the co-a	pplican	t?			
	Mailing Address: 4483 FM 219					
	City, State and Zip Code: Hico, TX 76457					
	Phone Number: <u>254/918-3156</u> Fax Number:	<u>n/a</u>				
	E-mail Address: david@horizondairy.farm					
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:	nent nt t nt		
Ε.	If the customer type is individual, complete	Attachi	nent 1.			
	Is this customer an independent entity?					
		diarv. or	part of a larger c	orporation		
G.	Number of employees:	,,		1		
	- ·	50	□ 251-500	\square 501 or higher		
н.	For Corporations and Limited Partnerships: What is the Tax Identification Number issued by the State Comptroller: 32065098900 What is the Charter Filing Number issued by the Texas Secretary of State: 0802835521					
SE	ECTION 5. APPLICATION CONTACT INFORMATION					
	nis is the person TCEQ will contact if additional information is needed about this oplication.					
	Prefix (Mr., Ms., Miss): Mr.					
	Application Contact First and Last Name: <u>Corey Mullin</u>					
	Title: Consultant Credentials:					
	Company Name: Enviro-Ag Engineering, Inc.					
	Mailing Address: 9855 FM 847					
	City, State and Zip Code: <u>Dublin, TX 76446</u>					

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: n/a

Company Name: Enviro-Ag Engineering, Inc.

Mailing Address: 9855 FM 847

City, State and Zip Code: <u>Dublin, TX 76446</u>

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: Daivd DeJong

Title: Member

Credentials:

Company Name: 4P Pastures, LLC

Mailing Address: 4483 FM 219

City, State and Zip Code: Hico, TX 76457

Phone Number: 254/918-3156 Fax Number: n/a E-mail Address: david@horizondairy.farm

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, 4P Pastures, LLC

 \square No, complete this section

Prefix (Mr., Ms., Miss):

First and Last Name:

Title: The hope to be a lower

Credentials:

Mailing Address:

City, State and Zip Code: Like State of the Code:

Phone Number: E-mail

Address: Clieb hard to come may

SECTION 8. LANDOWNER INFORMATION

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

Landowner Name: <u>4P Pastures, LLC</u>

B. Landowner of the land management units (LMUs)

Landowner Name: 4P Pastures, LLC, David and Leslie DeJong, William & Sydney Rienstra and

Victor & Rosa Aguilar

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:

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:

imullin@enviroag.com

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

☐ Fax Number:

□ Regular Mail:

Mailing Address: 9855 FM 847

City, State and Zip Code: <u>Dublin, TX 76446</u>

C. Contact person to be listed in the notice

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

First and Last Name: David Delong

Company Name: <u>4P Pastures, LLC</u> Phone Number: 254/918-3156

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: Texas Agri, Life Extension Office Physical Address of Building: <u>101 E. Henry</u> City: Hamilton County: Hamilton 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. 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?
- 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: Horizon Dairy
- B. If this is an existing permitted site, provide the Regulated Entity Number (RN) issued to this site? RN 102334661

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: 4P Pastures, LLC and Horizon Dairy, LLC
- 2) Enter <u>Customer Number</u>: CN606034338; CN605539436
- 3) Name of facility: Horizon Dairy
- 4) Enter Regulated Entity Number: RN102334661
- 5) Provide your permit Number: WQ0004842000
- 6) Facility Business: The facility confines 5,900 head of cattle in which 4,700 are milking. The facility has twenty-three (23) land management units (LMUs) with the following acreages: LMU #1 102, LMU #1A 36, LMU #2 178, LMU #2A 73, LMU #3 180, LMU #3A 105, LMU #4 58, LMU #5 42, LMU #6 65, LMU #7 65, LMU #8 84, LMU #9 20, LMU #10 120, LMU #11 22, LMU #13 90, LMU#14 77, LMU #15 58, LMU #16 85, LMU #17 85, LMU #18 113, LMU #20 120, LMU #21 24 and LMU #23 90 acres. Four (4) retention control structures (RCSs), one slurry storage pit and four settling basins with concrete bottoms and earthen sidewalls and an anerobic digester and associated equipment. The required capacities are: Digester Operational RCS #1 12.42 ac-ft, RCS #2A 50.79 ac-ft, RCS #2B 116.39 ac-ft and RCS #3 14.19 ac-ft. Digester on Bypass RCS #1 10.61 ac-ft, RCS #2A 7.42 ac-ft, RCS #2B 109.05 ac-ft and RCS #3 14.19. There are twenty-four (24) onsite wells of which six (6) are plugged. The facility is located in the Leon River Below Proctor Lake and the North Bosque River in Segment Nos. 1221 and 1226 of the Brazos River Basin.
- 7) Facility Location: The facility is located on the north side of FM 219 approximately 3.5 miles east of the intersection of US Hwy 281 and FM 219; said intersection is approximately 12 miles north of Hamilton in Hamilton County, Texas
- 8) Application Type: Individual Permit Major Amendment
- 9) Description of your request: Phase 1 is to increase headcount from 5,900 total and 4,700 milking to 10,000 total and 7,500 milking, addition of Parlor A, addition of a X vent Barn, addition of 4 freestall barns, reconfigure LMUs #2 (now #2B & #2C), #2A, #3 (now #3B & #3C), #3A, #4 & #5, addition of LMUs #Mayhugh 1, #Mayhugh 2, #Watson 1 and #Watson 2, total LMU acres increased from 1,892 to 2,326, LMUs #2C, #3A, #3B, #4, #20 and #23 are in the Leon Watershed and General Permit soil sampling rules apply, remove the anerobic digester and associated equipment, reconfigure Drainage Area #1 to divert to the Leon Watershed, addition of Slurry Storage Pit #2 and the addition of Wells #M1 and #W1. Phase 2 is to include the addition of an anerobic digester and associated equipment, addition of RCS #2C and decrease acres in LMU #15.
- 10)Potential pollutant sources at the facility include (list the pollutant sources):
 Manure, manure stockpiles, wastewater, sludge, slurry, compost, burial pit, 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, compost on-site or on-site burial. 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.



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 bow 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.					

TCEQ-20960 (02-09-2023)

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
X Texas Pollutant Discharge Elimination System (TPDES)
Texas Land Application Permit (TLAP)
XState 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
Horizon 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 X 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 America= 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 X 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 X No
What types of notice will be provided?
Publish in alternative language newspaper
Posted on Commissioner's Integrated Database Website
Mailed by TCEQ's Office of the Chief Clerk
Other (specify)

C.	Site Address/Location:				
	If the site has a physical address such as $12100 \text{Park} 35 \text{Circle}$, Austin, TX 78753, complete Item 1.				
	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: <u>4483 E FM 219</u>				
	City, State and Zip Code: Hico, TX 76457				
	Item 2: Site Location Description:				
	Location description:				
	City where the site is located or, if not in a city, what is the nearest city:				
	Zip Code where the site is located:				
D.	County or counties if more than 1: <u>Hamilton</u>				
E.	Latitude: <u>31 52' 09.75"N</u> Longitude: <u>98 02' 25.40"W</u>				
F. Ammal Type:					
	☑ Dairy-0241 ☐ Sheep/Goats-0214 ☐ Beef Cattle- 0211 ☐ Auction-5154 ☐ Swine-0213 ☐ Other, specify: ☐ Broiler-0251 ☐ Laying Hens-0252				
G.	Existing Maximum Number of Animals: 5,900 Total; 4,700 Milking				
	Proposed Maximum Number of Animals: 10,000 Total; 7,500 Milking				
Н.	What is the total LMU acreage? Phase 1 - 2,326; Phase 2 - 2,315				
SE	CTION 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 \square No \boxtimes If yes, provide the name(s) of the former TCEQ employee(s):				
В.	Is the facility located on Indian Country Lands? Yes \square No \boxtimes 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 \square No \boxtimes				
D.	Is any permanent school fund land affected by this application? Yes \square No \boxtimes				

If yes, provide the location and foreseeable impacts and effects this application has on the land(s).

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.

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
 - \square 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)

- 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: WQ0004842000

Signatory Name: David DeJong

Applicant: 4P Pastures, LLC

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.

Signature: Date: B/20/25

SUBSCRIBED AND SWORN to before me by the said Davi DeSarg on this Zoth day of Agost , 20 Z5

My commission expires on the Zoth day of October 21, 2028

Notary Public County, Texas

- 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: <u>WQ0004842000</u> Applicant: <u>Horizon Dairy, LLC</u>

Signatory Name: David De Jong

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.

SUBSCRIBED AND SWORN to before me by the said Pan Dong on this Zoth day of Jober 21 day of Jober 22 2028

My commission expires on the Zoth day of Jober 22 2028

Notary Public County, Texas

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: 4P Pastures, LLC and Horizon Dairy, LLC
- 2. Permit Number: <u>WQ0004842000</u> EPA ID Number: <u>TX0121878</u>
- 3. Address of the project (location description that includes street/highway, city/vicinity, and county). The facility is located on the North side of FM 219 approximately 3.5 miles East of the intersection of US Hwy 281 and FM 219; said intersection is approximately 12 miles North of Hamilton 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: <u>Dublin, TX 76446</u>

Phone Number: <u>254/965-3500</u> Fax Number: <u>254/</u>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. <u>Leon River Below Proctor Lake and the North Bosque River in Segment Nos. 1221 and 1226 of the Brazos River Basin</u>
- 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,

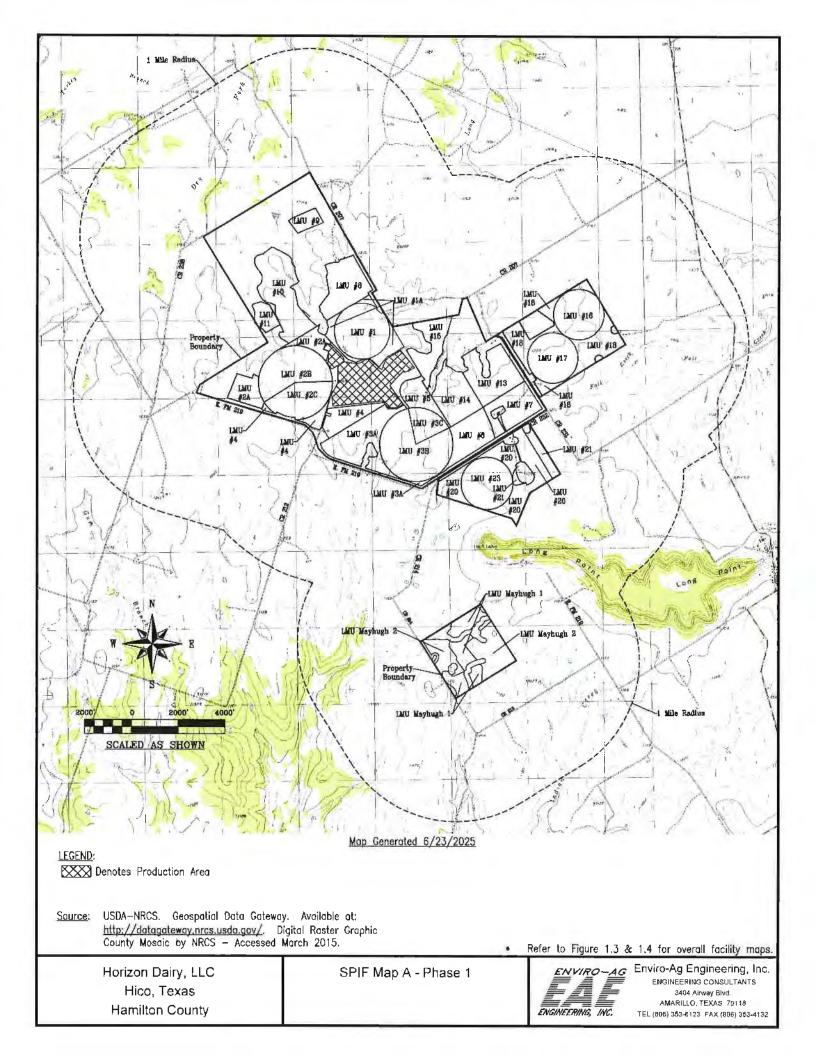
- sealing of caves or other karst features): <u>Construction of an anaerobic digester, parlor and barns</u>. Approximately 1 surface acre and 20 feet deep.
- 12. Describe existing disturbances, vegetation & land use (plowing, other ground disturbances): The land management units (LMUs) at the facility are planted in hybrid Bermuda grass over seeded with small grains in the winter, corn and sorghum. Normal expected farming practices to maintain crops are utilized.

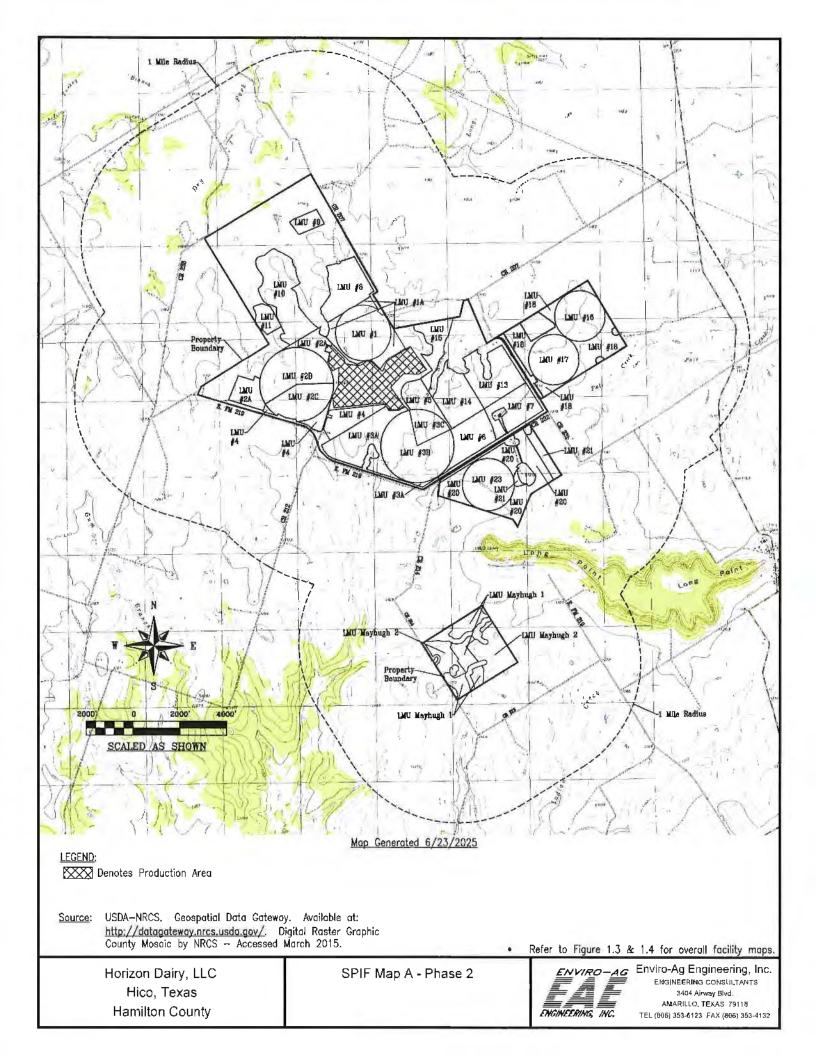
The following applies to New TPDES and Major Amendment to TPDES Permits:

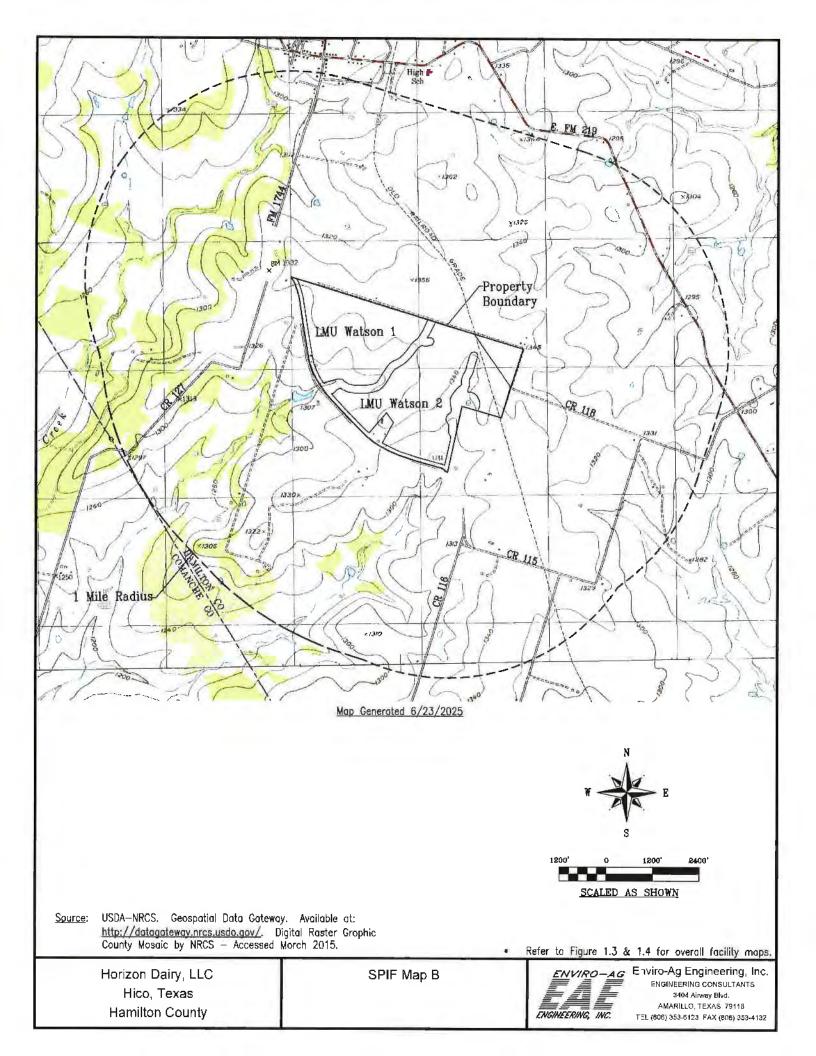
- 13. List construction dates of any buildings or structures on the property: <u>The original facility</u> was built in 1994. Then expanded in 1997 and 2002.
- 14. Provide a brief history of the property, and name of the architect/builder, if known: The facility was built by Mike Hancock of West Texas Dairy Construction.

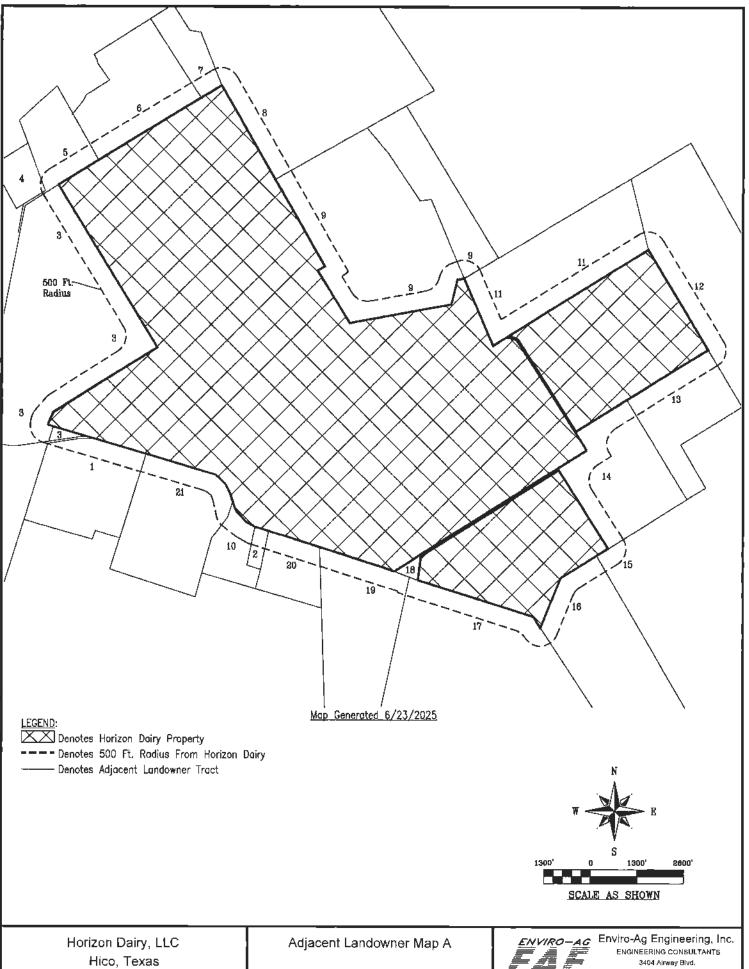
The following applies to New, Amended and Renewal TPDES applications:

- 15. List each Retention Control Structure and its required capacity (Acre Feet). Phase 1 RCS #1 16.93 ac-ft, RCS #2A-B 114.08 ac-ft and RCS #3 14.30 ac-ft. Phase 2 RCS #2B 91.74 ac-ft, RCS #2C 153.04 and RCS #3 14.30 ac-ft. Phase 2 Bypass RCS #2B 16.93 ac-ft, RCS #2C 125.90 and RCS #3 14.30
- 16. Provide the location and number of acres where wastewater and manure are land applied: The applicant has 2,326 (Phase 1) and 2,315 (Phase 2) onsite acres for waste and wastewater application. See attached Figures 1.3A1-2, B & C for exact locations of LMUs.
- 17. List the maximum number of head to be permitted. 10,000





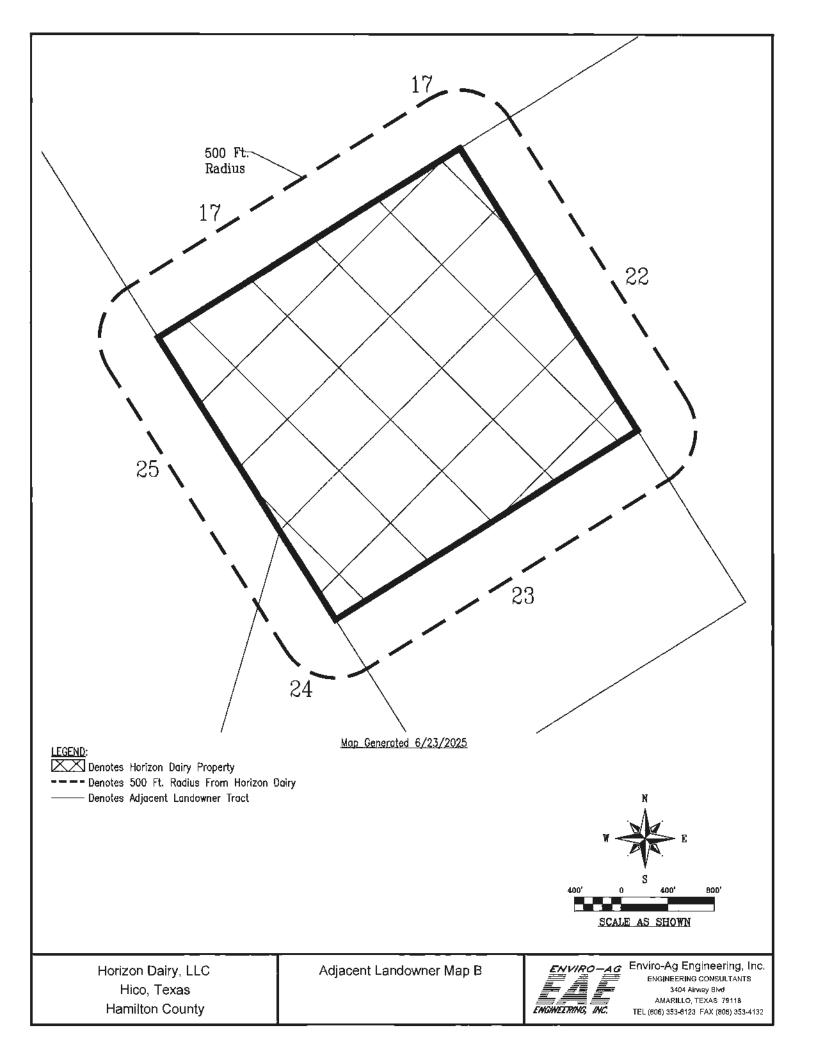


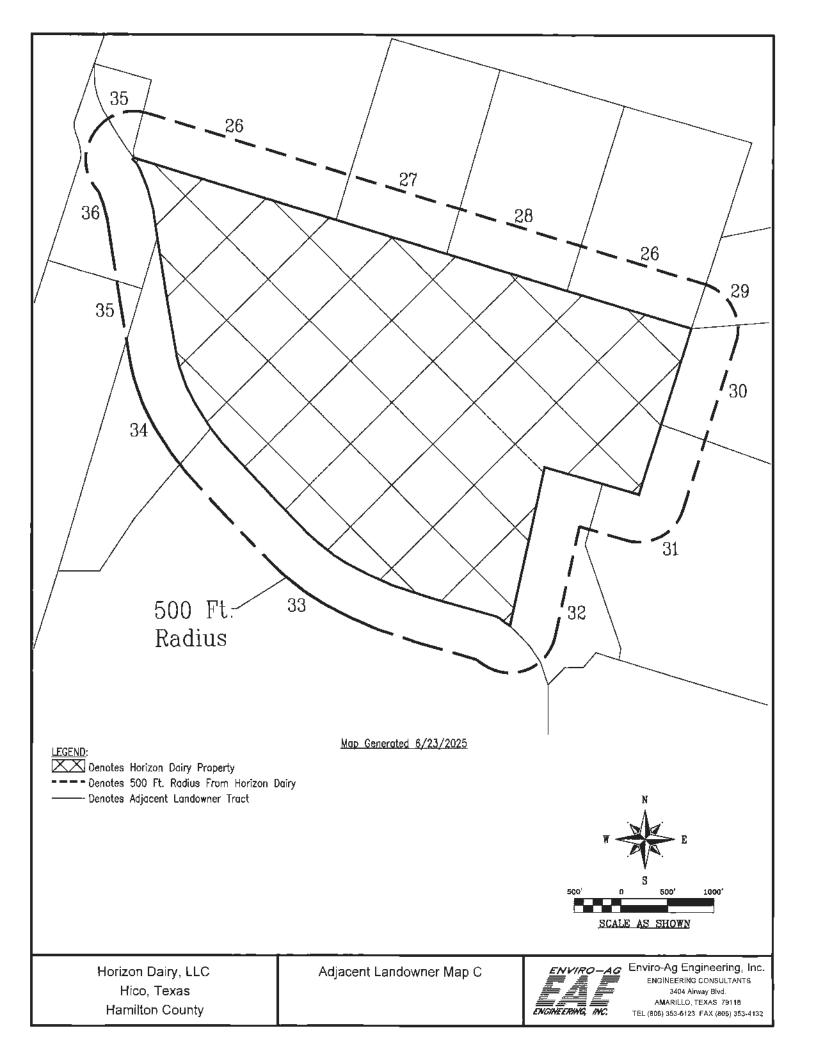


Hamilton County



AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132





ADJACENT LANDOWNERS LIST

Name <u>Curtis W Wuemling</u> Number on Map <u>1</u> Address <u>475 CR 242</u> Address <u>Hico, TX 76457</u>	Name <u>David & Angela Shelton</u> Number on Map <u>10</u> Address <u>322 Georgian Oak Cr</u> Address <u>Lake Dallas, TX 76065</u>
Name <u>Domingo Conde</u> Number on Map 2 Address 380 PR 4906 Address <u>Haslet</u> , TX 76052	Name Gary & Jana Crabtree Number on Map 11 Address PO Box 690 Address Glen Rose, TX 76043
Name <u>Dwain Gray</u> Number on Map 3 Address <u>PO Box 1537</u> Address <u>Celina, TX 75009</u>	Name The Morning Star Family, LP Number on Map 12 Address 3628 Beverly Drive Address Dallas, TX 75205
Name <u>Heath William Casey Trustee; Crawford</u> <u>Ranch Inter Vivos</u> Number on Map 4 Address 563 CR 130 Address <u>Stephenville</u> , TX 76401	Name James V Jr. & Karen K Felps Number on Map 13 Address 2144 CR 3231 Address Hico, TX 76457
Name <u>Billy & Barbara Baley</u> Number on Map 5 Address <u>2515 CR 239</u> Address <u>Hico, TX 76457</u>	Name Albert L. Sharp Number on Map <u>14</u> Address <u>3617 Park Ridge</u> Address <u>Ft. Worth, TX 76109</u>
Name Nathan Huggins Number on Map 6 Address 370 CR 3214 Address Hico, TX 76457	Name ZZZ Farms, LLC Number on Map 15 Address 2008 South 57th Street Address Temple, TX 76504
Name Kenneth M & Margaret A Dolson Number on Map 7 Address 2830 CR 207 Address Hico, TX 76457	Name Benjamin Rhodes Number on Map 16 Address 2726 Whispering Trail Circle Address Pantego, TX 76013
Name <u>Lake M Davis</u> Number on Map <u>8</u> Address <u>PO Box 466</u> Address <u>Hico, TX 76457</u>	Name Long Point Cattle Co. c/o Thomas Smith Number on Map 17 Address 2110 Warner Rd Address Fort Worth, TX 76110
Name <u>Oene Keuning</u> Number on Map 9 Address <u>4745 CR 207</u> Address <u>Hico</u> , TX 76457	Name Woman's Council of Hamilton County Number on Map 18 Address PO Box 292 Address Hamilton, TX 76531

Please identify where you obtained the landowner information.

Hamilton County Appraisal District; July 2025

Facility Name <u>Horizon Dairy</u>

ADJACENT LANDOWNERS LIST

Name Lloyd J & Bettye G Huggins Number on Map 19	Name <u>James Harrison</u> Number on Map <u>29</u>
Address 370 CR 3214 Address Hico, TX 76457	Address <u>3905 Mockingbird Lane</u> Address <u>Temple, TX 76502</u>
Name William J Richey Number on Map 20	Name Needham Farm Bobby & Andy Needham Number on Map 30
Address 5020 E FM 219	Address 915 Chestnut St.
Address Hico, TX 76457	Address <u>Hico, TX 76457</u>
Name Roger D Wuemling Number on Map 21	Name Jackie & Carla Monk
Address 2606 CR 535	Number on Map 31 Address PO Box 36
Address Hico, TX 76457	Address Carlton, TX 76436
Name O&B Farms, Inc.	Name Tom & Ashleigh Cole
Number on Map 22 Address PO Box 227	Number on Map 32
Address Hamilton, TX 76531	Address PO Box 128 Address Carlton, TX 76436
114(1000) 114(14(14(14(14(14(14(14(14(14(14(14(14(riddress <u>Carron, 1x 70430</u>
Name <u>Larry Frisch</u>	Name Ceborn Construction Co. Inc.
Number on Map 23	Number on Map 33
Address 860 CR 3213	Address PO Box 15694
Address <u>Hico, TX 76457</u>	Address <u>Baton Rouge</u> , <u>LA 70895</u>
Name Melody & Curtis Haley	Name Patrick & Barbara Bryson
Number on Map <u>24</u>	Number on Map 34
Address 8219 E FM 219	Address <u>1756 FM 1744</u>
Address Hico, TX 76457	Address Carlton, TX 76436
Name <u>Marisol Hudson c/o Jack Hudson</u>	Name Charles Upchurch
Number on Map 25	Number on Map 35
Address 600 Dennis Ct	Address PO Box 64
Address Merced, CA 95340	Address Carlton, TX 76436
Name Reich Acres, LLC	Name JM & Vicki Taylor
Number on Map 26	Number on Map <u>36</u>
Address 200 Tanglewood Drive	Address <u>763 CR 127</u>
Address <u>Stephenville, TX 76401</u>	Address Cariton, TX 76436
Name Confidential	
Number on Map <u>27</u>	
Name Sedrak Partners, LTD Amir & Adia Ibrahim	
Number on Map 28	
Address <u>3610 Gardenia</u> Address <u>Dalworthington</u> , TX 76016	
Address <u>Parworthington, 1A 70010</u>	
-	

Please identify where you obtained the landowner information.

Hamilton County Appraisal District; July 2025

Facility Name $\underline{\text{Horizon Dairy}}$

Land Lease Agreement

Lessor: David and Leslie DeJong

Family Limited Partnership

4483 E FM 219 Hico, Texas 76457

Lessee: 4P Pastures, LLC

4483 E FM 219 Hico, Texas 76457

Subject Property Legal Description & Address:

-468 R Kennedy; 705.11 Acres (CR 207 FAIRY, TX)

Total of 705.11 Acres.

Term: 5 year renewable lease. Two years must be given by either party to terminate lease.

Price: Undisclosed

Lessee further agrees to leave property in as good or better condition, to abide by any and all state and federal laws, work with Lessee for other possible income opportunities. Lessee will indemnify Lessor of any and all liability due to farming activities.

The above terms have been reviewed and are in mutual agreement between both the lessee and the lessor on this date: 7 - 24 - 2023.

Lessor:

for:

id and lorge De Jong

Lessee:

for

4PPastivis 116

Land Lease Agreement

Lessor: Victor J & Rosa Aguilar

5105 E FM 219 Hico, TX 76457

Lessee: 4P Pastures, LLC

4483 E FM 219 Hico, Texas 76457

Subject Properties Legal Description & Address:

- -745 Samuel Smith; Acres 19 (E FM 219, Hico, TX)
- -745 Samuel Smith; Acres 1 (5105 E FM 219, Olin, TX)

Total of 20 Acres.

Term: 5 year renewable lease. Two years must be given by either party to terminate lease.

Price: Undisclosed

Lessee further agrees to leave property in as good or better condition, to abide by any and all state and federal laws, work with Lessee for other possible income opportunities. Lessee will indemnify Lessor of any and all liability due to farming activities.

The above terms have been reviewed and are in mutual agreement between both the lessee and the lessor and becomes effective on this date: _7/24/2023.

1000

for:

Land Lease Agreement

Lessor: William H & Sydney A Rienstra

106 Angela Court Stephenville, TX 76401

Lessee: 4P Pastures, LLC

4483 E FM 219 Hico, Texas 76457

Subject Property:

-745 \$ SMITH; 9.26 Acres (CR 3231 HICO)

-745 \$ SMITH; 44 Acres (HICO)

-745 \$ SMITH; 66 Acres (CR 3231 HICO)

Total of 119.26 Acres

Term: 5 year renewable lease. Two years must be given by either party to terminate lease.

Price: Undisclosed

Lessee further agrees to leave property in as good or better condition, to abide by any and all state and federal laws, work with Lessee for other possible income opportunities. Lessee will indemnify Lessor of any and all liability due to farming activities.

The above terms have been reviewed and are in mutual agreement between both the lessee and the lessor and become effective on this date: $\frac{7}{24/2623}$

Lessor: William H & J. DNEW A RIENSTRA

Lessee: Xiloluli

for 49 Pasturis LLC





Franchise Tax Account Status

As of: 06/27/2023 11:30:28

This page is valid for most business transactions but is not sufficient for filings with the Secretary of State

4P PASTURES, L.L.C.

Texas Taxpayer Number 32083742083

Mailing Address 4483 E FM 219 HICO, TX 76457-9005

O Right to Transact Business in

Texas ACTIVE

State of Formation TX

Effective SOS Registration Date 03/14/2022

Texas SOS File Number 0804500516

Registered Agent Name DAVID DEJONG

Registered Office Street Address 4483 EAST FM 219 HICO, TX 76457





Franchise Tax Account Status

As of: 06/27/2023 11:48:16

This page is valid for most business transactions but is not sufficient for filings with the Secretary of State

HORIZON DAIRY, L.L.C.

Texas Taxpayer Number 32065098900

Mailing Address 4483 E FM 219 HICO, TX 76457-9005

Right to Transact Business in

Texas

ACTIVE

State of Formation TX

Effective SOS Registration Date 10/11/2017

Texas SOS File Number 0802835521

Registered Agent Name DAVID P DE JONG

Registered Office Street Address 4483 E FM 219 HICO, TX 76457

Public Information Report

Public Information Report HORIZON DAIRY, L.L.C.

Report Year: 2022

Information on this site is obtained from the most recent Public Information Report (PIR) processed by the Secretary of State (SOS). PIRs filed with annual franchise tax reports are forwarded to the SOS. After processing, the SOS sends the Comptroller an electronic copy of the information, which is displayed on this web site. The information will be updated as changes are received from the SOS.

You may order a copy of a Public Information Report from <u>open.records@cpa.texas.gov</u> or Comptroller of Public Accounts, Open Records Section, PO Box 13528, Austin, Texas 78711.

Title Name and Address

MEMBER DAVID DE JONG 4483 E FM 219 HICO, TX 76457

Hamilton CAD Property Search

Property Details

Account

Property ID: 19723 Geographic ID: 26000000000489001

ype; R Zoning:

Property Use:

Silus Address: CR 207 FAIRY, TX

Map ID: Map sco:

Legal Description: 468 R KENNEDY; ACRES: 705 11

Abstract/Subdivision: A00468

Neighborhood: (HICO) HICO STUDY

Owner

Owner ID: 20942

Name: DE JONG DAVID & LESUE

Agent:

7/1/25, 11:15 AM

Mailing Address: FAMILY LIMITED PARTNERSHIP

4483 E FM 219 HICO, TX 76457

% Ownership: 100 0% Exemptions: AB -

For privacy reasons not all exemptions are shown online

■ Property Values

Improvement Homesite Value: Improvement Non-Homesite Value: \$259,460 (+) Land Homesite Value: 50 (1) Land Non-Homosite Value 50 (+) Agricultural Market Valuation: \$3,346,270 (+) \$3,605,730 (*) Agricultural Value Loss:® \$3,280,030 (-) Appraised Value:0 \$325,700 (=) HS Can Loss: (2) &0 (-) https://eawarch.hamBig#good.org/property/www/197237pilidVlew~deleil

Circuit Bresker: **6** 50 (-)
Assessed Value: \$325,700

Ag Use Value: \$66,24

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 docutacy.

Property Taxing Jurisdiction

Owner: DE JONG DAVID & LESLIE %Ownership: 100.0%

Entity	Description	Тях Rate	Market Value	Taxeble Value	Estimated Tax	Freeze Ceiling
EHI	HICO EMERGENCY SERVICE DISTRICT	0.085295	\$3,605,730	\$325,700	3277 81	
GHA	HAMILTON COUNTY	0 430000	\$3,605,730	\$325,400	\$1,399 22	
SHI	HICO ISD	0 855200	\$3,605,730	\$325,700	\$2,785 39	
CAD	County Appraisal District	0,000,000	\$3,805,730	\$325,700	\$0 DO	

Total Tax Rate: 1 370495

Estimated Taxes With Exemptions: \$4,462.42

Estimated Taxes Without Exemptions: \$49,416.35

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■ Property Improvement - Building

Description: WORKSHOP Type: Misc Imp Living Area: 4500.0 sqft Value: \$259,460

Туре	Description	Class CD	Year Bullt	SQFT
COMMERCIAL	COMMERCIAL	WHS	2017	3200
COMMERCIAL	COMMERCIAL	CNS	2017	400
COMMERCIAL	COMMERCIAL	CNS	2017	800

Hamilton CAD Properly Search

P P	roperty Land						
Туре	Description	Acresge	Sqfi	Eff Front	Eff Depth	Market Value	Prod. Value
NP	NATIVE PASTURE	705 11	30,714,591 60	0.00	0 OD	33,346,270	\$66,240

25. 11:15 AM			Hamilton CAD F	Hamilton CAO Property Search							
■ Property Roll Value History											
Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap Losa	Азаезае					
2026	\$259,460	\$3,346,270	\$66,240	\$325,700	\$0	\$325,70					
2024	\$263,580	84,512,700	\$55,150	\$318,710	\$40	\$318,71					
2023	5160,980	\$4,265,200	\$64,000	9244,960	\$0	\$244,98					
2022	5183,720	\$4,285,200	\$64 000	\$247,720	30	\$247,72					
2021	\$174,780	\$2,115.330	\$64,000	\$238,780	3/0	\$238,76					
2020	\$92,510	\$2,115,330	364,000	\$156,510	\$0	\$156,51					
2019	539,750	\$2,115,330	\$57.170	\$96,920	\$0	596 92					
201B	\$39,750	51,410,220	\$57 170	\$96,920	90	\$96,92					
2017	50	\$1,410,220	\$57 170	\$57 170	30	\$57,17					

m Prope	erty L	eed History					
Deed Date	Туре	Description	Grantor	Orantee	Volume	Page	Number
11/26/2008	WD	WARRANTY DEED	207 HICO LAND TRUST	DE JONG DAVID & LIESLIE	432	389	0
6/22/2007	от	OWNER TRANSFER	NIX HAROLD	207 HICO LAND TRUST	415	753	۵
12/22/2005	ОТ	OWNER TRANSFER	DRAGOO GAYLE D & JEAN D LIVING TRUST	NIX HAROLD	394	219	0

7/1/25 11:17 AM Hemiton CAD Property Search

Hamilton CAD Property Search

■ Property Details

Property ID: 2105B Geographic ID: 26000000002349001

Type: Zoning:

Property Use: Location

4483 FM 219 OLIN, TX Situs Address:

Map ID:

Марьсо:

Legal Description: 754 J L STANLEY; Acres 191 51

Abstract/Subdivision: A00754

Neighborhood:

(HICO) HICO STUDY

Owner

Owner ID: 36160

4P PASTURES LLC Name:

Agent:

Malling Address:

4483 E FM 219 HICO, TX 76457

% Ownership:

Exemptions: For privacy reasons not all exemptions are shown online

	Property Values
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\$0 (+)
\$0 (+)
\$0 (*)
\$0 (*)
\$851,660 (4)
\$851,660 (=)
\$833,670 (-)
\$17,990 (=)
\$0 (-)
80 (-)

https://www.telad.com/www.cow/www.cow/

7/1/25, 11:17 AM Hamilton GAO Property Sparch

Assessed Value: \$17,990 Ag Use Value: \$17,990

The 2025 appraisal roll values are subject to change and are not certified. Information provided for research purposes only. Legisl ideacripilions 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 Appraisas District to verify all information for accuracy.

■ Property Taxing Jurisdiction

Owner: 4P PASTURES LLC %Ownership: 100,0%

Entity	Description	Tax Rate	Market Value	Taxable Value	Estimated Tex	Freeze Ceiling
EHJ	HICO EMERGERICA SERVICE DISTRICT	0.085295	\$851.660	\$17,990	\$15 34	
CHA	HAMILTON COUNTY	0.480000	\$851,860	817,990	\$77.36	
SHI	HICO ISD	0.855200	\$851,660	\$17,990	3153 85	
CAD	County Appraisal District	000000	\$451,660	\$17,990	\$0.00	

Total Tax Rate: 1 470495

Estimated Taxes With Exemptions; \$246.55

Estimated Taxes Without Examptions: \$11,671.96

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7/1/25, 11:1	7 AM		Han	nilen GAD Propi	irty Search		
MP	roperty Land						
Туре	Description	Aoreage	Sqft	Eff Front	Eff Depth	Market Value	Prod. Value
NÞ	NATIVE PASTURE	191.51	8.342.175.60	0.00	0.00	\$651 550	\$17,990

25, 11:17 AM			Hamilton GAD Property Search								
■ Property Roll Value History											
Year	Improvements	Land Market	Ag Valuation	Appraised	H9 Cap Loss	Аэвеэве					
2025	50	\$851,660	517,990	517,990	50	517,99					
2024	\$0	\$1,225,680	514,980	514,980	50	\$14, 9 8					
2023	20	\$1,292,690	\$13,980	\$13,980	SO.	\$13,98					
2022	\$0	\$1,292,690	\$13,980	\$13,980	\$0	\$13,88					
2021	\$0	\$459,620	\$13,980	\$13,980	\$0	\$13,98					
2020	\$ U	\$459,620	\$13,980	\$13,980	60	\$13,88					
2019	50	\$459,620	\$13,980	\$13,980	\$0	\$13.98					
2018	\$0	\$344,720	\$13,980	\$13,980	\$0	\$13,88					
2017	\$0	\$344,720	\$13,980	\$13,980	.\$0	\$13,98					

■ Property Deed History									
Deed Date	Туре	Description	Grantor	Grenteo	Volume	Pegio	Number		
5/31/2022	SWD	SPECIAL WARRANTY DEED	DE JONG DAVID	4P PASTURES LLC	611	600	20221292		
9/3/2013	WD	WARRANTY DEED	HORIZON DAIRY	DE JONG DAVID	476	328	1300		
9/23/1994	οT	OWNER TRANSFER	DEJONG WILLIAM C INA & DAVID P	HORIZON DAIRY	789	838	0		

Hamilton CAD Property Search

Property Details

Account

Property ID: 21057 Geographic ID: 26000000002347001

Type: Zoning:

Property Use: Location

Situs Address: 4483 E FM 219 FAIRY.

Map ID: Марасо:

Legal Description: 468 R KENNEDY; AGRES: 483 94

Abstract/Subdivision: A00468

Neighborhood:

(HICO) HICO STUDY

Owner

4P PASTURES LLC

Mailing Address:

4483 E FM 219 HICO, TX 76457

% Ownership: 100.0% Exemptions;

AB - For privacy reasons not all examptions are shown online

Property Values

Improvement Homeelte Value:	\$0 (+)
Improvement Non-Homesite Value:	52 568,510 (+)
Land Homesite Value:	\$0 (+)
Land Non-Homesite Value:	\$0 (+)
Agricultural Market Valuation:	5.7,152,110 (+)
Market Value:	\$4,720,620 (=)
Agricultural Value Loss:0	\$2,105,460 (-)
Appraised Value:®	\$2,615,160 (=)
HS Cap Loss: €	\$0 (-)

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■ Property Roll Value History

7/1/25, 15:17 AM

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Property Improvement - Buildin	g	
Description: BARNS Type: Misc Imp I	iving Area: 521030 5 sqlt Value: \$2,568,510	

Type	Description	Cless CD	Year Built	SQFT	
COMMERCIAL	MA	WHS	¢	12320	
COMMERCIAL	COMMERCIAL	8HED	1990	65853	
COMMERCIAL	3 SIDE BARN SLAB	BARNZS	0	7200	
COMMERCIAL	3 SIDE BARN DT	BARN26	1990	3500	
COMMERCIAL	3 SIDE BARN DIT	BARN2S	1990	2400	
COMMERCIAL	OPEN POLE SHED SLAB	SHED	1990	80000	
COMMERCIAL	OPEN POLE SHED DI	SHED	1990	83258	
COMMERCIAL	COMMERCIAL	WHS	1990	3600	
COMMERCIAL	COMMERCIAL	SHED	1990	72400	
COMMERCIAL	COMMERCIAL	SHED	2019	41300	
COMMERCIAL	COMMERCIAL	SHED	1990	24000	
COMMERCIAL	COMMERCIAL	SHEO	1990	93000	
COMMERCIAL	COMMERCIAL	SHEO	1990	/500	
COMMERCIAL	COMMERCIAL	SHEO	1990	7200	
COMMERCIAL	COMMERCIAL	SHEID	1990	7500	

■ Property Land

Туре	Description	Acresge	Sqft	Eff Front	Eff Depth	Market Value	Prod. Value
NP	NATIVE PASTURE	248 94	10,843,826 40	0 00	0.00	\$1,107,050	\$23,390
IMP	IMPROVED PASTURE	235 00	10,238.800 00	0.00	0.00	\$1,045,06D	\$23,260

7/1/25, 11:17 AM	Hamilton GAD Property Search	
Circuit Breaker: 0	50 (-)	
Assessed Value:	\$2.615,160	
Ag Use Value:	£46 650	

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

■ Property Taxing Jurisdiction

Owner: 4P PASTURES LLC %Ownership; 100,0%

Entity	Description	Tax Rate	Market Value	Taxab lo Value	Estimated Tax	Freeze Celling
EHI	HICO EMERGENCY SERVICE DISTRICT	0 005295	\$4,720,620	32,615.160	\$2,230.60	
GHA	HAMILTON COUNTY	0.430000	\$4,720,620	\$2.815,116	\$11,245.00	
SHI	HICO ISD	D 855200	\$4,720,620	\$2,615,160	322,364 85	
CAD	County Appraisal District	0.000000	\$4,720,620	\$2,615,160	\$0.00	

Total Tax Rate: 1,370495

Estimated Taxes With Exemptions: \$35,840.45

Estimated Taxes Without Exemptions; \$54,695.86

Year									
1 CHI	Impre	ovements	Land Ma	rket	Ag Valuation	Appraised	HS Cap Lo		Assessed
2025	\$	2,569,510	82,152	110	\$46,650	\$2,615,160	2	50	\$2,615.16
2024	8	2,566.510	\$3,097.	220	\$45,160	\$2,613,670		¥0	\$2,613.67
2023	\$	2,271,750	\$3,097.	220	\$42,730	\$2,314,480		£0	52,314.48
2022	8	2,309,980	\$3,097.	220	\$42,730	\$2,351,710	2	¥0	52,351.71
2021	5	1,685,700	\$1,161.	460	\$42 730	\$1,728,490	\$	5 0	\$1,728,49
2020	\$	1,153,740	\$1,161.	460	\$42 730	\$1,196,470	5	\$0	\$1,196,470
2019	5	1,422,240	\$1,161.	460	\$42,730	\$1,464,970		10	51,464 97
2018	5	1,422,240	8871.	00 0	542.730	\$1,464,970		\$0	\$1,464,97
2017	5	1,422,240	\$871	090	\$42.730	\$1,464,970	:	30	\$1,464,97
R Prop	erty (Deed Hist	огу						
•		Deed Hist	•	Granto	ır	Grantes	Volume	Page	Numbe
Deed	Туре		,		ir Ng Dayid	Grantes 4P PASTURES LLC	Volume 611	Page 600	Number 2022129
Deed Date	Type	Description	ARRANTY	DF JOI	-	4P PASTURES			

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Hamilton CAD Property Search

■ Property Details

Property ID: 19843 Geographic ID: 26000000000376001

Туре: R Zoning:

Property Use:

Location

Situs Address: 4483 FM 219 E OLIN. TX

Map ID: Марасо:

Legal Description: 745 SAMUEL 8MITH; ACRES: 235 57

Abstract/Subdivision: A00745

Neighborhood:

(HICO) HICO STUDY

Dwner

Owner ID:

4P PASTURES LLC

4483 E FM 219 HICO, TX 76457 Mailing Address:

% Ownership:

Exemptions: For privacy reasons not all exemptions are shown online

	Property Values
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Improvement Homesite Value:	50 (+)
Improvement Non-Homesite Value:	50 (+)
i.and itamesta Value;	\$0 (+)
Land Non-Flormeatte Value:	\$0 (+)
Agricultural Market Valuation:	\$1,047,590 (+)
Market Value:	\$1,047,590 (=)
Agricultural Value Loss:♥	\$1,025,460 (-)
Appraised Value:6	\$22,130 (=)
HS Cap Loss; ⊕	5 0 (-)
Circuit Breaker: €	\$0 (-)

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Assessed Value: \$22,130 Ag Use Value: \$22,130

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■ Property Taxing Jurisdiction

Owner: 4P PASTURES LLC %Ownership: 100,0%

Entity	Description	Tax Rate	Market Value	Taxable Value	Estimated Tex	Freeze Celling
FHI	HICO EMERGENCY SERVICE DISTRICT	0 085295	\$1,047,590	522,130	\$18,88	
GHA	HAMILTON COUNTY	0.430000	\$1,047.590	\$22,180	\$95.16	
sHI	HICO ISD	0.855200	\$1,047,690	822,130	5189 20	
CAD	County Appraisal District	0.000000	\$1,047.590	522,130	2000	

Total Tax Rate: 1 370495

Estimated Taxes With Exemptions: 5303 30

Estimated Taxes Without Exemptions; \$14 357 17

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70125, 11:16 AM			Hemi	Hamilton CAD Property Search				
MP	roperty Land							
Турв	Description	Acreage	Sqft	Eff Front	Eff Depth	Market Value	Prod. Value	
NP	NATIVE PASTURE	235 57	10.261.429.20	0.00	0.00	\$1.047.590	\$22,130	

5 11:18 AM			Hamilton GAD Property Search			
Prop	erty Roll Value	History				
Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap Loss	Assesse
2025	\$0	\$1,047,580	\$22.130	\$22,130	\$0	\$22,13
2024	20	\$1,507,850	\$18,420	\$18,420	60	818,42
2023	\$0	\$1,590,100	\$17.200	\$17.200	\$0	\$17,20
2022	3/0	\$1,590.100	\$17,200	\$17,200	30	\$17,20
2021	30	\$565.370	\$17.200	\$17,200	240	\$17,20
2020	3/0	\$565,370	\$17.200	\$17.200	30	\$17,20
2019	\$0	3565.370	\$17,200	\$17,200	\$0	\$17,20
2D18	80	\$424 030	\$17,200	\$17,200	3-0	\$17,20
2017	\$0	\$424,030	\$17,200	\$17,200	\$0	\$17,20

₹ Prope	■ Property Deed History								
Doed Date	Туре	Description	Grantor	Grantec	Volume	Page	Number		
5/31/2022	SWD	SPECIAL WARRANTY DEED	DE JONG DAVID	4P PASTURES LLC	611	600	20221292		
9/3/2013	WD	WARRANTY DEED	HORIZON DAIRY	DE JONG DAVID	476	328	1300		
6/8/2007	от	OWNER TRANSFER	HORIŽON DAIRY	AGUĮLAR VICTOR J & ROSA	415	215	0		

7/1/25, 11:19 AM

Hamilton GAD Property Search

Hamilton CAD Property Search

R Property Details

Property ID: 19719 Geographic ID: 26000000000485001

Туре: Zoning:

Property Use; Location

CR 3232 TX Situa Address:

Map ID: Mapsco:

Legal Description: 745 \$ \$MITH: Acros. 200 00

Abstraci/Subdivision; A00745

Neighborhood; (HICO) HICO STUDY

Owner

Owner |D: 36160

4P PASTURES LLC Name:

Mailing Address:

4483 E FM 219 HICO, TX 76457

% Ownership: 100 0% Exemptions:

AB - For privacy reasons not all exemptions are shown collne

■ Property Values

Improvement Homesite Value:	50 (+)
Improvement Non-Homesite Value:	5Q (+)
Land Homesite Value:	\$0(+)
Land Non-Homesite Value:	50 (+)
Agricultural Market Valuation:	\$996,350 (+)
Market Value:	\$995 350 (=)
Agricultural Value Loss:©	5974.150 (-)
Appraised Value:	\$22,200 (=)
HS Cap Loas: €	\$0 (-)

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Hamilton CAD Proporty Search

Circult Breaker: @ \$0 (-) Assessed Value: \$22,200 Ag Use Value:

The 2025 appraisal roll values are subject to change and are not certified. Information provided for research purposes only. Legal descriptions and accesse 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: 4P PASTURES LLC %Ownership; 100,0%

Entity	Description	Tax Rate	Market Value	Taxable Value	Estimated Tax	Freeze Celling
EHI	HICO EMERGENCY SERVICE DISTRICT	0.085295	\$996,350	\$22,200	\$18 94	
GHA	HAMILTON COUNTY	0 430000	\$996,350	\$21,968	5 94 46	
SHI	HICO ISD	0.855200	\$996,350	\$22,200	\$189.85	
CAD	County Appraisal District	0.000000	\$996,350	\$22.200	\$0.00	

Total Tax Rate: 1 370495

Estimated Taxes With Exemptions: \$303.25

Estimated Taxes Without Exemptions: \$13,654.93

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\$22,200

/25, 11 10	AM	Hami	Hamilton CAD Property Swerch					
Ħ₽r	operty Land							
Туре	Description	Acreage	Sqft	Eff Front	Eff Depth	Markel Value	Prod. Value	
NP	NATIVE PASTURE	145 87	8,354,097 20			\$726,690	\$13,700	
CROP	CROP	54 13	2,357,902 80	0.00	0.00	\$269,660	88.500	

25, 11:19 AM						
# Prop	certy Roll Value	History				
Year	Improvements	Land Market	Ag Valuation	Appreised	Н9 Свр Lова	Авневне
2025	50	\$895,350	\$22,200	\$22,200	50	\$22,20
2024	50	\$1,075,780	\$21,180	\$21,180	50	\$21,18
2023	\$0	\$829,910	\$19,120	\$19,120	50	519,12
2022	\$0	\$856,980	\$19 120	\$19,120	50	\$19,12
2021	\$ 0	\$600,000	\$19,120	\$19,120	\$0	\$19,12
2020	50	\$512,480	\$19,120	\$19,120	\$0	\$19,12
2019	\$0	\$600,000	\$16,660	\$16,660	\$0	\$16.66
2018	50	\$500,010	\$16,660	\$16,660	\$0	\$16,66
2017	\$0	\$500,010	\$16,660	\$16,660	80	\$16,66

Property Deed History									
Deed Date	Туре	Description	Grantor	Grantes	Volume	Page	Number		
5/31/2022	5WD	SPECIAL WARRANTY DEED	DE JONG DAVID B LESLIE	4P PASTURES LLC	811	600	20221292		
5/11/2017	WD	WARRANTY DEED	DJC HAMILTON LLC	DE JONG DAVID & LESUJE	ō21	594	07 5 9		
1/17/2017	WD	WARRANTY DEED	CLARK CLYDE MILTON 8	CAIC HAMILTON LLC	517	175	0079		

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 varified prior to using for legal purpose and or documents. Please contact the Appraisal District to verify all information for

0.085295 \$1,061,290

0.430000 \$1,001,290

0.855200 \$1,061,290

0.000000 \$1,061,290

Market

Vajue

Taxable

\$23,150

\$22,758

\$23,150

\$23,150

Value

Estimated

Tax

319 /5

\$97.86

\$197.98

\$0.00

Tax Rate

Choult Breaker, O

Assessed Value:

Ag Use Value:

accuracy.

Entity Description

SHI HICO ISD

GHA HAMILTON COUNTY

CAD County Appraisal District

Total Tax Rote, 1 370485

EHI

■ Property Taxing Jurisdiction

HICO EMERGENCY SERVICE

Estimated Taxes With Exemptions: 5315.59

Estimated Taxes Without Exemptions: \$14,544.93

Owner: 4P PASTURES LLC %Ownership: 100.0%

Hamilton CAD Property Search

■ Property Details

tccount

Property ID: 11986 Geographic ID: 00000000831002216

Type: R Zoning:

Property Use: Location

Situs Address: 935 CR 3232 FAIRY, TX

Map ID: HIS Maps co:

Legal Description: 745 S SMITH: Acres: 238 65

Abstract/Subdivision: A00745

Neighborhood: (HICO) HICO STUDY

Owner

Owner ID: 36160

Name: 4P PASTURES LLC

Agent:

 Mailing Address:
 4483 E FM 218

 HIGO, TX 76457

 % Ownership:
 100 0%

Exemptions; AB -

For privacy reasons not all exemptions are shown online

■ Property Va	lues
---------------	------

• •	
Improvement Homesite Value:	\$0(+)
Improvement Non-Homesito Value:	\$0(+)
Land Homesite Value:	\$0 (+)
Land Non-Homestie Value	50 (+)
Agricultural Market Valuation:	\$1,061,290 (+)
Market Value;	\$1,061 290 (=)
Agricultural Value Loss;⊘	\$1,038,140 (-)
Appraised Value:	\$23,150 (=)
HS Cap Lose; €	30 (-)

Hilps: esearch immilternading/property/yew/11898/grent/te/redeted

reign Personalis (sambligue, ad or grippingly select MRBP group by reduid-

2/10

80 (-)

\$23,150

\$23,150

Freeze

Celling

7/1125, 11:2	7/1/25. 11:2DAM			on GAD Proport			
MP	Property Land						
Туре	Description	Acreage	Sqft	Eff Front	E ff Depth	Market Value	Prod. Value
NP	NATIVE PASTURE	92.65	4,035,834.00	0 00	0.00	\$412,020	\$8,700
IMP	IMPROVED PASTURE	146.00	6.359,760 00	0.00	0.00	\$649,270	\$14,450

5. 11°20 AM			Hamilton CAD Property Search				
■ Proj	perty Roll Value	History					
Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap Lose	Assessed	
2025	50	\$1,061,290	\$23,150	\$23,150	30	\$23,150	
2024	\$0	\$1,286,480	\$23,210	523,210	80	\$23,21	
2023	20	\$1,610,890	\$22,020	\$22,020	\$0	522,02	
2022	\$0	21,610,890	\$22,020	\$22,020	ŝo	\$22,020	
2021	\$0	\$485,160	\$22,020	522,020	\$0	\$22,02	
2020	\$0	\$485,160	\$22,020	522,020	50	\$22,02	
2019	80	\$485,160	522,020	522,020	80	\$22,02	
2018	50	\$429,570	522,020	\$22,020	\$0	\$22,02	
2017	\$0	\$429,570	\$22,020	522,020	50	\$22,02	

Propi	Property Deed History								
Deed Date	Туре	Description	Grantor	Graniee	Volume	Page	Number		
5/31/2027	SWD	SPECIAL WARRANTY DEED	DE JONG DAVID	4P PASTURES	611	600	20221292		
9/3/2013	WO	WARRANTY DEED	HORIZON DAIRY	DE JONG DAVID	476	328	1300		
4/7/2000	OI	OWNER TRANSFER	ROACH RUDY AND SARAH	HORIZON DAIRY	324	621	0		

7/1/25, 11:21 AM

Homiton GAD Property Search

Hamilton CAD Property Search

Property Details

Account

Property ID: 20452 Geographic ID: 26000000001495001

Type: R Zoning:

Property Use: Location

5ltus Address: 3875 CR 3231 FAIRY,

Map ID: HIS Mepsoo:

Legal Description: 745 S SMITH; ACRES: 88 55

Abstract/Subdivision: A00745

Neighbdrhood: (HICO) HICO STUDY

Owner

Owner ID: 36160

Name: 4P PASTURES LLC

Agent:

Mailing Address: 4483 E FM 219 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 Vatue;	\$0 (+)
Land Homesite Value	\$0 (+)
Land Non-Homesite Value:	\$0 (+)
Agricultural Market Valuation;	\$625,240 (+)
Market Value:	\$825.240 (=)
Agricultural Value Loss:®	\$616,920 (-)
Appraised Value:	58.320 (=)
HS Cap Loss: ₽	\$0 (-)
Circuit Breaker: 0	\$0 (-)

https://esearch.hamiltonsad.org/property/viow/204527print/few=dotall

7/1/25, 11:21 AM Hamilton CAD Property Exacts

 Assessed Value:
 \$8,320

 Ag Use Value:
 \$8,320

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 vorify all information for accuracy.

■ Property Taxing Jurisdiction

Owner: 4P PASTURES LLC %Ownership: 100 0%

Entity	Description	Tax Rate	Market Value	Taxabje Value	Estimated Tax	Freeze Gelling
EHI	HICO EMERGENCY SERVICE DISTRICT	0 085295	\$82 5 ,240	\$8.320	\$7.10	
GHA	HAMILTON COUNTY	0 430000	\$825,240	\$8.320	\$35.78	
sHI	HICO ISD	0 855200	\$625,240	\$8,320	\$71.15	
CAD	County Appraisal District	0.00000	\$625,240	\$8.320	50.00	

Total Tax Rate: 1 370495

Extimated Taxes With Exemptions: \$114.00

Estimated Taxes Wilhoot Exemptions: \$8,568 88

https://osearch.hamition.cod.org/property/v/ew/204527print/View~delail

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7/1/25, 11 2	zi AM	Hen	Allon CAD Prope	ну балген			
M P	roperty Land						
Турв	Description	Acreage	Βq#	Eff Front	Eff Depth	Market Value	Prod. Value
NP	NATIVE PASTURE	86 55	3.657.238.00	0.00	0.00	\$525.240	\$8,320

5 11:21 AM		10:10:2	Hamilton CAD I	Poperty Search		_
m Proj	perty Roll Value	History				
Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap Losa	Assesse
2025	30	3625,240	\$8.320	\$8,320	30	\$9,32
2024	\$0	5664, 130	\$6.930	\$6,930	\$0	\$6,93
2023	80	\$442,750	\$6,460	\$6.460	\$0	\$6,48
2022	50	\$411.760	56 460	\$6.460	\$0	\$6,46
2021	50	5336,490	\$6,460	\$6,460	\$0	36,48
2,020	şo	\$285,650	56,460	36 ,460	\$0	55,48
2019	50	\$266,650	35,460	56,460	\$0	\$6,45
2018	\$o	\$221,380	36,460	\$6,460	\$0	\$6,46
2017	50	\$221,390	\$6,460	\$6,460	30	\$6,46

- 1	R Property Deed History										
	Deed Date	Туре	Description	Grantor	Grantee	Valume	Page	Number			
5,	(31/ 2 022	5WD	SPECIAL WARRANTY DEED	DE JONG DAVID	4P PASTURES LLC	611	600	20221292			
4	13/2017	WD	WARRANTY DEED	RIENSTRA FAMILY TRUST	DE JONG DAVID	520	623	0504			
,	9/3/2004	WD	WARRANTY DEED	FOSTER COLLEEN EST	RIENSTRA FAMILY TRUST	376	49	۵			

1/10

7/1/25 11:22 AM

Hamilton CAD Property Search

Property Details

Property ID: 11732 Geographic ID: 00000000831001687

Type: R Zoning:

Property Use: Location

CR 3231 HICO, TX 76457 Situs Address;

Map ID: Mapagot

Legal Description: 745 S SMITH; ACRES: 66 00

Abstract/Subdivision: A00745

(HICO) HICO STUDY

Owner

Neighborhood:

21376 Owner ID:

Name: RIENSTRA WILLIAM H & SYDNEY A

Agent:

Mailing Address: 6251 STEVENSON OAKS DR APT 1209

FORT WORTH, TX 76123

% Ownership: 100 0%

Exemptions:

For privacy reasons not all exemptions are shown online

■ Property Values	
Improvement Homesite Value;	\$0 (+)
Improvement Non-Homealte Value:	\$0 (+)
Land Homesite Value:	50 (+)
Land Non-Homesite Value;	\$0 (+)
Agricultural Market Valuation:	\$450,820 (+)
Market Value:	\$450,820 (=)
Agricultural Value Loss:0	\$440,450 (-)
Appraised Value:	\$10,370 (=)
HS Cap Lose: 0	\$0 (-)

ethys: essarch hamiltonindlerg property vine 197527 publishes adulail

7/1/25 11 22 AM Hamilton GAD Property Search

Circuit Breaker: Q \$0 (-) Assessed Value: \$10,370 Ag Use Value: \$10,370

The 2025 appraisal roll values are subject to change and are not certified, information provided for research purposes only. Legal descriptions and actoring 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 ассигасу.

Property Taxing Jurisdiction

Owner; RIENSTRA WILLIAM H & SYDNEY A %Ownership: 100.0%

Entity	Description	Tax Rate	Market Value	Taxeble Vajue	Estimated Tex	Freeze Colling
EHI	HICO EMERGENCY SERVICE DISTRICT	0.085295	\$450,870	\$10,370	98 85	
GΗΛ	HAMILTON COUNTY	0 430000	\$450,820	\$10.308	\$44 32	
SHI	HICO ISD	0 855200	\$450,820	\$10,370	\$88 58	
CAD	County Appraisal District	0.000000	\$450,820	\$10,370	\$0.00	

Total Tax Rate; 1.370495

Estimated Taxes With Exemptions: \$141.65

Estimated Taxes Without Exemptions: \$6,178.47

7/1/25, 11:22 AM			9	Harrillon GAD Pro	operty Search		
■ Pr	operty Land						
Турс	Oescription	Acreage	Sqft	Eff Front	€/f Depth	Market Velue	Prod. Value
CROP	CROP	66.00	2 874 980 00	0.00	n nn	\$450.920	\$1D 370

		Hamilton GAD F	Property Search		
perty Roll Value	History				
Improvementa	Land Market	Ag Valuation	Appraised	НЅ Свр Lовв	Assessed
\$0	\$450,820	\$10.370	\$10,370	\$0	\$10,370
\$-0	\$429,000	\$11.910	\$11,910	\$0	\$11.810
\$0	\$429,000	\$10.330	\$10,330	50	\$10,330
30	\$420,000	\$10 330	\$10.330	\$D	\$10,330
\$0	\$188,000	\$10.330	\$10.330	\$0	\$10,330
30	\$198,000	\$10.330	\$10,330	\$.0	810,330
\$0	\$198,000	\$7.330	\$7 330	\$0	\$7,330
\$0	\$165.000	\$6.90d	\$6,900	\$0	\$6,90
\$0	\$165 000	\$6.800	\$8,900	\$0	\$6,90
	perty Rolf Value Improvements \$0 \$40 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$5	Section Page Page	Perty Roll Value History Improvements Land Markot Ag Valuation \$0 \$450,820 \$10,370 \$0 \$429,000 \$11,910 \$0 \$429,000 \$10,330 \$0 \$489,000 \$10,330 \$0 \$188,000 \$10,330 \$0 \$188,000 \$10,330 \$0 \$188,000 \$7,330 \$0 \$188,000 \$6,800	Party Roll Value History Land Market Ag Valuation Appraised	Perty Roll Value History Improvements Land Markot Ag Valuation Appraised HS Cap Loss \$0 \$450,820 \$10.370 \$10,370 \$0 \$40 \$429,000 \$11.910 \$11,910 \$0 \$40 \$429,000 \$10.330 \$10,330 \$0 \$40 \$429,000 \$10.330 \$10,330 \$0 \$40 \$429,000 \$10.330 \$10.330 \$0 \$40 \$429,000 \$10.330 \$10.330 \$0 \$40 \$489,000 \$10.330 \$10.330 \$0 \$50 \$188,000 \$10.330 \$10.330 \$0 \$40 \$188,000 \$7.330 \$7.330 \$0 \$50 \$188,000 \$6.800 \$6.800 \$6.900 \$0

Property Deed History

I	Deed Date	Туре	Description	Granter	Grantee	Volume	Page	Number
1	2/10/2012	WD	WARRANTY DEED	BULLARD CLIFFORD W	R)ENSTRA WILLIAM H & SYDNEY A	467	661	

11/75, 11/22, AM Hemillon CAD Property Search

Hamilton CAD Property Search

Property Details

Account

Property ID: 20171 Geographic ID; 26000000001090001

Type: R Zoning

Property Use:

Location

Situs Address: GR 3231 HIGO, TX 70457

Map ID: HIS Mapseo:

Legal Description: 745 S SMITH; Acres: 44

Abstract/Subdivision: A00745

Neighbothood: (HICO) HICO STUDY

Dwner

Owner ID: 213/8

Name: RIENSTRA WILLIAM H & SYDNEY A

Agent:

Mailing Address: 6251 STEVENSON OAKS DR APT 1209

FORT WORTH, TX 76123

% Ownership: 100 0%

Exemptions: AB - For privacy reasons not all exemptions are shown online

■ Property Values
Improvement Homesite Value:

 Improvement Homesite Value:
 \$0 (+)

 Improvement Non-Homesite Value:
 \$0 (+)

 Land Homesite Value:
 \$0 (+)

 I and Non-Homesite Value
 \$0 (+)

 Agricultural Markel Valuation:
 \$300,540 (+)

 Market Value:
 \$300,540 (=)

 Agricultural Value Loss:0
 \$293,630 (-)

 Appraised Value:8
 \$6,910 (=)

7/1/25 11 22 AM	Hamilton GAD Property Search
Circuit Breaker; Ø	\$n (-)
Assessed Value:	\$6,910
A - U M-h	41-

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 uso 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: RIENSTRA WILLIAM H & SYDNEY A %Ownership: 100,0%

Entity	Description	Tax Rele	Market Value	Taxeble Value	Estimated Tax	Freeze Celling
EHI	HICO EMERGENCY SERVICE DISTRICT	D 085295	\$300,540	\$6,910	\$5 89	
GHA	HAMILTON COUNTY	0.430000	\$300,540	58 861	\$28 59	
SHI	HICO ISD	0 655200	\$300,540	\$6.810	\$58,09	
GAD	County Appraisal District	0.000000	\$300,540	\$6,910	\$0.00	

Total Tex Rale: 1 370495

Estimated Taxes With Exemptions: \$94.57

Estimated Taxes Without Exemptions: \$4,116.69

they are such been under a greatently in wi2017 beautiewe dated

Proj	perty Roll Value	History				
Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap Loae	Аввезвес
2026	80	\$300,540	86.010	\$ 6,910	80	\$6,910
2024	\$0	\$286,000	\$7,940	\$7.940	80	\$7,940
2023	50	\$298,000	\$6,690	\$5,890	\$0	\$6,900
2022	\$0	\$286.000	\$6 880	\$8,880	30	\$6,880
2021	\$0	\$132,000	\$6,890	\$8,890	50	\$6,890
2020	30	\$132,000	46 880	\$6,890	3.0	35,890
2019	\$0	\$132,000	\$4,880	\$4 880	20	\$4,880
2018	50	\$110,000	\$3,400	\$3,400	340	\$3,40
2017	50	\$110.000	\$3,400	\$3,400	\$0	\$3,400

		,					
Deed Date	Туре	Description	Grantor	Grantes	Volume	Page	Number
12/10/2012	WD	WARRANTY DEED	BULLARD CLIFFORD W	RENSTRA WOLLIAM HIS SYDNEY A	467	661	1793
6/4/1990	ОТ	OWNER TRANSFER	BULLARD JERREL	BULLARD CLIFFORD W	276	438	0

Hamilton CAD Property Search

Property Details

Account

11733 Property ID: Geographic ID: 00000000831001888

Тура: Zoning:

Location

CR 3231 HfCO, TX 76457 Situs Address:

Map ID: HIS Марясо:

745 S SMITH; ACRES: 9 26 Legal Description:

Abstract/Subdivision: A00746

Neighborhood: (HICO) HICO STUDY

Owner ID: 21370

RIENSTRA WILLIAM H & SYDNEY A Name:

Agent:

6251 STEVENSON OAKS OR Mailing Address: APT 1209 FORT WORTH, TX 76123

% Ownership:

Exemptions:

AB For privacy reasons not all exemptions are shown online

Property Values

Improvement Homesite Value:	30 (+)
Improvement Non-Homesite Value:	\$236.340 (+)
Land Homesite Value:	30 (+)
Land Non-Homesite Value:	\$5,830 (+)
Agricultural Market Valuation:	\$55,420 (+)
Market Value:	\$299,590 (=)
Agricultural Value Loss: 9	\$55,120 (-)
Appraised Value: 0	\$244,470 (=)
H5 Cap Loss: ❷	\$0 (-)

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7/1/25 11:23 AM Hamilton CAD Property Search

Circuit Breaker: Q \$0 (-) Assessed Value: \$244,470

Ag Use Value: \$1,300

The 2025 appraisal roll values are subject to change and are not certified, information provided for research purposes only. Logal 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: RIENSTRA WILLIAM H & SYDNEY A %Ownership: 100 0%

Entity	Description	Tax Rato	Market Value	Taxable Va(ue	Estimated Tax	Freeze Celling
ΓHt	HICO EMERGENCY SERVICE DISTRICT	0 085295	\$299,590	\$244,470	\$208.52	
AHD	HAMILTON COUNTY	0 430000	\$289,590	\$244,422	51,051 01	
SHI	HICO ISD	0 855200	\$288,580	\$244,470	\$2,090 71	
CAD	County Appraisal District	0 000000	\$299,580	\$244,470	\$0.00	

Total Tax Rate: 1 370495

Estimated Taxes With Exemptions: \$3,350.24

Estimated Taxes Without Exemptions: \$4,105 87

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7(1/25, 11:23 AM	Hamilton CAD Property Search
■ Property Improvement - Building	V

Type; Residential Living Area: 2096,0 sqft Value: \$236,340							
Турс	Description	C)ass CD	Year Bui(t	SQFT			
LA	LIVING AREA	R93F	2019	1144			
PORCHES	PORCHES	RS3F	2018	144			
ST	STORAGE	STM1	2019	280			
8T	STORAGE	STF1	2019	35			
ST	STORAGE	ST51	2019	380			
MH	мн	MH2	2022	952			
PORCHES	PORCHES	R83F	2022	64			

Property Land

Туре	Description	Acreage	Sqf	Eff Front	Eff Depth	Market Value	Prod, Value
CROP	CROP	8 26	359,805 60	0 00	0.00	\$56,420	\$1,300
RES	RESIDENTIAL LAND	1 00	43,560 00	0.00	0.00	\$5,830	80

5, 11:23 AN									
Property Roll Value History									
Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap Loss	Assesse			
2025	\$236,340	\$83,250	\$1,300	\$244,470	\$0	\$244,47			
2024	\$238,590	\$81,980	\$1,490	\$248,380	\$0	\$248,38			
2023	\$142,820	\$81,890	\$1 290	\$152,410	\$0	\$152,41			
2022	\$142,840	\$61,890	\$1,290	3152,430	\$0	\$152,43			
2021	\$104,180	\$29,280	\$1,290	3109.970	\$0	\$109.97			
2020	& D	\$27,760	\$1.450	\$1,45D	\$0	\$1,45			
2019	\$0	\$27,780	\$1,030	\$1,030	\$0	\$1 03			
2018	\$0	\$23,150	\$710	\$710	\$0	\$71			
2017	\$0	\$23,160	\$710	\$710	\$0	\$75			

Reperty Deed History

Doed Date	Туре	Description	Grantor	Grantee	Volume	Page	Number
12/10/2012	WD	WARRANTY DEED	BULLARD CLIFFORD W	RIENSTRA WILLIAM H & 8YDNEY A	467	661	1793
8/4/1990	от	OWNER TRANSFER	BULLARÐ JERREL G	BULLARD CLIFFORD W	276	435	0

7/1/25, 51:24 AM

Hamilton CAD Properly Sparch

7/1/25, 11.24 AM

Circuit Breaker: @

Assessed Value:

Ag Use Value:

весштасу.

Entity Description

SHI HICO ISD

DISTRICT

GHA HAMILTON COUNTY

CAD County Appreisal District

Total Tax Rate: 1 370495

EHI

■ Property Taxing Jurisdiction

HICO EMERGENCY SERVICE

Estimated Taxes With Exemptions: \$3,811.85

Estimated Taxes Without Exemptions: \$23,099 01

Owner: 4P PASTURES LLC %Ownership: 100,0%

Hamilton CAD Property Search

Market

Taxable

\$278,190

\$278,045

\$278,190

\$278,190

Estimated

\$237.28

\$2,379.08

50.00

The 2025 appraisal roll values are subject to change and are not certified. Information provided for research

0 085295 51,685,450

0.855200 \$1,685,450

O CODDOD \$1.685.460

purpoxes 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

Tax Rate

Hamilton CAD Property Search

Property Details

Account

Property ID: 19987
Туре: R

Geographic ID: 260000000000844001

Zoning:

Property Use:

Location

Situs Address: OR 3231 HICO, TX 78457

Map (D): HIS Mapsoo:

Legal Description: 43 ED BALL; ACRES: 326 86

Abstract/Subdivision: A00043

Neighborhood: (HICO) HICO STUDY

Owner

Owner |D: 36160

Name: 4P PASTURES LLC

Agent:

Mailing Address: 4483 E FM 219 HICO, TX 76457

% Ownership: 100 0%
Exemptions: AB -

For privacy reasons not all exemptions are shown online

■ Property Values

Improvement Homesite Value: 30 (+) Improvement Non-Homesite Value: \$231,890 (+) Land Homesite Value; Land Non-Homestic Value: 30 (+) Adricultural Market Valuation: \$1,453,560 (+) Market Value: \$1,685,450 (=) Agricultural Value Loss:@ \$1,407,260 (-) Appraised Value:® 3278.190 (=) HS Cap Loss: 🛭 \$0 (-)

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https://www.spiphernttorusedorg/property/view/199977printView~delail

\$0 (-)

\$278,190

\$46,300

Freeze

Ceiling

17025 11:24 AN

Hamilton CAD Property Search

■ Property Improvement - Building
Description: OPEN POLE SHED DT Type: Misc Imp Living Area: 2772.0 sqft Value: \$231,890

•	• • • • • • • • • • • • • • • • • • • •			
Туре	Description	Class CD	Year Built	SQF7
BHED	MA	SHED2	1980	4800
мн	мн	MH2	2 02 2	924
MH	МН	MH2	2022	924
MH	MH	MH2	2022	924
PORCHES	PORCHES	CNF3	2027	64
PORCHES	PORCHES	MH2	2022	64
PORCHES	PORCHES	MH2	2022	64

Property Land

Турс	Description	Acreage	₽p2	Eff Front	Eff Daplh	Market Value	Prod. Value
NP	NATIVE PASTURE	80 00	3,464,800 00	0 00	0.00	\$355,700	\$7,520
CROP	CROP	246 66	10,753,221.60	0.00	0.00	\$1,097,800	\$36,780

25, 11:24 AM	1					
R Prop	erty Roll Value	History				
Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap Loss	Assessed
2025	\$281,890	\$1,453,680	846.300	\$278.190	\$0	\$278,190
2024	\$298 610	\$1,572,690	\$50,790	8287,400	\$0	\$287,400
2023	\$20.800	\$1,899,900	\$44.470	\$65.270	\$0	\$65,270
2022	\$21,130	\$1,859.900	544.470	\$65.600	\$0	\$65,600
2021	\$14,920	3980.580	\$44,470	\$58,390	\$0	\$59,390
2020	\$15.140	\$932,580	\$44 470	\$59,610	\$0	\$58,610
2019	\$3,070	\$980,580	\$33,240	\$36,310	\$0	\$36,310
2D16	\$3,070	\$817,150	\$33,240	\$36,310	\$0	335,310
2017	30	\$500 000	\$17.410	\$17,410	\$0	\$17.410

■ Property Deed History

Deed Date	Type	Description	Grantor	Grantee	Volume	Page	Number	
5/31/2022	SWŌ	SPECIAL WARRANTY DEED	DE JONG DAVID & LESLIE	4P PASTURES LLC	611	600	20221292	
2/22/2018	WD	WARRANTY DEED	GLIDEWELL BILLY	DE JONG DAVID & LESUIE	530	16	0346	
10/19/2015	LIFE	ENHANCED LIFE ESTATE	GLIDEWELL BILLY	GLIDEWELL BILLY	502	746	1680	

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Hamilton CAD Property Search

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0.085295 \$1,015,930

0 430000 \$1,015,930

0.855200 \$1.015,930

0.000000 \$1,015,930

Market

Value

Taxable

\$23,050

\$23,041

\$23,050

\$23,050

Value

Estimated

Так

\$19.66

\$99.08

\$197.12

so no

Tax Rate

Circuit Breaker: @

Assessed Value:

Ag Use Value:

accuracy.

Entity Description

SHI HICO (SD

DISTRICT

GHA HAMILTON COUNTY

CAD County Appreisal District

Total Tex Rato: 1 370495

EHI

■ Property Taxing Jurisdiction

HICO EMERGENCY SERVICE

Estimated Taxes With Exemptions: 5315 86

Eshmated Taxes Without Exemptions: \$13,923 27

Owner: 4P PASTURES LLC %Ownership: 100 0%

Hamilton CAD Property Search Property Details

Account Property ID:

20453 R

Geographic ID: 26000000001496001

Zoning:

Марисо:

Property Use:

Location

Type:

Situs Address;

Legal Description:

468 R KENNEDY; ACRES: 154 57

Abstract/Subdivision: A00468

Neighborhood:

(HICO) HICO STUDY

Owner

36160 Owner (D;

Name:

4P PASTURES LLC

Mailing Address:

4483 E FM 219 HICO, TX 78457 100 0%

% Ownership: Exemptions:

For privacy reasons not all exemptions are shown online

50 (+)
30 (+)
30(+)
\$0 (+)
\$1,015,930 (+)
\$1,015,930 (=)
\$992,880 (-)
\$23,050 (=)
5 0 (-)

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50 (-)

\$23,050

\$23,050

Freeze

Gelling

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■ Pr	operty Land						
Туре	Description	Acreage	9qft	Eff Front	Eff Depth	Market Value	Prod, Value
NP	NATIVE PASTURE	19 57	852,469 20	0.00	0.00	\$128,630	\$1.840
CROP	CROP	135 00	5,880,600.00	0.00	0.00	\$897,300	\$21,210

Pro	perty Roll Value	History				
Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap Losa	Assessed
2025	ŝO	\$1,015,930	\$23,050	323,050	30	\$23,050
2024	30	\$975,350	\$25,880	\$25,880	\$0	\$25,880
2023	so	8955,780	\$22,500	\$22,560	\$0	\$22,560
2022	\$0	\$987,520	\$22.500	\$22,560	30	\$22,560
2021	so	\$463,710	\$22,500	\$22,560	\$0	\$22,560
2020	\$o	\$451,970	\$22,560	\$22,560	80	\$22,560
2019	80	\$463,710	516,420	516,420	50	\$16,420
2018	50	\$386,430	516,420	816,420	50	\$16,420
2017	02	\$386,430	\$16,420	\$16,420	so	\$16,420

1	Prop	erty I	Deed History					
	Deed Date	Туре	Description	Grantor	Grantee	Volume	Page	Number
5	31/2022	SWD	SPECIAL WARRANTY DEED	DE JONG DAVID	4P PASTURES LLC	611	600	20221292
4.	13/2017	WD	WARRANTY DEED	RIENSTRA FAMILY TRUST	DE JONG DAVID	520	623	0504
:	9/3/2004	WD	WARRANTY DEED	FOSTER COLLEEN	RIENSTRA FAMILY TRUST	376	48	0

Hamilton CAD Property Search

Property Details

Account

19628 Property IO: Geographic ID: 26000000000358001

Ргорепу Цже:

Location

Situs Address: CR 3214 FAIRY TX

Map ID: HI6 Manago: 693 ROBERT M WILLIAMS; ACRES: 150 00 Legal Description:

Abstract/Subdivision: A00B93

(HICO) HICO STUDY

Owner

Neighborhood:

Owner ID: 19939

Name: MAYHUGH EDDIE F & ROXIE R

Agent:

Mailing Address: D/O MIKE MAYHUGH

PO BOX 672 HENDERSON, TX 75853

% Ownership: 100 0%

Exemplians:

III Daniel and Addieses

Appraised Value:@

HS Cab Loss: @

For privacy reasons hot all exemptions are shown online

roperty values	
Improvement Homesite Value:	\$0 (+)
Improvement Non-Homesite Value:	\$0 (+)
Land Homesite Value:	50 (+)
Land Non-Homealte Value:	\$0 (+)
Agricultural Market Valuation:	\$944,350 (+)
Market Value:	\$944,350 (=)
Agricultural Value Lossat	5930,260 (-)

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Circuit Breaker: O

Assessed Value: \$14,090 Ag Use Value:

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 fegal purpose and or documents. Please contact the Appraisal District to verify all information for accuracy.

■ Property Taxing Jurisdiction

Owner: MAYHUGH EDDIE F & ROXIE R %Ownership: 100.0%

Entity	Description	Tax Rate	Market Value	Taxable Value	Estimated Tax	Freeze Celling
EHI	HICO EMERGENCY SERVICE DISTRICT	0 085295	\$944,350	\$14,090	\$12.02	
GHA	HAMILTON COUNTY	0.430000	\$944,350	\$13,948	\$59.98	
SHI	HICO ISD	0 655200	\$944,350	\$14,090	\$120,50	
CAD	County Appraisal Disinct	0.000000	\$944,350	\$14,090	\$0.00	

Total Tax Rate: 1 370495

\$14,090 (=)

\$0 (-)

Estimated Taxes With Exemptions: \$192.50

Estimated Taxes Without Exemptions \$17,942.26

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7/1/25.11.26 AM			Ifon	Hernfiton GAD Property Search					
M P	roperty Land								
Туре	Description	Acreage	Sqft	Eff Front	Eff Depth	Market Value	Prod. Value		
NP	NATIVE PASTURE	150 00	6.534,000.00	0.00	0.00	\$914.350	\$14 090		

5. 11:26 At	×		Homelton CAID F					
■ Property Roll Value History								
Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap Loas	Assessed		
2025	.50	\$944,350	\$14,090	514,090	\$0	\$14,090		
2024	\$0	\$750,000	\$11,730	\$11,730	\$0	\$11,730		
2023	\$0	\$600,000	\$10,950	\$10,950	50	\$10.950		
2022	\$0	\$690,000	\$10,950	\$10,950	\$0	\$10,850		
2021	5 D	\$450,000	\$10,950	\$10,950	\$0	\$10.950		
2020	\$0	\$350,000	\$10,950	\$10,950	\$0	\$10,950		
2019	\$ 0	\$450,000	\$10,950	\$10,950	\$0	\$10,950		
2018	\$0	\$375,000	\$10,950	\$10,950	\$0	\$10,950		
2017	\$0	\$375,000	\$10,950	\$10,950	\$0	\$10.950		

7/1/25, 11:28 AM Hamilton CAD Proporty Soon

Hamilton CAD Property Search

Property Details

Account

Property ID: 20459 Geographic ID: 25000000001\$12001

Type: R Zoning:

Property Use: Location

Situs Address: FM 1744 CARLTON, TX 76436

Map ID: HI4 Map soo:

Legal Description: 857 J 8 WALDEN; Acres 214 80

Abstract/Subdivision: A00657

Neighborhood: (HICO) HICO STUDY

Owner

Owner (D; 36160

Name: 4P PASTURES LLC

Agent:

7/1/25 11:29 553

Malking Address: 4463 E FM 219 HICO, TX 76467

% Ownership: 100 0%
Exemptions: AB -

For privacy reasons not all exemptions are shown online

■ Property Values

\$0 (+)
\$0 (+)
\$0 (+)
\$0 (+)
\$1,121.540 (+)
\$1,121 640 (=)
\$1,100,280 (-)
\$21,260 (=)
SD (-)

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Ag Use Value: \$21,260

Ag Use Value: \$21,260

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 recordly 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: 4P PASTURES LLC %Ownership: 100,0%

Homiton GAD Property Search

\$0 (-)

2/10

Entity	Description	Tex Rate	Market Value	Taxable Value	Esilmated Tax	Freeze Celling
EHI	HICO EMERGENCY SERVICE DISTRICT	0 085295	\$1,121,540	\$21,260	\$18 13	
GHA	HAMILTON COUNTY	0.430000	\$1.121,540	\$20.923	48 9 97	
SHI	HICO ISD	0 855700	\$1,121,540	\$21,260	\$181.82	
CAĐ	County Apprecial District	0.000000	\$1,121,540	\$21.260	\$0.00	

Total Tax Rate; 1.870485

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Circuit Breaker: @

Estimated Taxes With Exemptions: \$289.92

Estimated Taxes Without Exemptions: \$15,370.65

11 112.2, 11.2	SAIN .	perty Land escription Acreage Sqfi	amon axa i folial di marai						
₩ P	roperty Land								
Турс	Description	Acreage	Sqfl	Eff Front	Eff Depth	Markot Value	Prod. Value		
IMP	IMPROVEO PASTURE	214 80	9,356.688.00	0 00	0.00	\$1,121.540	\$21,260		

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25. 11:26 AM						
Prop	erty Roll Value	History				
Year	Improvementa	Land Market	Ag Valuation	Appraised	HS Cap Loss	Assesse
2025	\$0	\$1,121,540	\$21,260	\$21,260	\$0	\$21.28
2024	\$0	\$1,018,920	\$23,450	\$23,450	\$0	\$23.45
2023	\$0	\$1,018,920	\$22,420	\$22,420	\$0	\$22,42
2022	3-0	\$1,018,820	\$22 420	\$22,420	\$0	\$22,42
2021	\$0	\$643,530	\$22.420	\$22,420	\$0	12 2,42
2020	\$0	\$643,530	\$22 420	\$22,420	5.0	\$22,42
2019	\$0	\$643,530	\$23.510	\$23,510	\$ 0	\$29.51
2018	30	\$536 280	\$23,510	\$23,510	\$40	\$23,51
2017	\$0	\$596,260	\$23,510	\$23,510	\$0	\$23,51

MILIOP	CL CY L	Deed History					
Deed Date	Туре	Description	Grantor	Grantee	Volume	Page	Number
4/1/2025	₩D	WARRANTY DEED	WATSON STEVEN & SONS INC	4P PASTURES LLC	656	150	20250521
2/25/2005	OT	OWNER TRANSFER	JONES RICHARD C & ESTHER	WATSON STEVEN & SONS INC	382	140	G

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7/1/25, 11:29 AM

Circuit Breaker: @

Assessed Value:

An Use Value:

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Entity Description

ΕHI

SHI

Property Taxing Jurisdiction

HICO EMERGENCY SERVICE DISTRICT

Estimated Taxes With Exemptions: \$199.06

Estimated Taxes Without Exemptions: \$10,733.72

HAMILTON COUNTY

GAD — County Appraisal District

Total Tax Rate: 1 370495

HICO ISD

Owner: 4P PASTURES LLC %Ownership: 100 0%

Hamilton GAD Property Search

Market

\$783,200

\$783,200

\$783,200

\$783,200

Toxoblo

\$14,460

\$14,434

\$14,46D

514,460

Estimated

\$12.33

\$62.07

\$123.66

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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

Tax Rate

0 065295

0 430000

0.855200

0.000000

\$0 (-)

514,460

\$14,460

Freeze Colling

Property Details

Account

Property ID: 21274 Туре: R

Hamilton CAD Property Search

Geographic ID: 26000000005016001

Zoning:

Property Use:

Location

Situs Address: FM 1744 CARLTON, TX 76436

Mapseo:

Legal Description: 657 J B WALDEN; Agres: 150

Abstract/Subdivision: A00857

Neighborhood:

(HICO) HICO STUDY

Owner

36160 Owner ID: 4P PASTURES LLC

Name:

Agent: Mailing Address:

4463 E FM 219 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 (+)
1.and Homestle Valte:	\$0 (+)
Land Non-Homesite Value;	\$0 (4)
Agricultural Market Valuation:	\$783,200 (*)
Market Value:	\$783,200 (=)
Agricultural Value Loss:®	\$768,740 (-)
Appraised Value:®	\$14,460 (=)
HS Cap Loss: ❷	\$0 (-)

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7/1/25 11:2	7/1/25, 11:29 AM			Hamilton CAO Property Seprets						
MP	roperty Land									
Турю	Description	Acreage	Sqft	Eff Front	Eff Depth	Market Value	Prod. Value			
NP	NATIVE PASTURE	77 00	3,354,120.00	0 00	0.00	5402,040	\$7,230			
IMP	IMPROVED PASTURE	73 00	3,179,880.00	0.00	0.00	\$381,160	\$7,230			

Year	Improvements	Land Merket	Ag Veluetion	Appraised	HS Cap Loss	Assesses
2025	30	\$783,200	\$14,460	\$14,460	\$0	\$14,480
024	50	\$731,750	\$14,000	\$14,000	\$0	\$14,00
2023	80	\$654,750	\$13,250	\$13,250	30	\$13,25
2022	50	\$616,250	\$13,250	\$13,250	80	\$13,25
021	404	\$450,000	\$13,250	\$13,250	50	\$13,25
020	\$0	\$403,800	\$13,250	\$13,250	\$0	\$13,25
019	\$0	\$450,000	\$13,720	\$13,720	\$0	\$13,72
018	\$0	\$375,000	\$13,720	\$13,720	20	\$13,72
2017	\$0	\$375,000	\$13,720	\$13,720	\$0	\$13.72
Prop	erty Deed Hist	ory				
Deed Date	Type Description	Grantor	Gran	ntee	Volume Pag	e Numbe
1/1/2025	WD WARRANTY	/ WATSON S	STEVEN & 4PF	ASTURES LLC	656 15	0 2025052

Hamilton CAD Property Search

7/1/25, 11:19 AM

Hamilton CAD Property Search

Hamilton CAD Property Search

Property Details

Property 10:

19720

Geographic ID; 26000000000488001

Zoning:

Марасо:

Property Use:

Location

Type:

Situs Address: CR 3232 TX

Map ID: HI7

Legal Description: 745 S SMITH; Aures 48 32

Abstract/Subdivision: A00745 Neighborhood:

(HICO) HICO STUDY

Owner

3616D

4P PASTURES LLC

Agent:

1/625, 11:18 AM

Mailing Address: 4463 E FM 219 HICO, TX 76457

% Ownership: 100 0%

Exemptions: For privacy reasons not all exemptions are shown online

■ Property Values	
Improvement Homesite Value;	50 (+)
Improvement Non-Homesite Value:	\$0 (*)
Land Homesite Value;	\$0 (*)
Land Non-Homesite Value:	\$0 (*)
Agricultural Market Valuation.	\$240.720 (+)
Market Value:	\$240.720 (=)
Agricultural Value Loss:•	\$233,130 (-)
Appreled Value: 9	\$7,590 (=)
НЅ Сәр Lовь: ₽	\$0 (-)
Circuit Breaker: 9	\$D (-)

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Hamilton CAD Property Search

MPn	operty Land						
Type	Description	Acreage	Sqft	Eff Front	Eff Depth	Market Value	Prod. Value
CROP	CROP	48 32	2,104,819 20	D 00	0.00	\$240,720	\$7,690

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Assessed Value:

\$7,590

Ag Use Value: \$7,590

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Property Taxing Jurisdiction

Owner: 4P PASTURES LLC %Ownership: 100 0%

Entity	Description	Yax Rate	Markel Value	Taxable E Value	allmated Tak	Fréeze Celling
EHI	HICO EMERGENCY SERVICE DISTRICT	0 085785	\$240,720	\$7,590	\$6 47	Cenny
GHA	HAMILTON COUNTY	0.430000	\$240,720	\$7.590	\$32.64	
SHI	HICO ISD	0 855200	\$240,720	\$7,590	\$64.91	
GAD	County Appraisa District	0.000000	\$240,720	\$7,590	\$0.00	

Estimated Taxes With Exemptions: \$104.02

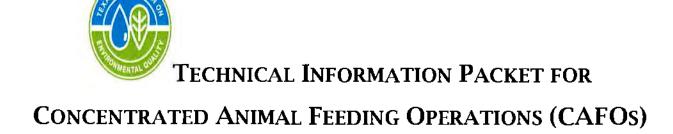
Estimaled Taxea Without Exemptions: \$3,299 05

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5, 11:19 AW			Hamilton CAD I	Property Search		
Property Roll Value History						
Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap Loss	Assesse
2025	30	\$240.720	\$7,590	\$7,580	\$0	\$7,59
2024	30	\$308,250	\$8 720	\$8,720	80	\$8,720
2073	\$0	\$309,250	\$7,56 0	\$7,560	\$0	\$7,56
2022	\$0	\$308,250	\$ / 580	\$7,560	80	\$7,56
2021	50	\$144,960	\$7,560	\$7,560	\$0	\$7,56
2020	ŝo	\$144,960	\$7 560	\$7,580	50	\$7,58
2019	20	\$144,960	\$5,360	\$5,980	50	\$5,38
2018	\$0	\$120,800	\$5,360	\$5,360	80	\$5,36
2017	50	\$120,800	\$5,360	\$5,360	90	\$5,36

Propi	erty (Deed History					
Oeed Dale	Туре	Description	Grantor	Grantee	Volume	Page	Number
5/31/2022	SWD	SPECIAL WARRANTY DEED	DE JONG DAVID & LESLIE	4P PASTURES I LC	811	600	20221292
5/11/2017	WD	WARRANTY DEED	OJC HAMILTON LLC	DE JONG DAVID & LESLIE	521	584	0753
1/17/2017	WD	WARRANTY DEED	CLARK CLYDE MILTON 8	OJĆ HAMILTON LLC	517	175	0079



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

Name of Site: Horizon Dairy

TCEQ Permit Number, if assigned: WQ000 4842000

Date Prepared: August 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 Pit	See Attached BMPs

SECTION 2. RETENTION CONTROL STRUCTURE DESIGN

A. Design Summary

 Design Standards, Characteristic, and Values So)	Design Standards	Characteristic	and Values Sour	ces Hsed
---	---	------------------	----------------	-----------------	----------

- ☐ Natural Resource Conservation Service
- ☑ Other; specify: <u>Midwest Plan Services</u>

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 Sonrces:

Potential Best Management Practices (BMPs)

Manure, Sludge, Stockpiles, Slurry,	Temporary (< 30 days) & Permanent Storage (>30 days)
Bedding, Feed Waste & Compost	Store in drainage area of the RCS - OR -
Bedding, reed waste & Compost	· ·
	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.
	Utilize dust abatement measures for feed handling equipment, Utilize choke
	feeding when handling feed ingredients & Utilize feed ingredients, such as
Dust - Feed Handling/Processing	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
	Carcasses buried at least 3 feet below the natural surface of the ground.
Burial Pits	Covered with 3 feet of native soil.

2) Total Number of Animals:

In Open Lots: 2,500 In Buildings: 7,500

3) Animal Housing Location, hours/day:

Opeu Lots: 22 Buildings: 2

- 4) Average Liveweight, pounds per head: 1,400 lbs
- 5) Volatile Solids Removed by Separator System: 50% Primary; 40% Secondary
- 6) Volatile Solids Loading Rate, lbs/day/1000 ft³: 5.0

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

8) Water for Cleanup, gallons/day: <u>112,500 gal/day</u>

9) Water for Manure Removal, gallons/day: <u>Included in cleannp water</u>

10) Recycled Wastewater, gallons/day: \underline{o}

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

 - \square Other; specify:

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

Table 2. RCS Volume Allocations (Acre-Feet)

RCS	Design	Process	Minimum	Sludge	Water	Required	Actual
Name	Rainfall	Generated	Treatment	Accumulation	Balance	Capacity	Capacity
	Event	Wastewater	Volume				
	Runoff						
1	0.00	0.00	14.63	2.29	0.00	16.93*+	17.52
2A	0.00	10.36	0.00	0.68	0.00	11.04+	62.99
2B	79.73	0.00	0.00	0.00	23.32	103.04*+	117.81
3	12.42	0.00	0.00	0.12	1.76	14.30	15.02
						*Rounded	
						Figure	
						+Phase 1	

Indicate which RCSs are in-series: RCS #1, RCS #2A and RCS #2B

2) Total Number of Animals:

In Open Lots: 2,500 In Buildings: 7,500

3) Animal Housing Location, hours/day:

Open Lots: 22 Buildings: 2

- 4) Average Liveweight, pounds per head: 1,400 lbs
- 5) Volatile Solids Removed by Separator System: 90.12%
- 6) Volatile Solids Loading Rate, lbs/day/1000 ft³: <u>5.0</u>

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

8) Water for Cleanup, gallons/day: 112,500 gal/day

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

10) Recycled Wastewater, gallons/day: <u>o</u>

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

 - ☐ Other; specify: Click bere to enter text.

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

Table 2. RCS Volume Allocations (Acre-Feet)

RCS	Design	Process	Minimum	Sludge	Water	Required	Actual
Name	Rainfall	Generated	Treatment	Accumulation	Balance	Capacity	Capacity
	Event	Wastewater	Volume				
	Runoff						
2B	0.00	0.00	68.29	23.44	0.00	91.74*~	117.81
2C	91.58	23.71	0.00	0.68	37.07	153.04~	TBD
3	12.42	0.00	0.00	0.12	1.76	14.30	15.02
						*Rounded	
						Figure	
						~Phase 2	

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

2) Total Number of Animals:

In Open Lots: 2,500 In Buildings: 7,500

3) Animal Housing Location, hours/day:

Open Lots: 22 Buildings: 2

- 4) Average Liveweight, pounds per head: <u>1,400 lbs</u>
- 5) Volatile Solids Removed by Separator System: 50% Primary; 40% Secondary
- 6) Volatile Solids Loading Rate, lbs/day/1000 ft³: 5.0

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

8) Water for Cleanup, gallons/day: <u>112,500 gal/day</u>

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

10) Recycled Wastewater, gallons/day: <u>o</u>

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

 - □ Other; specify: Click hour technology.

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

Table 2. RCS Volume Allocations (Acre-Feet)

RCS	Design	Process	Minimum	Sludge	Water	Required	Actual
Name	Rainfall	Generated	Treatment	Accumulation	Balance	Capacity	Capacity
	Event	Wastewater	Volume				
	Runoff						
2B	0.00	0.00	14.63	2.29	0.00	16.92*^	117.81
2C	91.58	10.36	0.00	0.68	23.28	125.90^	TBD
3	12.42	0.00	0.00	0.12	1.76	14.30	15.02
						*Rounded	
						Figure	
						^Bypass	

Indicate which RCSs are in-series: RCS #2B and RCS #2C

D. RCS Liner or Lack of Hydrologic Connection Certification

Table 3: RCS Hydrologic Connection

RCS Name	Construction Date	Type of Hydrologic Connection Certification
1	1994	Liner Cert., Norman Mullin, P.E., 2008
2A	1994	Liner Cert., Norman Mullin, P.E., 2010
2B	2009	Liner Cert., Norman Mullin, P.E., 2009
3	2009	Liner Cert., Norman Mullin, P.E., 2009
Settling Basins #1-4	2011	Liner Cert., Norman Mullin, P.E., 2011
Slurry Pit #1	2021	Liner Cert., Norman Mullin, P.E., 2021

E.	Playa	Lakes
-----------	-------	-------

. 1 11 10 2000		
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: ()			
2)	Land Application Location:			
	oxtimes Onsite $oxtimes$ Offsite $oxtimes$ Not Applicable			
3)	Composting Location:			
	⊠ Onsite □ Offsite □ Not Applicable			
Sludge				

B. Sludge:

- 1) Use or Disposal Method:
 - oxdim Land Application to LMUs
 - oxdot Transfer to other persons
 - oxdiv Third Party Fields
 - □ Other; specify:

2)	Lar	nd Applicat	ion Locatioi	n:
	\boxtimes	Onsite 🗵	Offsite □	Not Applicable

C. Wastewater:

- 1) Use or Disposal Method:
 - □ Land Application to LMUs
 - ☐ Total Evaporation
 - □ Third Party Fields
 - □ Other; specify: Class Separation 1.2
- 2) Land Application Location:
 - oximes Onsite oximes Offsite oximes 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

	_		Application Rate (Ac-
LMU Name	Acre	Crop(s) and Yield Goal(s)	ft/Ac/Year OR
			Tons/Ac/Year)
1	102	Silage-Corn 16-20T; SG Green Chop	0.175 Ac-ft/Ac/Yr
		6-7T	
1 A	36	Coastal GC 9-11T; SG GC 6-7T M	44.3 Tons/Ac/Yr
2A	60	Coastal GC 9-11T; SG GC 6-7T M	44.3 Tons/Ac/Yr
2B	105	Coastal GC 9-11T; SG GC 6-7T M	0.283 Ac-ft/Ac/Yr
2C	73	Coastal GC 9-11T; SG GC 6-7T M	0.283 Ac-ft/Ac/Yr
3A	104	Coastal GC 9-11T; SG GC 6-7T M	44.3 Tons/Ac/Yr
3B	142	Coastal GC 9-11T; SG GC 6-7T M	0.283 Ac-ft/Ac/Yr
3C	38	Coastal GC 9-11T; SG GC 6-7T M	0.283 Ac-ft/Ac/Yr
4	56	Coastal graze 1 AU/lac; SG Mod	44.3 Tons/Ac/Yr
		Graze M	
5	37	Coastal GC 21-23T; SG GC 6-7T H	66.5 Tons/Ac/Yr
6	65	Coastal GC 21-23T; SG GC 6-7T M	66.5 Tons/Ac/Yr
7	65	Coastal GC 21-23T; SG GC 6-7T M	66.5 Tons/Ac/Yr
8	84	Coastal GC 21-23T; SG GC 6-7T M	66.5 Tons/Ac/Yr
9	20	Coastal GC 21-23T; SG GC 6-7T M	66.5 Tons/Ac/Yr
10	120	Silage-Sorg 11-15T; SG Green Chop	44.3 Tons/Ac/Yr
		6-7TM	

C. Wastewater:

- 1) Use or Disposal Method:
 - □ Land Application to LMUs
 - □ Total Evaporation
 - □ Third Party Fields
 - □ Other; specify: Click here to enter test
- 2) Land Application Location:
 - oximes Onsite oximes Offsite oximes 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

			Application Rate (Ac-
LMU Name	Acre	Crop(s) and Yield Goal(s)	ft/Ac/Year OR
			Tons/Ac/Year)
1	102	Silage-Corn 16-20T; SG Green Chop	0.3 Ac-ft/Ac/Yr
		6-7T	
1A	36	Coastal GC 9-11T; SG GC 6-7T M	44.3 Tons/Ac/Yr
2A	60	Coastal GC 9-11T; SG GC 6-7T M	44.3 Tons/Ac/Yr
2B	105	Coastal GC 9-11T; SG GC 6-7T M	0.467Ac-ft/Ac/Yr
2C	73	Coastal GC 9-11T; SG GC 6-7T M	0.458 Ac-ft/Ac/Yr
3A	104	Coastal GC 9-11T; SG GC 6-7T M	44.3 Tons/Ac/Yr
3B	142	Coastal GC 9-11T; SG GC 6-7T M	0.458 Ac-ft/Ac/Yr
3C	38	Coastal GC 9-11T; SG GC 6-7T M	0.458 Ac-ft/Ac/Yr
4	56	Coastal graze 1 AU/1ac; SG Mod	44.3 Tons/Ac/Yr
		Graze M	
5	37	Coastal GC 21-23T; SG GC 6-7T H	66.5 Tons/Ac/Yr
6	65	Coastal GC 21-23T; SG GC 6-7T M	66.5 Tons/Ac/Yr
7	65	Coastal GC 21-23T; SG GC 6-7T M	66.5 Tons/Ac/Yr
8	84	Coastal GC 21-23T; SG GC 6-7T M	66.5 Tons/Ac/Yr
9	20	Coastal GC 21-23T; SG GC 6-7T M	66.5 Tons/Ac/Yr
10	120	Silage-Sorg 11-15T; SG Green Chop	44.3 Tons/Ac/Yr
		6-7TM	_

LMU Name	Acre	Crop(s) and Yield Goal(s)	Application Rate (Ac- ft/Ac/Year OR Tons/Ac/Year)
11	22	Coastal GC 9-11T; SG GC 6-7T M	44.3 Tons/Ac/Yr
13	90	Coastal GC 9-11T; SG GC 6-7T H	44.3 Tons/Ac/Yr
14	77	Coastal GC 9-11T; SG GC 6-7T H	44.3 Tons/Ac/Yr
15	58	Coastal GC 9-11T; SG GC 6-7T H	44.3 Tons/Ac/Yr
16	85	Silage-Sorg 11-15T; SG Green Chop 6-7T H	0.283 Ac-ft/Ac/Yr
17	85	Silage-Corn 16-20T; SG Green Chop 6-7T M	0.308 Ac-ft/Ac/Yr
18	113	Silage-Sorg 11-15T; SG Green Chop 6-7T H	44.3 Tons/Ac/Yr
20	120	Silage-Sorg 11-15T; SG Green Chop 6-7T H	44.3 Tons/Ac/Yr
21	24	Silage-Sorg 11-15T; SG Green Chop 6-7T H	44.3 Tons/Ac/Yr
23	90	Silage-Sorg 11-15T; SG Green Chop 6-7T M	0.283 Ac-ft/Ac/Yr
Mayhugh 1	70	Silage-Sorg 11-15T; SG Green Chop 6-7T M	32.8 Tons/Ac/Yr
Mayhugh 2	92	Silage-Sorg 11-15T; SG Green Chop 6-7T M	32.8 Tons/Ac/Yr
Watson 1	125	Silage-Sorg 11-15T; SG Green Chop 6-7T M	32.8 Tons/Ac/Yr
Watson 2	168	Silage-Sorg 11-15T; SG Green Chop 6-7T M	32.8 Tons/Ac/Yr

- 1) Wastewater production, ac-in/year: 3,118.92 ac-in/yr (Tables 2.3A&D, Col. 4)
- 2) Estimated Wastewater application, ac-in/year: 2,097.96 ac-in/yr (Tables 2.3A&D, Col. 10)
- 3) Manure production, tons/year: 32,394 tons/yr (Table 2.1)
- 4) Estimated manure application, tons/year: 15.980.11 tons/yr
- 5) Estimated manure transferred to other persons, tons/year: 16,413.79 tons/yr

			Application Rate (Ac-
LMU Name	Acre	Crop(s) and Yield Goal(s)	ft/Ac/Year OR
			Tons/Ac/Year)
11	22	Coastal GC 9-11T; SG GC 6-7T M	44.3 Tons/Ac/Yr
13	90	Coastal GC 9-11T; SG GC 6-7T H	44.3 Tons/Ac/Yr
14	77	Coastal GC 9-11T; SG GC 6-7T H	44.3 Tons/Ac/Yr
15	47	Coastal GC 9-11T; SG GC 6-7T H	44.3 Tons/Ac/Yr
16	85	Silage-Sorg 11-15T; SG Green Chop 6-7T H	0.467 Ac-ft/Ac/Yr
17	85	Silage-Corn 16-20T; SG Green Chop 6-7T M	0.517 Ac-ft/Ac/Yr
18	113	Silage-Sorg 11-15T; SG Green Chop 6-7T H	44.3 Tons/Ac/Yr
20	120	Silage-Sorg 11-15T; SG Green Chop 6-7T H	44.3 Tons/Ac/Yr
21	24	Silage-Sorg 11-15T; SG Green Chop 6-7T H	44.3 Tons/Ac/Yr
23	90	Silage-Sorg 11-15T; SG Green Chop 6-7T M	0.467 Ac-ft/Ac/Yr
Mayhugh 1	70	Silage-Sorg 11-15T; SG Green Chop 6-7T M	32.8 Tons/Ac/Yr
Mayhugh 2	92	Silage-Sorg 11-15T; SG Green Chop 6-7T M	32.8 Tons/Ac/Yr
Watson 1	125	Silage-Sorg 11-15T; SG Green Chop 6-7T M	32.8 Tons/Ac/Yr
Watson 2	168	Silage-Sorg 11-15T; SG Green Chop 6-7T M	32.8 Tons/Ac/Yr

- 1) Wastewater production, ac-in/year: <u>5.398.56 ac-in/yr (Tables 2.3B&D, Col. 4)</u>
- 2) Estimated Wastewater application, ac-in/year: <u>3,830.88 ac-in/yr (Tables 2.3B&D, Col. 10)</u>
- 3) Manure production, tons/year: 32,394 tons/yr (Table 2.1)
- 4) Estimated manure application, tons/year: 15,980.11 tons/yr
- 5) Estimated manure transferred to other persons, tons/year: 16,413.79 tons/yr

E. Floodplain Information

1)	Is any part of the production area within a 100-year floodplain? Yes \Box	No ⊠
If Y	ES, describe management practices to protect the sites.	

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

If YES, describe management practices. <u>Vegetative buffers shall be maintained between</u> 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
BtC, ByC, ReB, BxD, PkB	Droughty Depth to Bedrock	- Land application not to exceed agronomic rates and soil infiltration rates (refer to the nutrient management plan)
		- Maintain cover crops in LMUs.
		-Manage irrigation events to maintain soil moisture levels within the range of the available water holding capacity of the LMU.
		-No land application to inundated soils.
		-All RCSs have been certified as
		meeting TCEQ liner requirements.
ChB, ReB	Depth to Cemented Pan Droughty	- Land application not to exceed agronomic rates and soil infiltration rates (refer to the nutrient management plan)
		- Maintain cover crops in LMUs.
		-Manage irrigation events to maintain soil moisture levels within the range of the available water holding capacity of the LMUNo land application to inundated
		soils.
KrB, NuB, SaB, SsB, DnB	Slow Water Movement	- Land application not to exceed agronomic rates and soil infiltration rates (refer to the nutrient management plan)

Soil Types	Limiting Characteristics	Best Management Practices
		 - Maintain cover crops in LMUs. -No land application to inundated soils. -All RCSs have been certified as meeting TCEQ liner requirements.
NuC	Large Stones on the Surface Slow Water Movement	 - Land application not to exceed agronomic rates and soil infiltration rates (refer to the nutrient management plan) - Maintain cover crops in LMUs. -No land application to inundated soils.
OgB	Droughty Depth to Bedrock Slow Water Movement	 Land application not to exceed agronomic rates and soil infiltration rates (refer to the nutrient management plan) Maintain cover crops in LMUs. Manage irrigation events to maintain soil moisture levels within the range of the available water holding capacity of the LMU. No land application to inundated soils.
ToC, ToD, WsC	Depth to Soft Bedrock	 - Land application not to exceed agronomic rates and soil infiltration rates (refer to the nutrient management plan) - Maintain cover crops in LMUs. -Manage irrigation events to maintain soil moisture levels within the range of the available water holding capacity of the LMU. -No land application to inundated soils.
ToD	Slope	 - Land application not to exceed agronomic rates and soil infiltration rates (refer to the nutrient management plan) - Maintain cover crops in LMUs. -Manage irrigation events to maintain soil moisture levels within the range of

Soil Types	Limiting Characteristics	Best Management Practices
		the available water holding capacity of the LMUNo land application to inundated soils.

G. Well Protection

Table 6: Water Well Status and Protective Measures

Well ID	Well Type	Producing or Non-	Open, Cased,	Protective
Number	wen Type	Producing	or Capped	Measures
1	Domestic	Producing	Cased	See Attached
				Approved Well
				Buffer Exception
2	Domestic	Producing	Cased	Maintain 150-ft
				Buffer
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	Producing	Cased	Maintain 150-ft
				Buffer
7	Domestic	Non-Producing	Cased	No Evidence of Well-
				See Attached due
				diligence letter from
				Associated Well.
8	Domestic	Non-Producing	Cased	See Attached
				Plugging Report
9	Domestic	Non-Producing	Cased	See Attached
				Plugging Report
10	Irrigatio n	Producing	Cased	Maintain 100-ft
				Buffer
11	Domestic	Non-Producing	Cased	See Attached
				Plugging Report

Well ID	Mall Tames	Producing or Non-	Open, Cased,	Protective
Number	Well Type	Producing	or Capped	Measures
12	Domestic	Non-Producing	Cased	See Attached
				Plugging Report
13	Domestic	Producing	Cased	Maintain 150-ft
				Buffer
14	Domestic	Producing	Cased	Maintain 150-ft
				Buffer
1 5	Domestic	Producing	Cased	Maintain 150-ft
				Buffer
16	Domestic	Producing	Cased	Maintain 150-ft
				Buffer
17	Domestic	Producing	Cased	Maintain 150-ft
				Buffer
18	Domestic	Producing	Cased	Maintain 150-ft
				Buffer
19	Domestic	Producing	Cased	Maintain 150-ft
				Buffer
20	Irrigation	Producing	Cased	Maintain 100-ft
				Buffer
21	Irrigation	Producing	Cased	Maintain 100-ft
				Buffer
22	Irrigation	Producing	Cased	Maintain 100-ft
				Buffer
23	Irrigation	Producing	Cased	Maintain 100-ft
				Buffer
24	Irrigation	Non-Producing	Cased	See Attached
				Plugging Report
M1	Domestic	Producing	Cased	Maintain 150-ft
				Buffer
W1	Domestic	Producing	Cased	Maintain 150-ft
				Buffer

SECTION 4. AIR AUTHORIZATION SUMMARY

A. Type of Air Authorization

\boxtimes	Air Standard Permit in 30 TAC § 321.43
	Permit By Rule in 30 TAC Chapter 106 Subchapter F
	Individual Air Quality Permit
If Air Star	ndard Permit is selected, then complete Sections B and C below.

B. Indicate the AFO Status and Buffer Option.

	•	tion started after August 19, 1998: ½ mile buffer*
		¼ mile buffer" and an odor control plan
☒	Opera	ation started on or before August 19, 1998: ¼ mile buffer*
	\boxtimes	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: 3 (3 Applicant Owned)

14 - 1/2 mile: <u>11 (6 Applicant Owned)</u>

½ - 1 mile: 13 (8 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)

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

Air Standard Permit Documentation (if required) D.

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

Groundwater Monitoring (if required) E.

- Groundwater Monitoring Plan 1)
- Groundwater Monitoring Analyses 2)

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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 March 2018). The location of the facility is depicted on the map.

1.2 USGS Quadrangle Map

Figures 1.2A1-2 & B, entitled 7.5-Minute USGS Map is a seamless, high-quality copy of the 7.5-minute USGS quadrangle map (Hico, Carlton & Edison Lake, TX, quadrangles) that shows the boundaries of land owned, operated, or controlled by 4P Pastures, LLC 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.

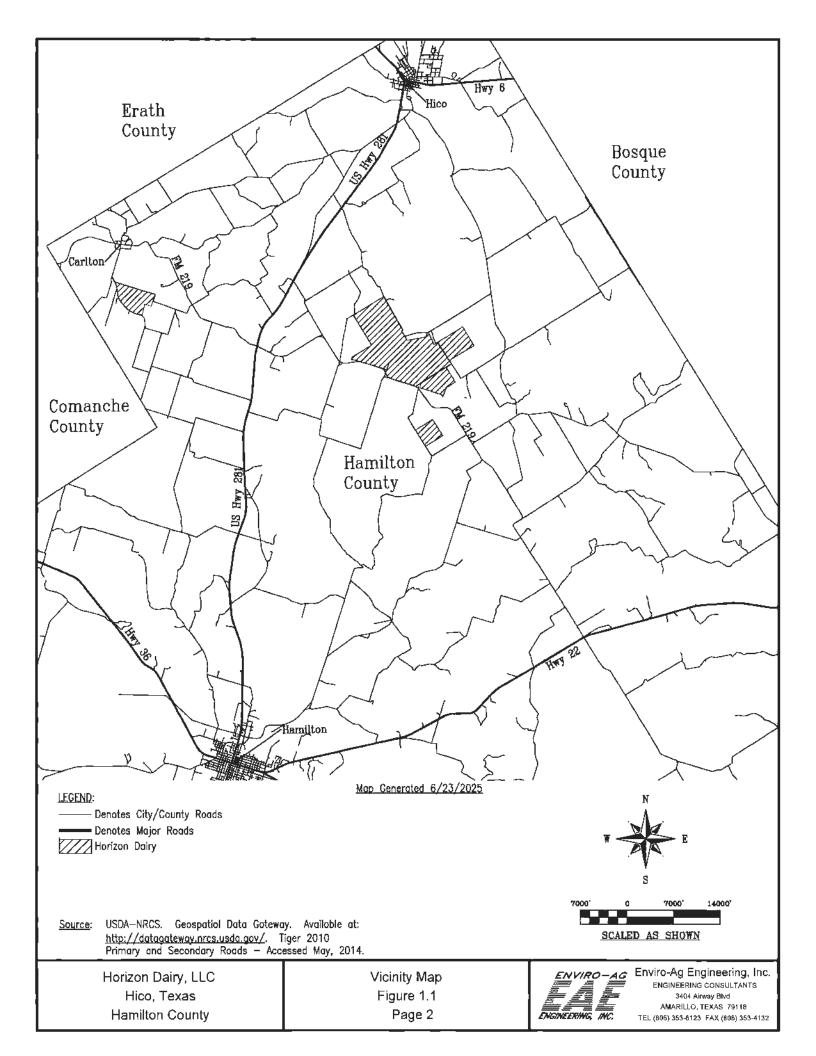
1.3 Site Map

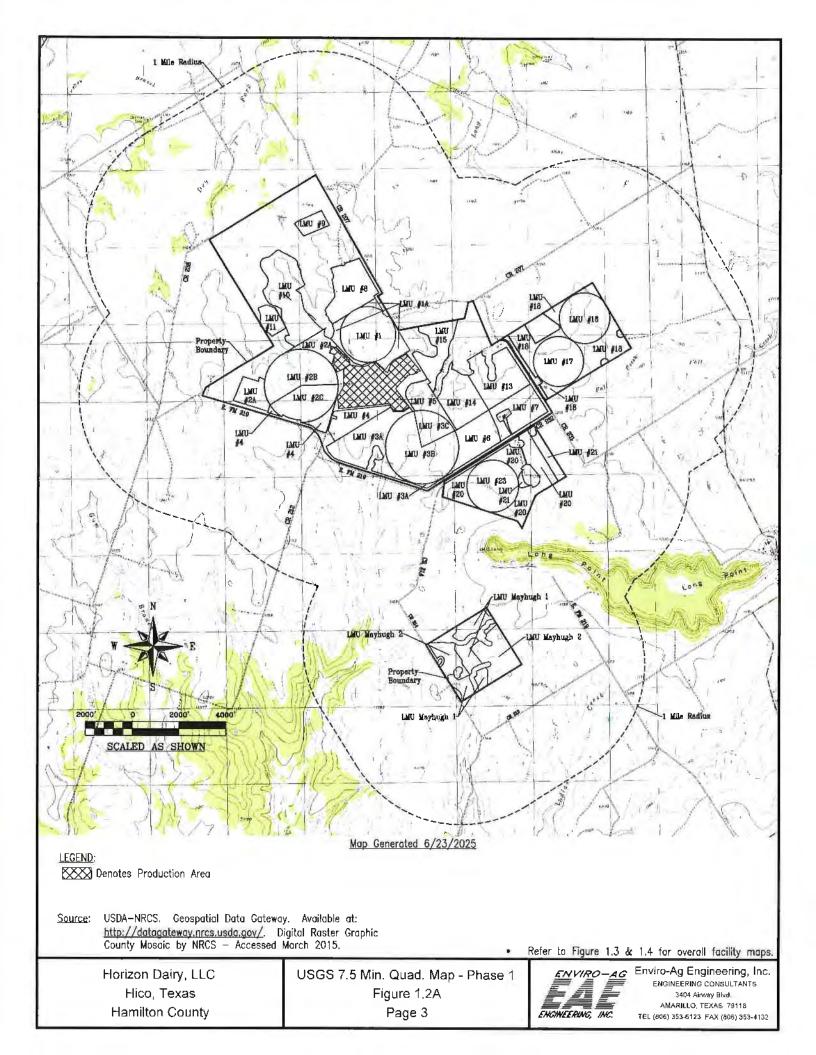
Figures 1.3A1-2, B & C Site Map, is a scaled drawing of the entire property to be permitted showing the locations of the following information:

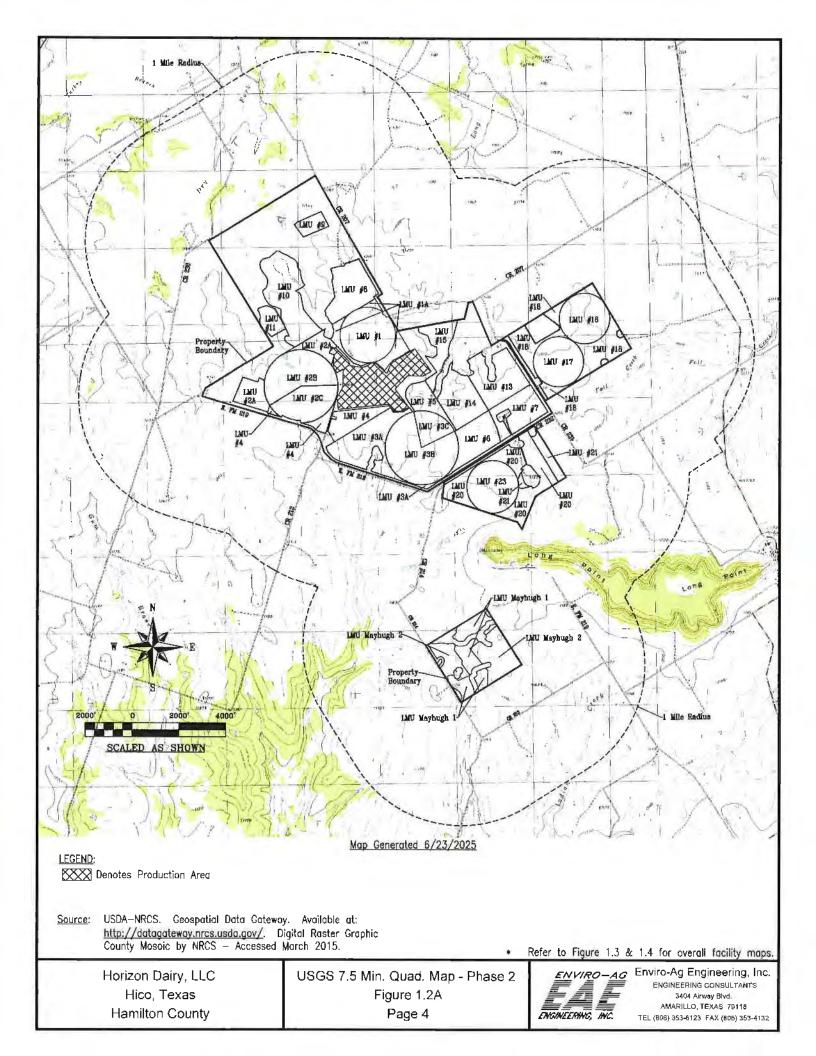
- Pens/Open Lots
- Barns
- Retention Control Structures
- Land Management Units
- Buffer zones
- Wells
- Freshwater Ponds
- Milking Parlors
- Manure/Compost Storage Areas
- Irrigation Reservoir
- Burial Pit
- Anerobic Digester

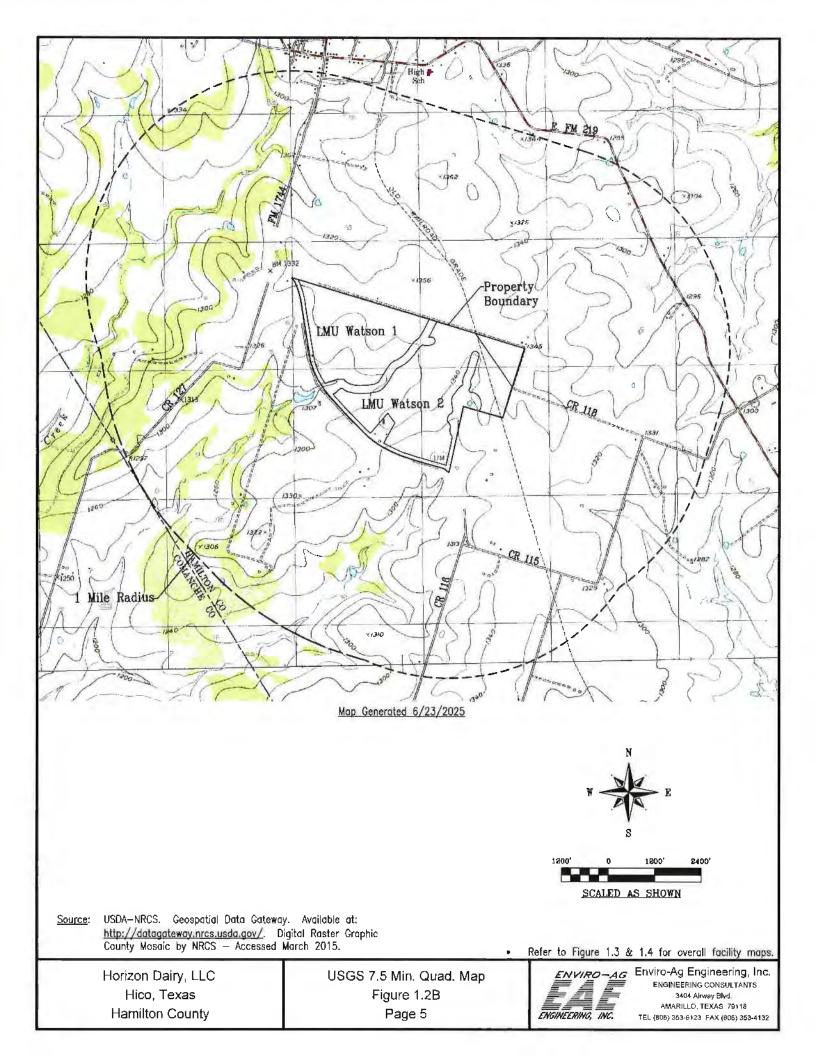
1.4 Runoff Control Map

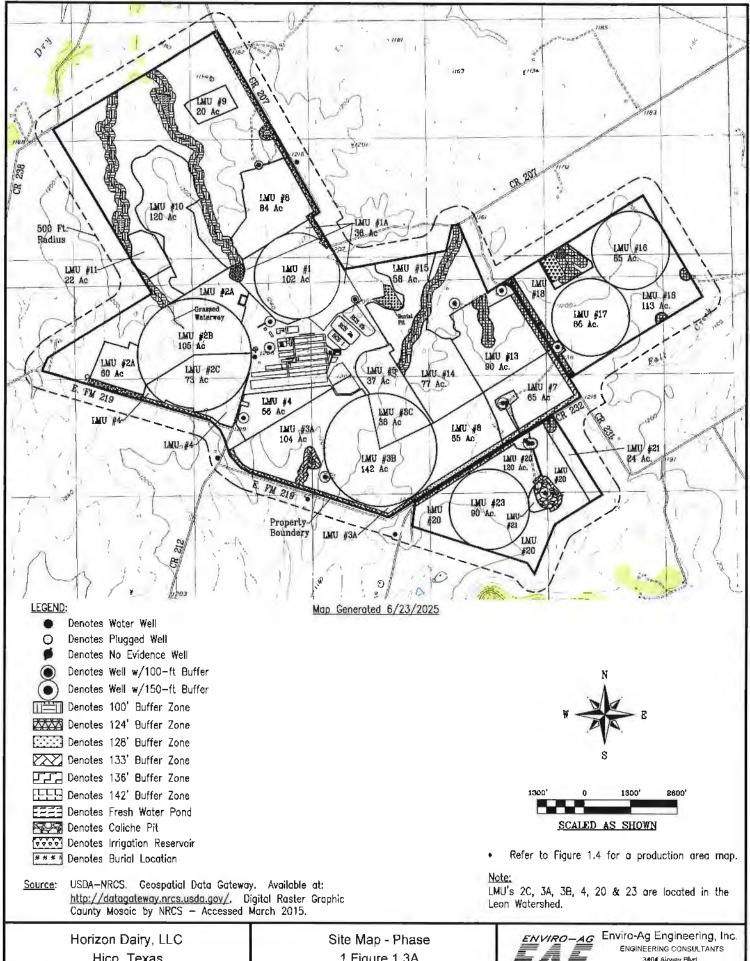
Figures 1.4A-B is a scaled drawing of the production area showing the pens, barns, wells, RCSs, permanent manure storage and compost areas, berms, silage storage area, hay storage area, anerobic digester, drainage area boundaries and flow directions.







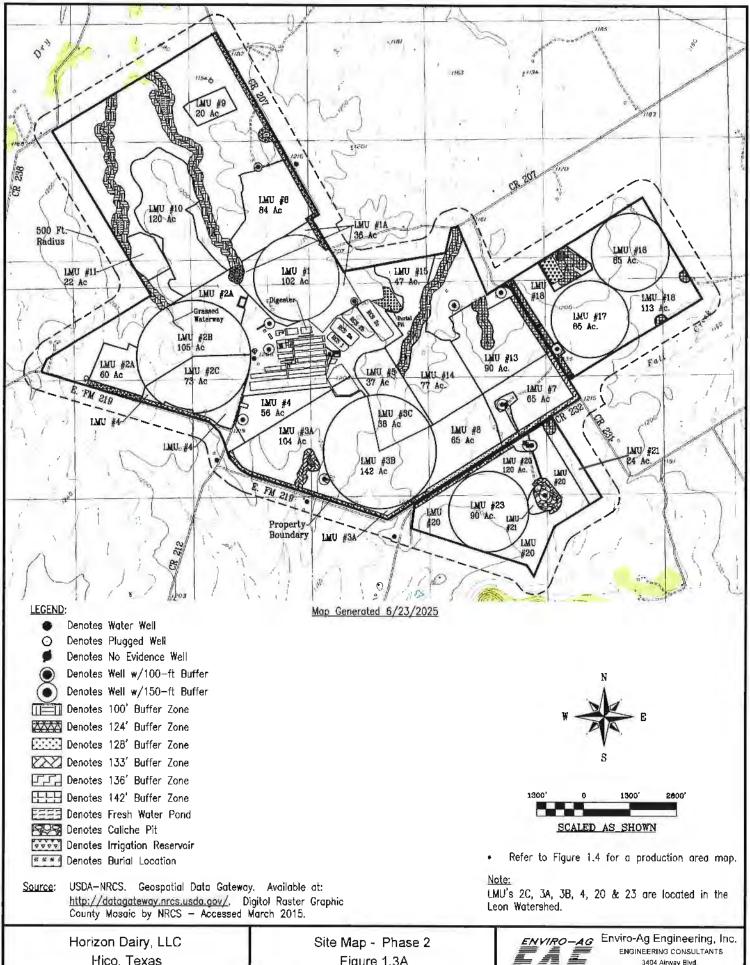




Hico, Texas **Hamilton County** 1 Figure 1.3A Page 6



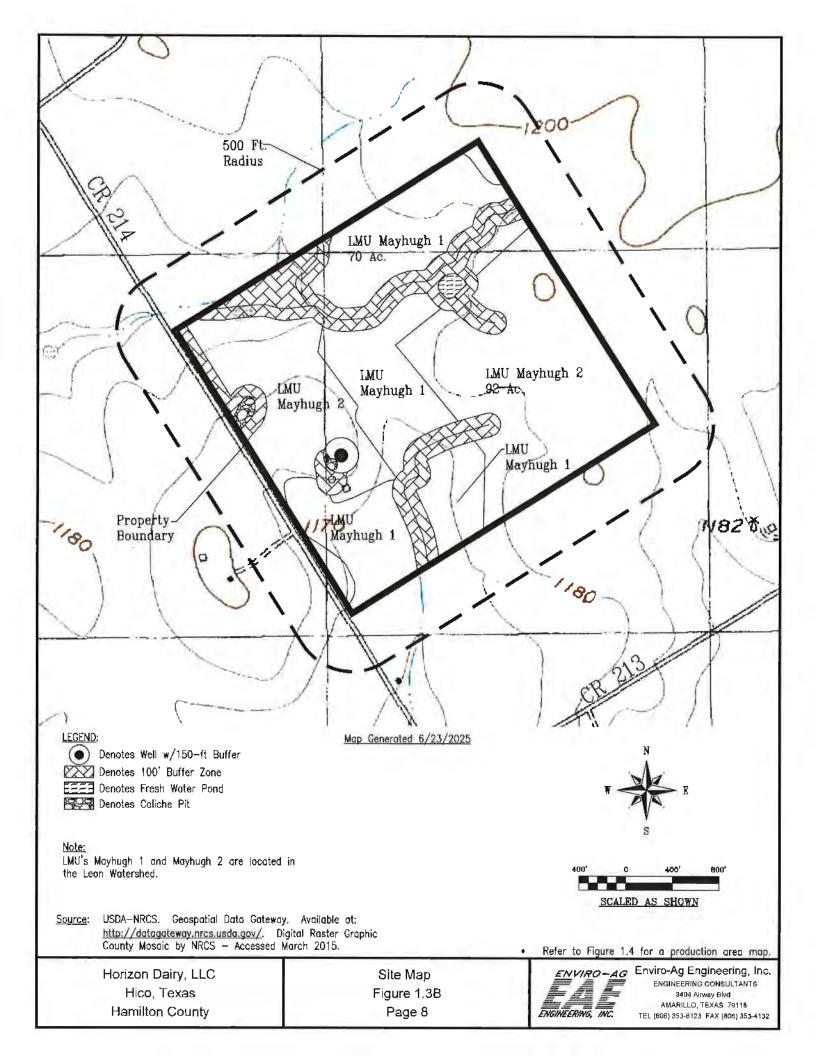
3404 Airway Blvd. AMARILLO, TEXAS 79118 TEL (808) 353-6123 FAX (806) 353-4132

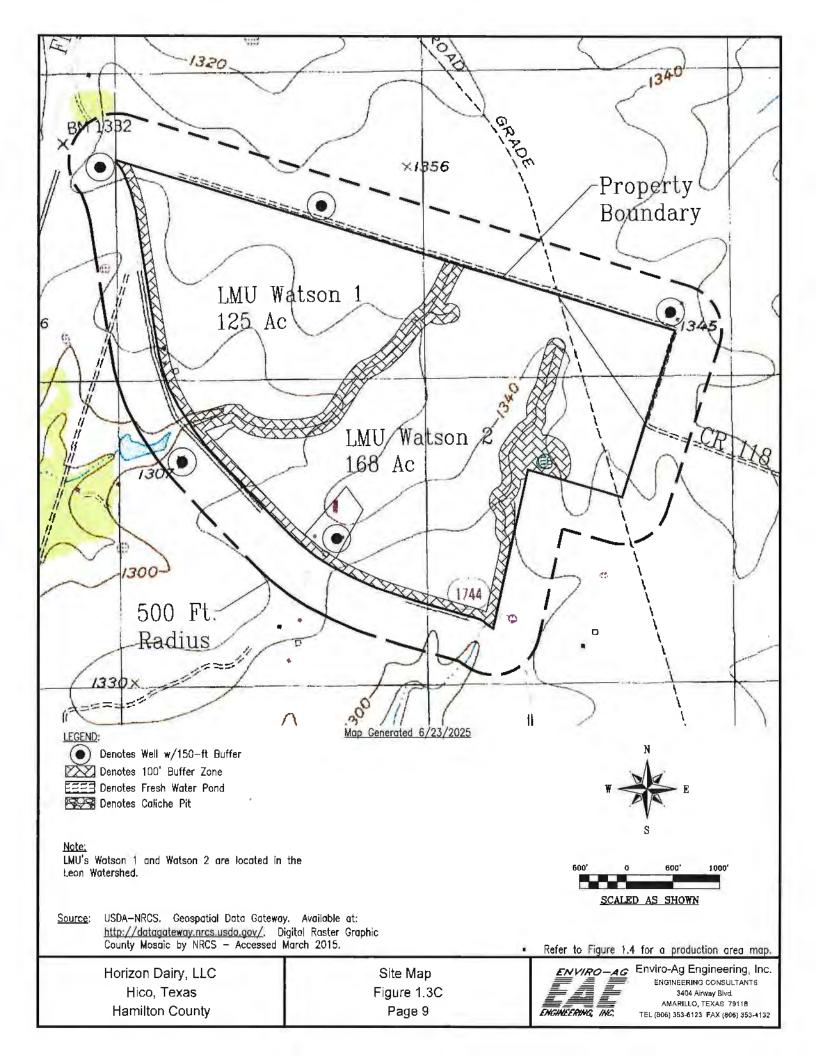


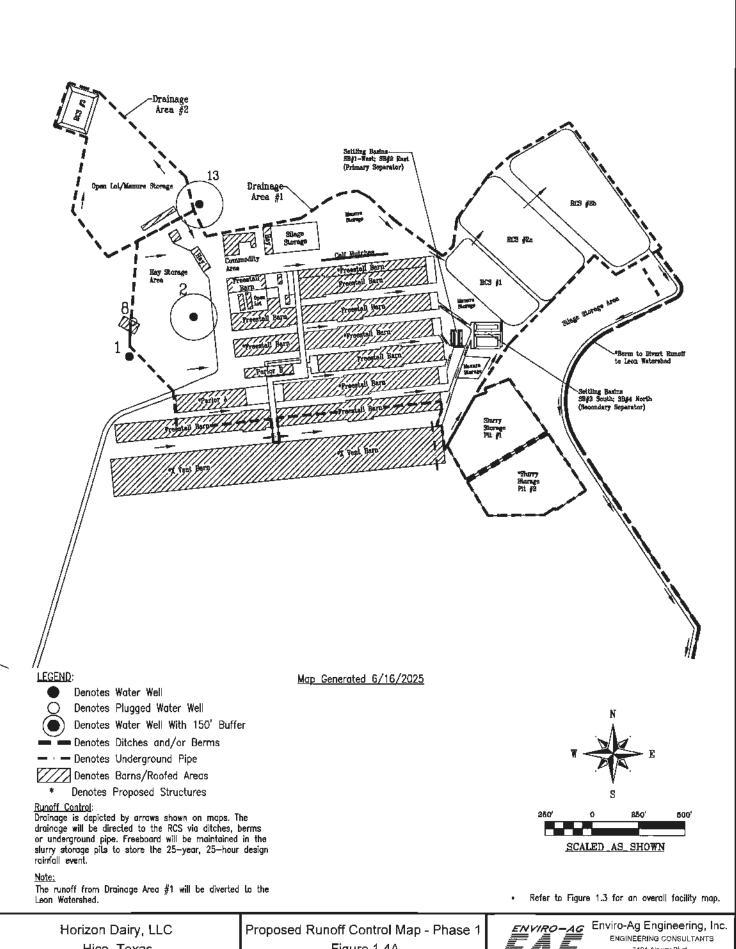
Hico, Texas Hamilton County Figure 1.3A Page 7



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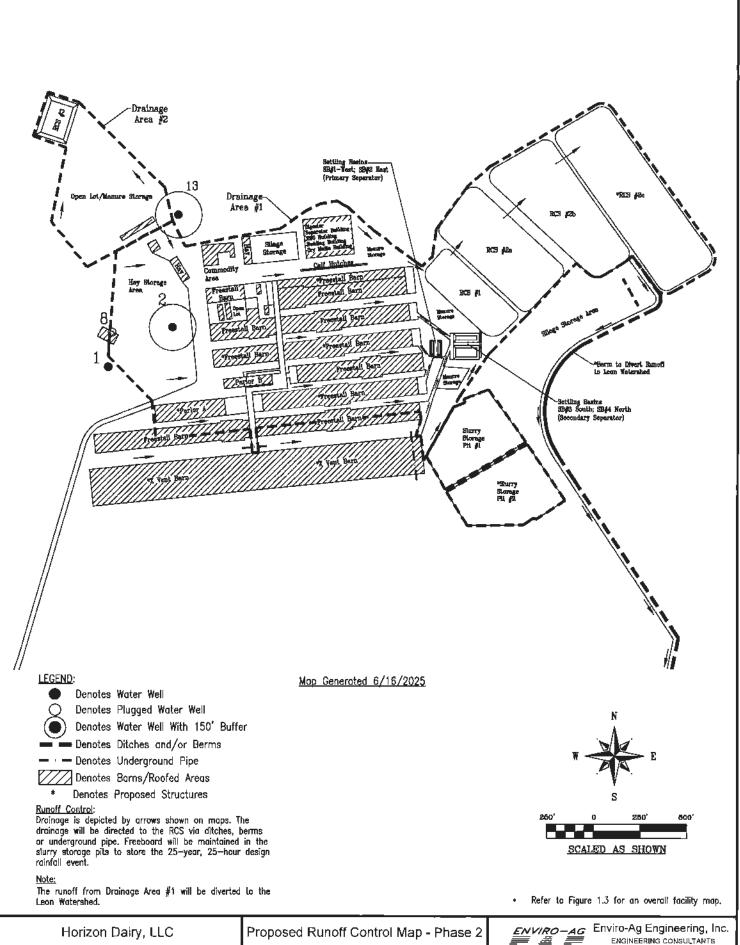




Hico, Texas Hamilton County Figure 1.4A Page 10



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Horizon Dairy, LLC Hico, Texas Hamilton County

Proposed Runoff Control Map - Phase 2
Figure 1.4B
Page 11



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

2.0 CALCULATIONS & SPECIFICATIONS

2.1 Facility Overview

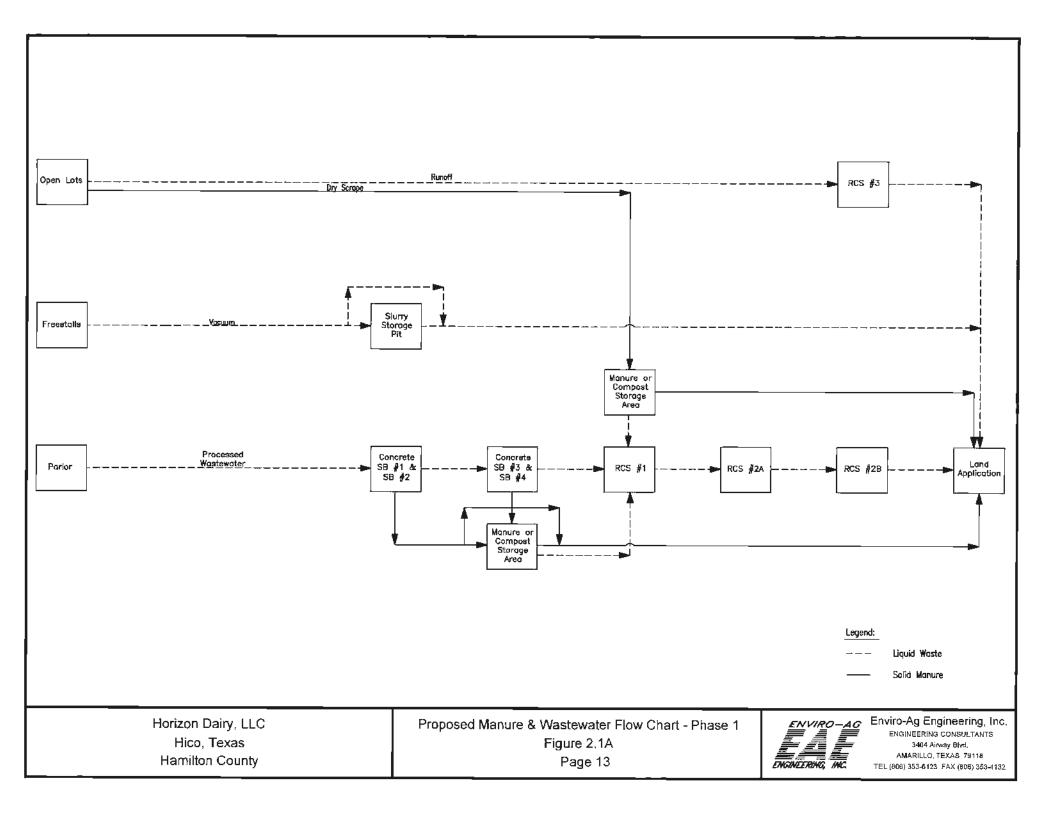
The existing facility consists of open lots, freestall barns, a milking parlor, one slurry storage pit, four settling basins with concrete bottoms and earthen sidewalls, anerobic digester and associated equipment and four retention control structures to confine 5,900 head, of which 4,700 head are milking.

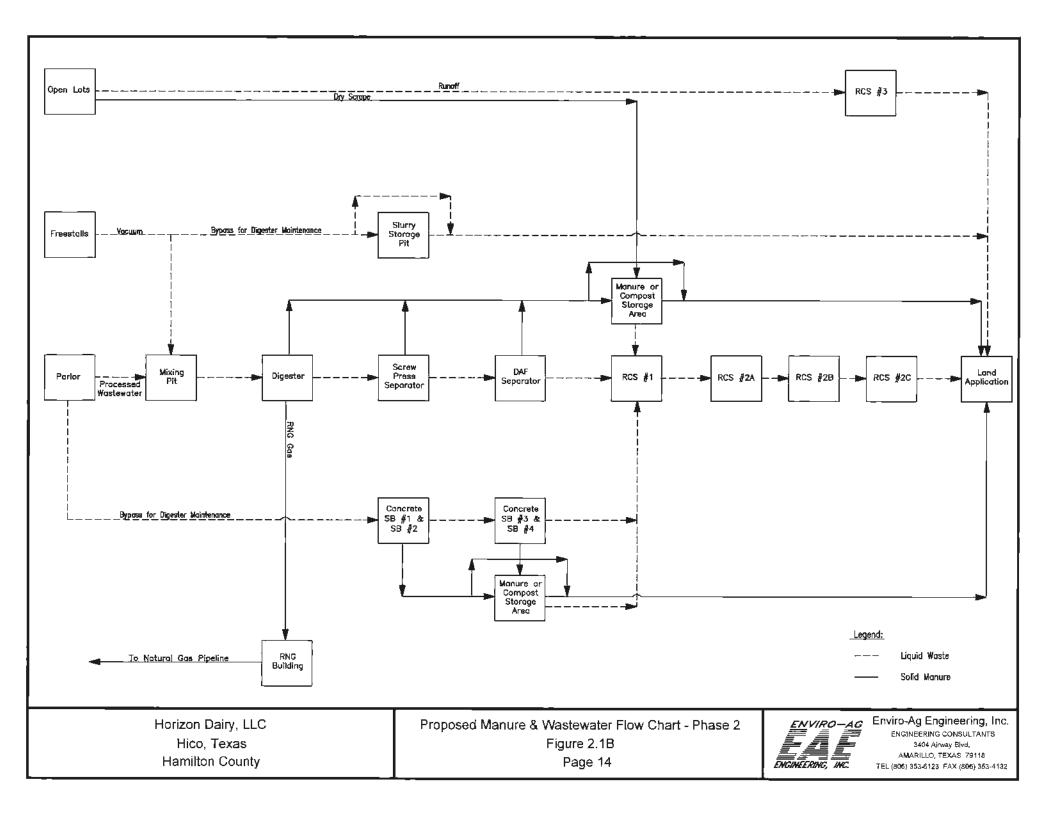
4P Pastures, LLC is submitting a major amendment application in two phases in order to maintain compliance throughout the transition. Phase 1 will included the increase of headcount from 5,900 total and 4,700 milking to 10,000 total and 7,500 milking, addition of Parlor A, addition of a X vent Barn, addition of 4 freestall barns, reconfigure LMUs #2 (now #2B & #2C), #2A, #3 (now #3B & #3C), #3A, #4 & #5, addition of LMUs #Mayhugh 1, #Mayhugh 2, #Watson 1 and #Watson 2, total LMU acres increased from 1,892 to 2,326, LMUs #2C, #3A, #3B, #4, #20 and #23 are in the Leon Watershed and General Permit soil sampling rules apply, remove the anerobic digester and associated equipment, reconfigure Drainage Area #1 to divert to the Leon Watershed, addition of Slurry Pit #2 and addition of Wells #M1 and #W1. Phase 2 will include the addition of an anerobic digester and associated equipment and the addition of RCS #2c. The existing manure and/or wastewater storage structures have been certified as meeting TCEQ requirements for soil liner. Figures 2.1A-B, 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.





ESTIMATED MANURE PRODUCTION for a DAIRY FACILITY

Table 2.1 ENVIRO-AG ENGINEERING, INC.

NAME OF CAFO:

Horizon Dairy

LOCATION:

Hamilton, TX

DATE:

June-25

MANURE PRODUCTION CRITERIA (a)					
FACILITY TOTAL	Milkers	Milkers in	*Dry Cows in	Total	
	in Parlor	Freestall Barns	Freestall Barns		
1. Maximum Number of Animals Confined (head):	7,500	7,500	2,500	10,000	
2. Confinement period, hrs./hd/day	2	22	24	24	
3. Percent of time in Confinement	8%	92%	100%	100%	
4. Total Manure Production, lbs./day	93,750	1,031,250	207,500	1,332,500	
5. Total Solids Production, lbs./day	12,500	137,500	27,500	177,500	
6. Manure Production, tons/year	2,281	25,094	5,019	32,394	
7. Volatile Solids Production, lbs./day	10,625	116,875	23,000	150,500	
8. Total Nitrogen Production, lbs./day	619	6,806	1,250	8,675	
P. Total Phosphorus, P2O5 lbs./day (b)	243	2,676	378	3,298	
10. Total Potassium, K2O lbs./day (b)	173	1,898	990	3,060	

NOTES:

- Freestall barns to be vacuumed for manure removal.
- * 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: (ASAE 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.

2.4 Process-Generated Wastewater Volume

The primary source of process-generated wastewater is wash water from the milking parlor operations (15 gal/head/day) and the water generated from the production of biogas (500 gal/day). The flow of the process-generated wastewater can be found on Figures 2.1. The freestall barns are vacuumed for manure removal. All open lot pens are dry scraped for manure removal. The design storage volume in the RCSs for process-generated wastewater is 30 days and is calculated in Table 2.2A-C.

2.5 25-Year, 10-Day Rainfall Storage Volume

In accordance with 30 TAC §321.42(c)(1), RCSs #1, #2A, #2B and #3 are 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 open lot runoff area was 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 85. Roofed/concrete areas were calculated using a CN of 100. Runon from areas outside the control facility is directed away from the RCSs. Tables 2.2A-D shows the calculated storage volume required for the rainfall runoff from a 25-year, 10-day storm.

2.6 Sludge Accumulation Volume

Sludge accumulation 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. The required sludge accumulation volume calculations are shown in Tables 2,2A-D.

2.7 Water Balance Model

Tables 2.3A-D, Water Balance Model, estimates the inflows and withdrawals from the RCSs 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.

2.8 RCS Management Plan

A RCS Management Plan will be developed by a licensed Texas professional engineer and has been implemented to incarporate 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.

2.9 Minimum Treatment Volume Requirement

A minimum treatment volume for odor control is required to obtain air standard authorization from the ICEQ. 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 FEB.2011) of 5.0 lbs of volatile solids per 1,000 cubic feet of storage. Table 2.2a shows the minimum treatment volume calculation.

2.10 Digester Discussion

Wastewater from the milking parlor is directed to the anerobic digester system. The manure from the barns is vacuumed and delivered to the mixing pit to adjust the total solids content required by the digester. The data supporting the calculations used in the volatile solids/total solids reduction in the digester, screw press, and dissolved air flotation systems are from actual sample results from testing by DVO (the digester/equipment company) and are attached.

PHASE 1

REQUIRED STORAGE VOLUMES FOR TREATMENT/ RUNOFF RETENTION CONTROL STRUCTURES

Table 2.2A ENVIRO-AG ENGINEERING, INC.

NAME OF CAFO: LOCATION:

DATE:

Horizon Dairy Hamilton, TX June-25

Total Required RCS#1 Valume:	(ac-ft)	16.93
1-Year Sludge Volume:	(ac-ft)	2.29
Treatment Volume:	(ac-ft)	14 63
TOTAL TREATMENT VOLUME		
Studge Volume:	(ac-ft)	2 29
Sludge Accumulation Period:	(y≎ars)	ı
Sludge Accumulation Rate (c):	(cuft/lb)	0.0729
Adjusted Volatile Solids Production:		3,750
Secondary Senting Basin Efficiency (%) (a):		40%
Adjusted Dry Manure Production:	(fb/day)	6,250
Primary Settling Basin Efficiency (%) (a):	•	50%
Dry Manure Produced in Parlor:	(fb/day)	12,500
SLUDGE VOLUME		
Treatment Volume:	(ac-ft)	14 63
Design Loading Rate (lbVS/1000cuft-day) (b):	•	5 00
Adjusted Velatile Solids Production:	(lb /day)	3,188
Secondary Settling Basin Efficiency (%) (a):		40%
Adjusted Voletile Solids Production;	(lb/day)	5,313
Primary Settling Basin Efficiency (%) (a):		50%
Volatile Solids Produced:	(lb/day)	10.62
TREATMENT VOLUME		

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) Studge Accumulation Rate taken from Table 10-7, USDA-NRCS Agricultural Waste Management Field Handbook.
- (d) Value includes wer manure production from the milking parlor
- (e) Using SCS method:

Where:

\$ = (1000/CN) - 10

 $Q = ((1-0.2S)^2)/(1+0.8S)$

S = Potential maximum retention after runoff begins in)

Q = Runoff (in)

1 = 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 for volume estimation (SC of 1.5% for 1 year).

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

PROCESS GENERATED WASTE/WASTER	VATER	
Parlor Wash Water (d):	(gal/head/day)	15
No. of Head in Parlor:		7_500
Volume of Process Water;	(gaVday)	112,500
Design Storage Period;	(days)	30
Process Water Volume;	(ac-ft)	10 36
RAINFALL VOLUME		
Drainage Area Characteristics:	(acres)	CN
Pen Area:	0 62	90
Adjacent Area:	40 62	85
Paved/Roof Areas:	24 36	100
RCS Surface Areas:	12.59	100
Settling/Slurry Basin Surface Areas:	0.88	100
Total Drainage Area:	84,77	
25-year, 10-day rainfall:	(inches)	12.2
Runoff Volume Determination (e):	(inches)	(ac-ft)
Pon Area:	11.0	0.57
Adjacent Area:	10 3	34 90
Paved/Roof Areas;	12 2	24 77
RCS Surface Areas:	12 2	18 59
Settling/Slurry Basin Surface Areas:	12 2	0 89
Rainfall Volume:	(ac-ft)	79 73
TOTAL RCS VOLUME REQUIRED		
Runoff Sludge Volume (f):	(ac-ft)	0.68
Process Water Volume:	(ac-fi)	10.36
Rainfail Volume:	(ac-ft)	79 73
Additional from Water Balance:	TE OF TELL (acid)	23 32
Total Required RCS #22-h Volume:		114.08

PHASE 2 - ANEROBIC DIGESTER

REQUIRED STORAGE VOLUMES FOR TREATMENT/ RUNOFF RETENTION CONTROL STRUCTURES

Table 2.28 ENVIRO-AG ENGINEERING, INC.

NAME OF CAFO:

Horizon Dairy Bamilton, TX

LOCATION: DATE:

June-25

RCS #18 - TREA IMENT VOLUME REQUIREMENT SILTIGE VOLUME		
Dry Manure Produced	(lfs/day)	177.500
Anaerobic Digester Efficiency (%) (a):		34%
	(Tb /day)	117,150
Screw Press Efficiency (%) (a):		22%
	(lb/day)	91.377
Dissolved Air Flotation Efficiency (%) (a);		53%
	(Tb /day)	38,378
Sludge Accumulation Rate (b):	(cuft/lb)	0 0729
Shidge Accumulation Period:	(years)	1
I-Year Sludge Volume:	(ac-it)	23 44
TREATMENT VOLUME		
Volatile Solids Produced:	(th/day)	150,500
Anaerobic Digester Efficiency (%) (a).		42%
	(Ib /day)	87.290
Screw Press Efficiency (%) (a):		29%
No.	(lb /day)	61,976
Dassolved Air Flotation Efficiency (%) (2):	200	76%
Adjusted Valatile Solids Production:	(lb /day)	14,874
Design Loading Rate (lbVS/1000cuft-day) (g);		50
Trestment Volume:	(ac-lt)	68 29
TOTAL TREATMENT VOLUME		
Treatment Volume:		68 29
I-Year Sludge Volume:		25 44
Total Required RCS #2B Volume:	(ac-ft)	91.74

NOTES

- (a) Based on data provided by DVO
- (b) Sludge Accumulation Rate taken from Table 1, ASABE Standards (ASABE EP403 4 FEB 2011)
- (c) Site Specific Data
- (d) Based on data provided by DVO
- (e) Using SCS method:

Where.

S = (1000/CN) - 10 $Q = ((1 - 0.2S)^2)/(1 + 0.3S)$

S = Potential maximum retention after runoff begins in)

Q = Rumoff (in)

I = 25-year, 10-Day reinfall (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 (Inputs-pervad) contribution, 1.9% solids and 1 year)
- (g) Loading Rate teken from Figure 2, ASABE Standards (ASABE EP403 + FEB2011)

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

RCS #2C - BUNOFF POND REQUIREMENT PROCESS GENERATED WASTERNATEWATER		
Parlor Wash Water (c):	(gal/nead/day)	15
No of Hearl in Parlor;		7,500
Volume of Process Water,	(gal/day)	112,500
Biogas Production Generated Water (d):	(gal/day)	1,000
Wet Manure Production:	(lb /day)	1, 3 3 2 ,500
Total Solids Produced:	(lb /day)	177,500
Total Solids Removed by Separation System:	(1b /day)	139,122
Wer Manure Production Less Segarated Solids:	(ib /day)	1,193,378
	(Ref(qnA)	143,975
Design Storage Period:	(days)	30
Process Water Volume:	(ac-ft)	23 71
RAINFALL YOLUME		
Drainage Area Characteristics:	(aeres)	CN
Pen Area:	0.62	90
Adjacent Area:	40 92	85
Paved/Roof Areas:	24 16	100
RCS Surface Areas:	29 70	100
Settling/Shurry Basin Surface Areas:	0 83	100
Total Drainage Area:	96.48	
25-year, 10-Day rainfall:	(inches)	122
Runoff Volume Determination (e):	(inches)	(ac-ft)
Pen Area:	110	0.57
Adjacent Area:	103	35 16
Paved/Roof Areas:	13.2	24 77
RCS Surface Areas	12.2	30 20
Settling/Slurry Basin Surface Areas:	122	0.89
Rainfall Volume:	(ac-ft)	91 58
TOTAL RCS VOLUME REQUIRED		
Runoff Sludge Volume (f):	(ac-ft)	0.68
Process Water Volume:	OF TEN (ac-ft)	23 71
Rainfall Volume:	(ac-ft)	91.58
Additional from Water Balance:	(ac.n)	37 07
Total Required RCS 82C Volume: X		153,84

PHASE 2 - ANEROBIC DIGESTER BYPASS REQUIRED STORAGE VOLUMES FOR TREATMENT/ RUNOFF RETENTION CONTROL STRUCTURES

Table 2.2C ENVIRO-AG ENGINEERING, INC.

NAME OF CAFO:

Horizon Dairy Hamilton, TX

June-25

LOCATION: DATE:

RCS #2B - TREATMENT VOLUME REQUIREMENT		
TREATMENT VOLUME		
Volatile Solids Produced:	(lb/day)	10,625
Primary Settling Basin Efficiency (%) (a):	(iv/day)	50%
Adjusted Volatile Solids Production;	(lb /day)	5,313
Secondary Settling Basin Efficiency (%) (a):	(10702))	40%
Adjusted Volatile Solids Production:	(lb/day)	3,128
Design Loading Rate (lbVS/1000cuft-day) (b):	(5 00
Treatment Volume;	(ac-ft)	14 63
SLUDGE VOLUME		
Dry Manure Produced in Parlot.	(lb/day)	12,500
Primary Setting Basin Efficiency (%) (a):	(,/	50%
Adjusted Dry Manure Production;	(lb/day)	6,250
Secondary Settling Basin Efficiency (%) (a):		40%
Adjusted Volatile Solids Production:		3,750
Sludge Accumulation Rate (c):	(curt/lb)	0.0729
Sludge Accumulation Period:	(years)	1
Sindge Volume:	(ac-ft)	2 29
TOTAL TREATMENT VOLUME		
Treatment Volume:	(ac-ft)	14.63
I-Year Sludge Volume:	(ac-ft)	2.29
Total Required RCS #2B Volume:	(ac-ft)	16,93

NOTES:

- (a) Midwest Plan Service, 1983, Ravised 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 10-7, USDA-NRCS Agricultural Waste Management Field Handbook
- (d) Value includes wet manure production from the milking parlor
- (e) Using SCS method:

Where:

S = (1000/CN) - 10 $Q = ((1 - 0.2\$)^2)/(1 + 0.8\$)$

S = Potential maximum retention after runoff begins in)

Q = Remoff(in)

1 = 25-year, 10-day rainfall (in)

CN = Curve Number from SCS 210-V1-TR-55,

2nd Edition, June 1986

(f) USDA Agricultural Field Waste Handbook, Kansas, Part 651 1082, Suggested procedures for sediment for volume estimation (SC of 1 5% for 1 year)

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.

PROCESS GENERATED WASTEWASTEWATER		
Parlor Wash Water (d):	(gsl/head/day)	15
No of Head in Parlor.		7,500
Volume of Process Water:	(gal/day)	112,500
Design Storage Period:	(days)	30
Process Water Volumo:	(ac-ft)	1036
BAINFALL VOLUME		
Drainage Area Chamicteristics:	(acres)	CN
Pen Area:	0 62	90
Adjacent Area:	40 92	25
Paved/Roof Areas:	24.36	100
RCS Surface Areas:	29.70	100
Settling/Slurry Basin Surface Areas:	88.0	100
Total Drainage Area:	96 48	
25-year, 10-day rainfall:	(inches)	122
Runoff Volume Determination (c):	(inches)	(ac-fr)
Pen Area:	0.11	0.57
Adjaceor Area:	103	35 (6
PaveI/Roof Areas:	12 2	24 77
RCS Surface Areas;	12.2	30 20
Sertling/Slurry Basin Surface Areas:	12 2	0.89
Rainfall Volume:	(ac-ft)	91.58
TOTAL RCS VOLUME REQUIRED		
Runoff Sludge Volume (f);	(ac-fi)	22.0
Process Water Volume:	(ac-ff)	10.36
Rainfall Volume:	(ac-fi)	91.58
Additional from Water Balance:	(ac-ft)	23.28
Total Required RCS #2C Volumes	(ac-ft)	125.90

REQUIRED STORAGE VOLUMES FOR RUNOFF RETENTION CONTROL STRUCTURE Table 2.2D

ENVIRO-AG ENGINEERING, INC.

NAME OF CAFO:

Horizon Dairy Hamilton County

LOCATION:

June-25

DATE:

RAINFALL VOLUME		
Drainage Area Characteristics:	(acres)	CN
Pen Area:	11.00	90
Adjacent Areas:	0.00	85
Roof Area:	0,00	100
RCS Surface Area;	2,37	100
Total Drainage Area:	13,37	
25-year, 10-day rainfall:	(inches)	12.2
Runoff Volume Determination (a):	(inches)	(ac-ft)
Pen Area:	11.0	10.05
Adjacent Areas:	10,3	0.00
Roof Area:	12.2	0.00
RCS Surface Area:	12.2	2.37
Rainfall Volume:	(ac-ft)	12,42
TOTAL RCS VOLUME REQUIRED		
Rainfall Volume:	(ac-fi)	12.42
5-year Sludge Volume (b):	(ac-ft)	0.12
Additional from Water Balance:	(ac-ft)	1.76
Total Required RCS #3 Volume:	(ac-ft)	14.30

NOTES:

(a) 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

(b) USDA Agricultural Field Waste Handbook, Kansas, Part 651.1082, Suggested procedures for sediment volume estimation (Inputs-pen/adj contribution, 1.5% solids and 1 year).



PHASE I WATER BALANCE MODEL IRRIGATION AND EVAPORATION

Table 23A ENVIRO-AG ENGINEERING, INC.

NAME:	Horizon Daicy			HYDROLOGIC	CHARACTERISTIC	's	· · · · · · · · · · · · · · · · · · ·		IRRIGATION C	ELL VOLUME S	HMMARY DATA			
LOCATION:	Hamilton, TX			Peo Area (acres)		0.62				v Rainfall Volume		•		79.73
DATE:	June-25			Adiacent Area (a	cres):	40 62				ed Wasiewater Vol				10 36
				Paved/Roof Area	(acres):	2436				ation Volume (ac-	, ,			0.68
					orface Area (acres):	19 17			Additional Volum		1.9.			23 32
				Total Irrigated Ar			460	460	Total Required C	, ,				114 08
				Cropping scheme			Wheat	Coastal	rotm evedanen e	apacity (20-11).				114 US
				Control of the second of the Paris	man Surface Area (16 29	PT I KAME	COSSISI						
		RCS II	NFLOW CALC		The transfer of the		AULIC CROP DE	MAND CALC	T ATTONS			PCC STOR	AGE SUMMARY	
	(1)	(2)	(2)	(3)	(4)	(5)	(S)				100			
MONTH	(inches)	(inches)	(inches)	(ac-fit)	(ac-ft)	رارر) (inches)	(o) (inches)	(6) (inches)	(7)	(7)	(8)	(9)	(10)	(11)
MONTH	1 till California	tudiesi	(miques)	тягэшт	(az-i)((Inches)	Inchesi	(inches)	(ac-ft)	(ac-ft)	(inches)	(32-ft)	(<u>3</u> e-ft)	faq-fţ)
T 4 3 T													start value>	0.68
Jan	1 57	0.24	0.06	10 70	16 62	1 57	2 74	2 0	44 93	20 40	2 23	3 03	13 60	0.68
FEB	1 39	039	Ù 14	9 67	17 03	1 86	3.11	2 46	47.76	22 84	2.56	3 48	13 55	0.68
MAR.	2 !2	0.52	0.21	10.70	19-15	2 06	4.97	4 06	111 46	76.58	4.08	5 54	13 61	0.68
APR	2 68	0.86	0 44	10.36	21.60	2.50	5 74	4 98	124.21	95 08	4 97	6.75	14 86	0.68
MAY	4 15	1.94	1.24	10 70	30 07	3 41	5 33	5 73	73 49	88 82	4 97	6 75	23 32	0.68
IUN	3 08	1 13	0.63	1036	23 72	2.78	3 22	6 82	16 94	154 94	6 67	9.06	14 66	0 63
πı	1.87	0.38	0 14	10.70	17 97	l 85	0.00	7 66	0.00	222.86	7.72	10 48	7.49	0.58
								,	0.00		1 1 1 2	10 40	. 47	0.50

0.00

0.00

2 !5

1.70

2 33

31.29

7.56

5 78

4 29

281

2.24

55 47

0.00

0.00

0.00

0.00

28 11

Alfo DÓ

218.43

118 43

51.05

36 60

24 65

1132.58

7.42

561

460

3 17

237

56 37

10.08

7.62

5.25

4 30

3.22

76.54

9.12

15 40

17.17

13 36

13 54

169 68

0.63

0.68

0.68

860

0.63

TOTALS

AUG

SEP

QCT

NQV

DEC

(1) AVERAGE PRECIPITATION - Average precipitation taken from the Texas Water Development Board, Hamilton County, Quad 4609, recrewed June 17, 2025

10.70

10.36

10.70

10 36

10 70

126 02

- (2) RUNOFF PENS AND ADJACENT AREA Ranoff from pens, adjacent areas calculated using SCS Corve Number Method adjusted from 1 to 30-day Curve Number (Pen CN 77, Adj CN 57) (Ref. NRCS Animal Waste Management Software Help File-Program Documentation for Runoff)
- (3) ENFLOW Inflow is calculated from process generated wastewater, Table 2.2A.

0.52

1.04

1.05

039

0.35

¥ 71

- (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 rainfull on the irrigated area Runoff from Irrigated areas calculated using SCS Curve Number Method adjusted from 1 to 30-day Curve Number (Irrigated CN 58)(Ref. NRCS Animal Waste Management Software Help File-Program)
- (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, Lubbook, Texas (Tables [6 & 25 Stephenville))

2 07

2 69

2.70

1 86

1 60

26 94

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

0.22

0.56

0.57

0.14

0.07

4 43

(8) MONTHLY LAKE SURFACE EVAPORATION - Average monthly lake surface evaporation taken from the Texas Water Development Board, Hamilton County, Quad #609, retrieved June 17, 2025

19 20

23 02

23 42

17.67

1676

246 22

- (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 Assual 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 call at the end of the month. The storage calculated in this column should not enemach in the volume reserved for the DS-year, 10-day rainfall event
- (12) Imigated Acres Include LMUs 1, 2B, 2C, 3B & 3C

Z 13

2 95

296

1 38

1.60

28 88

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

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PHASE 2 WATER BALANCE MODEL FOR ANEROBIC DIGESTER/RUNOFF RETENTION CONTROL STRUCTURES IRRIGATION AND EVAPORATION

Table 2.08 ENVIRO-AC ENGINEERING, INC.

NAME: LOCATION: DATE:	Horizon Dairy Hamilton, TX June-25			Pen Area (acres); Adjacent Area (ac Paved/Roof Area Total RCS/SB Su Total Irrigated Ar Cropping scheme Effective Evapora	(acres); rface Area (acres); ca (acres)(12);	0 62 40 92 24 36 30 58	460 Wheat	460 Coastal	25-Year, 10- Day Process Generate Sludge Accumul: Additional Volum Total Required C		(ac-ft); ume (ac-ft)			91 58 23 71 0 68 37 97 153 04
			IFLOW CALCI		- 72	HYDRA	ULIC CROP DE	MAND CALCU	LATIONS	-		RCS 5TOR.	AGE SUMMARY	
	(1)	(2)	(2)	(3)	(4)	(5)	(6)	(6)	(7)	(7)	(8)	(9)	(10)	(11)
MONTH	(Inches)	Linchest	(raches)	(ac-ft)	(ac-fi)	(inahes)	inchest	(inches)	(.sc-1t)	125-03	(mehes)	(State)	(25-21	kac-fill
	0.44	15.64											start value>	0.68
JAN	1.57	0 24	0 06	24 50	31 91	1.57	2 74	2 10	44 93	2040	2.25	4 53	27 08	0.68
FEB	1.23	0.39	0 14	22 13	31.28	1 36	3 11	2 46	47 76	22 84	2 56	5 55	25 74	0.68
MAR	2 13	0.52	021	24 50	34 96	2.06	4 97	4 06	11146	76.58	4 08	\$ 84	26 12	0.68
APR	2 68	0.86	0 44	23 71	37 51	2 50	5 74	4 98	124 21	95 08	4.97	10.77	26 75	0.68
MAY	4 15	194	1 24	24 50	47 84	3.41	5 33	5 73	73 49	88.82	4 97	10.77	37 07	0.68
JUN	3 08	1 13	0.63	23 71	40 01	2.78	3 22	682	16 94	154 94	6 67	14.45	25 56	0.68
JUL.	1 87	0.38	0.14	24 50	33 54	1 85	0.00	7 66	0.00	222 S6	7.72	16.72	16 \$2	0 68
AUG	2 (3	0.52	0.22	24 50	35 02	2 97	0.00	7.56	0.00	210 43	7.42	16 07	1895	0.66
ŠEP	2 95	1 04	0.56	23 71	39 19	2 69	0.00	5 78	0.00	118 43	. 561	12.15	27.04	0.68
OCT	2 96	: 05	0.57	24.50	40.04	2 70	2 15	4 29	0.00	61.05	4 60	9 96	3008	0.68
NOV	1.88	039	0 14	23 71	32 81	1 86	1.70	281	0.00	36 60	3 17	6 37	25 94	0.63
DEC	1.60	0.25	B 07	24 50	32 07	1.50	2.03	2 24	28 11	24 66	2 37	5 13	26 94	0.68
TOTALS	28 38	8 71	4.43	288 43	436 19	35.94	3! 29	56.49	110,00	1132.68	56.37	(22.10	314 59	

NOTES

- (1) AVERAGE PRECIPITATION Average precipitation taken from the Toxas Water Development Board, Hamilton County, Quad #609, retrieved June 17, 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 67) (Ref. NRCS Animal Waste Management Software Help File-Program Documentation for Runoff)
- (3) INFLOW Inflow is calculated from process generated wastewater, Table 2.2B
- (4) TOTAL INFLOW Total follow 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. Runoff from irrigated areas calculated using SCS Curve Number Method adjusted from 1 to 30-day Curve Number (Irrigated CN 58)(Ref. NRCS Animal Waste Management Software Help File-Program)
- (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, Lubbook, Texas (Tables 16 & 25)
- (7) NET CROP DEMAND Net Crop Demand = ((Consumptive Use(6) Effective Rainfall(5))/12) x Irrigated Area
- (6) MONTHLY LAKE SURFACE EVAPORATION Average monthly lake surface evaporation taken from the Texas Water Development Board, Hamilton County, Quad #669, retrieved June 17, 2025
- (9) NET POND EVAPORATION Net Evaporation from the water surface is taken as (Monthly Like Surface Evap/12) x (RCS Surface Ages)
- (10) ACTUAL WITHDRAWAL Actual Withdrawal from the infigation 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 impation coll at the end of the month. The storage calculated in this column should not encreach in the volume reserved for the 25-year, 10-day rainfall event
- (12) Irrigated Acres Include LMUs 1, 28, 2C, 38 & 3C

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



PHASE 2 BYPASS WATER BALANCE MODEL FOR ANEROBIC DIGESTER/RUNOFF RETENTION CONTROL STRUCTURES IRRIGATION AND EVAPORATION

Table 2.3 C ENVIRO-AG ENGINEERING, INC.

NAME: LOCATION: DATE:	Horizon Dairy Hamilton, TX June-25			Pen Area (acres): Adjacent Area (ac Pawed/Roof Area Total RCS/SB Su Total Irrigated An Cropping scheme:	(acres); dace Area (acres); ta (acres)(12)	0 62 40 92 24 36 30 58	460 Wheat	460 Coastal	25-Year, 10- Day Process Generate	y Kainfall Volume xi Wastewater Vol ation Volume (ac-i ne (ac-R);	ume (sc-ft):			91 58 10 36 0 68 23 28 125 90
	3.5	RCS E	FLOW CALC			HYDR/	ULIC CROP DE	MAND CALCU	TLATIONS			8C5 510R4	UJE SUMMARY	
	(1)	(2)	(2)	(3)	(4)	(5)	(6)	(6)	(7)	(7)	(8)	(%)	(10)	(11)
MONTH	(முத்த)	(spalses)	(taines)	(ac-II)	ac-da)	(inches)	tenchess	(enchés)	eac-áti	suc-fil	. finatics)	ant site	Case-St.	t.#-fit
											:		start value>	0 66
JAN	1 57	0.24	D Oá	10.70	18 12	1 57	2,74	2 10	44 93	20 40	2 23	4.83	13 29	0.68
FEB	1 89	039	0 14	9 67	18 83	185	3 (1	2 45	47.76	27.84	2 56	5 55	13.28	0.68
MAR	2 12	0.52	0.21	10.70	21 17	2 06	4 97	4 06	111.46	76.58	4 OS	8 24	12.33	0.68
APR.	2 68	0 86	0.44	1036	24 16	2 50	5 74	4 98	124.21	95.03	4 97	10.77	13 40	0.68
MAY	415	L 94	1 24	10.70	34 05	3.41	5 33	5 73	73 49	98 82	4 97	10 77	23.28	0.68
NUL	3 08	1 13	0 63	10 36	26 6 6	2.78	3 22	6.82	16 94	154.94	6.67	14.45	12 22	0.58
JJJ.	1 87	0.38	0.14	10.70	19.75	L 35	0.00	7 66	0.00	232 86	772	16 72	3 03	0.68
AUG	2 13	0.52	0.22	10.70	21 23	2.07	0.00	7.56	0.00	210 43	9.42	16 07	5 15	0.68
SEP	2.95	1 04	0.56	10 36	25 84	2.69	0.00	5.78	0.60	11843	561	12 15	13 69	0.68
OCT	2.9a	I 05	0.57	10 70	26 25	2 70	2 15	4 29	0.00	61 05	460	9 96	16 29	0.68
NOV	1 88	0.39	0 14	10 36	19 46	1 86	1 70	781	0.00	36.60	3 17	6 57	12.59	0.68
DEC	1 60	0 25	0 07	10 70	18 28	1 60	2 33	2 24	28 11	24 66	237	5 13	13 14	0.68
TOTALS	28.68	871	4-13	126 92	273 79	26 34	71 TO	56.49	445-90	1132.68	5á 37	122 10	151 69	

NOTES:

- (1) AVERAGE PRECIPITATION Average precipitation taken from the Texas Water Development Board, Hamilton County, Quad #609, retrieved June 17, 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 67) (Ref. NRCS Animal Waste Management Software Help File-Program Documentation for Runoff)
- (3) CNFLOW Inflow is calculated from process generated wastewater, Table 2.2C
- (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 imigated area Runoff from irrigated areas calculated using SCS Curve Number Method adjusted from 1 to 30-day Curve Number (Irrigated CN 58)(Ref. NRCS Animal Waste Management Software Help File-Program)
- (6) CONSUMPTIVE USE values from Borrelli, et al., 1993 Mean Crop Consumptive Use and Free-Water Evaporation for Texas, Dept. of Civil Engineering, Texas Tech University, Lubbook, Texas (Tables 16 & 25)
- (7) NET CROP DEMAND Not Crop Demand = ((Consumptive Use(6) Effective Paintell(5))/12) x Imigated Area
- (8) MONTHLY LAKE SURFACE EVAPORATION Average monthly take surface evaporation taken from the Texas Water Development Board, Hamilton County, Quad #609, retrieved June 17, 2025
- (9) NET POND EVAPORATION Net Evaporation from the water surface is taken as (Monthly Lake Surface Evap/(2) π (RCS Surface Area)
- (10) ACTUAL WITHDRAWAL Actual Withdrawal from the irrigation cell not to exceed Not Crop Demand (No consideration given for untrient demand of crop)
- (11) STORAGE AT END OF MONTH Storage valueme in the irrigation cell at the end of the month. The storage calculated in this column should not encrosed in the volume reserved for the 25-year, 10-day rainfall event
- (12) Irrigated Acres Include LMUs 1, 28, 2C, 3B & 3C

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



WATER BALANCE MODEL IRRIGATION AND EVAPORATION Table 2-3D

ENVIRO-AG ENGINEERING, INC.

NAME: LOCATION: DATE:	Horizon Dairy Hamilton, TX June-25			Pen Arca (acres); Adjacent Area (ac Paved/Roof Area (Total RCS Swrface Total Irrigated Arc Cropping scheme;	acres); : Area (acres); :a (acres)(12);	0 00 0 00 0 00 2 37	46D Wheat	460 Coastal	25-Year, 10-day Process Generate		a≛-ft) uone (ac-ft):	k.		12 42 0 00 0 12 1 76 14 30
		RCS	NFLOW CALC	ULATIONS		HYDRA	AULIC CROP DE	MAND CALCU	LATIONS			KCS STOKA	GÊ SUMMARY	
MONTH	(1) Imchesi	(2) (meires)	(2) (inches)	(3) (ac-ft)	(4) (ac-š)	(5) (isabes)	(6) (1) (6)	(5) (inches)	(7) (ac-ft)	(7) (36-40)	(8) (inches)	(9) (ac-ft)	(10) (ac-ft)	(11) (a>li)
			1.0000001	(100 10)	104 37	1 110000000	1110411433	G DEALE ST	(30.16)	Tac-401	i (ilicites)	130-107	stan value>	0.13
JAN	1.57	0.24	0.00	0.00	0.53	1.57	2.74	2.10	44.93	20.40	2 29	0.37	0 16	012
FEB	1 39	039	0.00	0.00	D 73	1 86	311	246	47.76	22 84	2.56	0 43	030	0 12
MAR	2 12	0.52	0.00	0.00	0.89	2.06	197	4 D6	111 46	76 58	4 03	0 68	621	012
APR .	2 68	0 56	0.00	0.00	1 32	2 50	5 74	4 98	124.21	95 08	4 97	D 83	0.48	012
MAY	4 15	194	0.90	0.00	2.59	3 41	5 33	5 73	73 49	88 82	4 97	0 83	1.76	0 12
JUN	3 03	1 [3	0.00	0.00	1 65	2.78	3 22	6 B2	16 94	154 94	5 67	1 13	0.53	012
JUL	1 97	0.3%	0.00	0.00	0.72	1 85	0.00	7.66	0.00	222 86	7.72	0.72	0.00	0 12
AUG	2 13	0.52	0.00	0.00	0.90	2 07	0.00	7.56	0.00	310 43	7 42	0.90	0.00	0.12
SEP	2 95	1.04	0.00	0.00	l 54	2 69	0.00	5 78	0.00	118 43	5.61	0.94	0.60	0 12
OCT	2 96	1 05	0.00	0.00	1 55	2 70	2 15	4 29	0.00	61.05	4 60	0.27	0.77	D 13
NOA	1 88	039	0.00	0 00	07 0	1 86	1 70	281	0.00	36 60	3 17	0.53	0.19	0.12
DEC	, 160	0.25	0.00	0 00	0.55	L 6D	2 33	2 34	28 11	24 66	2.37	0 40	0 15	013
TOTALS	28 38	871	0.60	300	13.84	25 %3	31 29	56.49	446 9 0	1:52 68	56 37	8.54	5 [5	

NOTES:

- (1) AVERAGE PRECIPITATION Average precipitation taken from the Tesas Water Development Board, Hamilton County, Quad #609, retrieved June 17, 2025
- (2) RUNOFF PENS AND ADJACENT AREA Runoff from pers, 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 No process inflow for this RCS
- (4) TOTAL RIFLOW 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 reinfall on the impated area. Runoff from irrigated areas calculated using SCS Curve Number Method adjusted from 1 to 30-day Curve Number (Irrigated CN \$3)(Ref. NRCS Animal Waste Management Software Help File-Program)
- (6) CONSUMPTIVE USE values from Borrelli, et al., 1998. Man Crop Consumptive Use and Free-Water Evaporation for Toxas, Dept. of Civil Engineering, Texas Tech University, Lubbook, Texas (Tables 16 & 25)
- (7) NET CROP DEMAND Net Crop Demand = ((Consumptive Uso(6) Effective Rainfal(5))/12) x Imigated Area
- (8) MONTHLY LAKE SURFACE EVAPORATION Average monthly lake surface evaporation taken from the Texas Water Development Board, Hamilton County, Quad #609, retrieved June 17, 2025
- (9) NET POND EVAPORATION Ner 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 Cemand 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 polumn should not encount in the volume reserved for the 25-year, 10-day rainfall event
- (12) Irrigated Acres Include LMUs 1, 2B, 2C, 3B & 3C

NOTE: Calculations were performed in Microsoft Exact 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



3.0 FACILITY INFORMATION

3.1 Required Certifications

All RCSs, the slurry storage pit and settling basins with concrete bottoms and earthen side walls have been certified by a licensed Texas professional engineer as meeting the liner requirements of the TCEQ. Existing liner and capacity certifications are attached. Upon the completion of Phase 2, liner and capacity certifications for RCS #2C will completed and submitted.

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.



Horizon Dairy RCS #1 Capacity Certification

A capacity survey was performed by Enviro-Ag Engineering, Inc., on RCS #1 at Horizon Dairy in Hamilton County, Texas. The capacity was calculated using the prismoidal method with 2 ft of freeboard. The overall capacity was calculated to be <u>17.52 ac-ft</u>. The volume of sludge at the time of the survey was measured at <u>7.88 ac-ft</u>.

Respectfully Submitted,



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

Attachments:

Figure 1 - Capacity Survey

Figure 2 - Stage-Storage Curve



Horizon Dairy Hamilton County, Texas Treatment Lagoon Liner Certification

A three-inch Shelby tube core sample was collected from the treatment lagoon 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 sample location was sealed with bentonite chips.

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

Treatment Lagoon (788)

 $1.6 \times 10-8 \text{ cm/sec}$

Based on the above documentation the liner in the treatment lagoon 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, P.E.

Enviro-Ag Engineering, Inc.

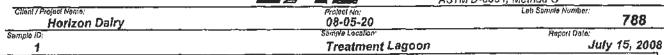
HYDRAULIC CONDUCTIVITY

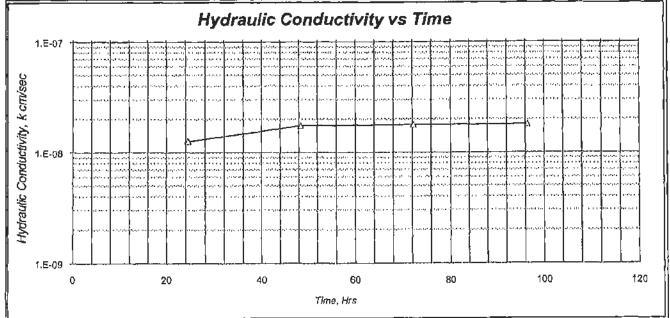
3404 Atrway Blvd., Amarillo, TX 79118 (806) 353-6123 LABORATORY SERVICES



REPORT

ASTM D-5084, Method C





SPECIMEN DATA

SAMPLE ID:	1	
DESCRIPTION:	Treatment Lagoo	n
	<u>INITIAL</u>	<u>FINAL</u>
1		
HEIGHT, in.	3.1	3.1
DIAMETER, In.	2.8	2.8
WATER CONTENT, %	21.7	33.4
DRY DENSITY, pcf	91	88
SATURATION, %	68	100
(Specific Gravity assumed as 2.7))	
SAMPLE COLOR	Dark Brown	
SAMPLE CONSISTENCY	Clay	

COMMENTS:

Tap water used as permeant.

TEST DATA

	1	
	ASTM D-5084.	Method C
EFFECT	TIVE STRESS:	5 psi
GRADIE	NT RANGE:	3 - 3
ואן (סיי	TRATIO:	1.25
ĺ		HYDRAULIC
TRIAL	TIME	CONDUCTIVITY
<u>nos.</u>	<u>hrs.</u>	cm/sec
] 1	24.5	1.3E-08
2	48.4	1.7E-08
3	72.3	1.8E-08
4	96.5	1.8E-08
}		
l		

AVERAGE LAST 4:

1.6E-08

These results apply only to the above listed samples. The data and information are proprietary and can not be released without authorization of Enviro-Ag Engineering Inc. By accepting the data and results represented on this page, client agrees to limit the liability of Enviro-Ag Engineering, Inc. from Client and all other parties claims arising out of the use of (his date to the cost for the respective test(s) represented here, and Client agrees to Indemnify and hold harmless Eavire-Ag from and against all liability in excess of the aforementioned limit.

2: Soils Lab/Perms 2008 | 08-05-20 | 788 | Print Date: Reviewed By: | LSN:

07/16/08

Micah Mullin



Horizon Dairy RCS #2 Capacity Certification

A capacity survey was performed by Enviro-Ag Engineering, Inc., on RCS #2 at Horizon Dairy in Hamilton County, Texas. The capacity was calculated using the prismoidal method at the spillway. The overall capacity was calculated to be 62.99 ac-ft. The volume of sludge at the time of the survey was measured at 24.36 ac-ft.

Respectfully Submitted,



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

Attachments:

Figure 1 – Capacity Survey

Figure 2 - Stage-Storage Curve



Horizon Dairy Hamilton County, Texas RCS #2A Liner Certification

Four 3-inch Shelby tube core samples were collected from RCS #2A to document that the liner meets the requirements of the TCEQ for soil liner. The liner thickness was documented to be at least 18 inches.

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

4	RCS #2A-1 (Lab # 1618)	2.1 x 10 ⁻⁸ cm/sec
₽	RCS #2A-2 (Lab # 1619)	2.3 x 10 ⁻⁸ cm/sec
•	RCS #2A-3 (Lab # 1620)	7.0 x 10 ⁻⁹ cm/sec
•	RCS #2A-4 (Lab # 1621)	3.7 x 10 ⁻⁸ cm/sec

Based on the above documentation the liner in RCS #2A 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.

Morman Madh NORMAN H. MIGLLI 68107 4/19/10

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

TRIAXIAL PERMEABILITY CHAIN of CUSTODY	STRUCTURE	PERM REPORT I.D.	LAB LOG
Old PCS# Z PCS Fill of Wosteroso	大きタコス-1 たらタス - ム 八きサム - 3 八きサム - 3 八きサム - 3	3	12:19 16:19 16:20 16:21
Project Engineer: Sampled by: Date Sampled: Date to Lab: Project Engineer: Received: Received:	302 Mo Bl Stephen (254	rgan Mill Road dg C ville, TX 76401) 965-3500 54) 965-8000	

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

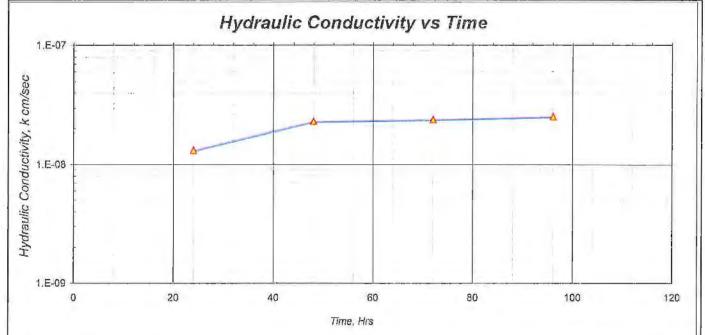
LABORATORY SERVICES

HYDRAULIC CONDUCTIVITY

REPORT

ASTM D-5084, Method C

Client / Project Name. Lab Sample Number: 1618 Horizon Dairy 10-04-05 Sample ID: Sample Location Report Date: RCS #2 - 1 April 19, 2010



SPECIMEN DATA

SAMPLE ID:	1		
DESCRIPTION:	RCS #2 - 1		
	<u>INITIAL</u>	FINAL	
HEIGHT, in.	4.2	4.2	
DIAMETER, in.	2.8	2.9	
WATER CONTENT, %	14.5	16,9	
DRY DENSITY, pcf	119	116	
SATURATION, %	93	100	
(Specific Gravity assumed as 2.7)			
SAMPLE COLOR	Light Brown		
SAMPLE CONSISTENCY	Clay		

COMMENTS:

Tap water used as permeant.

TEST DATA

	ASTM D-5084.	Method C
EFFECT	TIVE STRESS:	5 psi
GRADIE	ENT RANGE:	2 - 2
IN / OUT	TRATIO;	1.00
	-	HYDRAULIC
TRIAL	TIME	CONDUCTIVITY
INIAL	, ,,,,,	
	hrs.	cm / sec
nos.	HIO.	
<u>nos.</u> 1	24.1	1.3E-08
<u>nos.</u> 1 2		1.3E-08 2.3E-08
1	24.1	

AVERAGE LAST 4:

2.1E-08

These results apply only to the above listed samples. The data and information are proprietary and can not be released without authorization of Enviro-Ag Engineering Inc. By accepting the data and results represented on this page, client agrees to limit the liability of Enviro-Ag Engineering, Inc. from Client and all other parties claims arising out of the use of this date to the cost for the respective test(s) represented here, and Client agrees to indennify and hold harmless Enviro-Ag from and against all liability in excess of the aforementioned limit. LSN:

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Print Date: 04/19/10

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LABORATORY SERVICES

Semple ID:

2

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HYDRAULIC CONDUCTIVITY

REPORT

Client / Project Name:

Horizon Dairy

ASTM D-5084, Method C

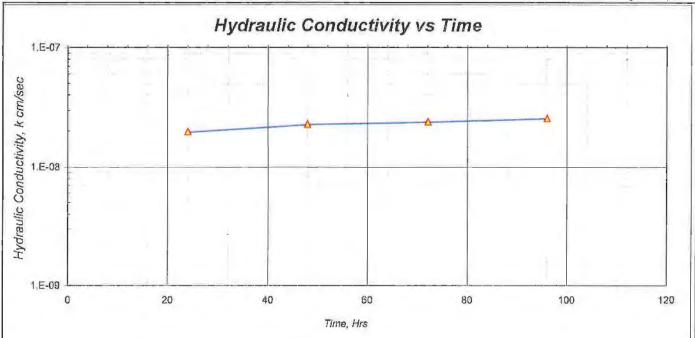
Project No:
Leb Sample Number:
10-04-05

RCS #2 - 2

Report Date:

April 19, 2010

1619



SPECIMEN DATA

	SAMPLE ID:	2	
	DESCRIPTION:	RCS #2 - 2	
		<u>INITIAL</u>	<u>FINAL</u>
	HEIGHT, in.	3.6	3.6
	DIAMETER, in.	2.9	2.9
	WATER CONTENT, %	36.1	39.6
	DRY DENSITY, pcf	81	80
	SATURATION, %	91	97
	(Specific Gravity assumed as 2.7)	J	
	SAMPLE COLOR	Dark Brown	
	SAMPLE CONSISTENCY	Clay	
-11			

COMMENTS:

Tap water used as permeant.

TEST DATA

	ASTM D-5084.	Method C		
EFFECT	TIVE STR E SS:	5 psi		
GRADIE	NT RANGE:	2 - 3		
IN/OUT	ΓRATIO:	1.05		
		HYDRAULIC		
TRIAL	TIME	CONDUCTIVITY		
nos.	hrs.	cm/sec		
1	24.1	2.0E-08		
2	48.0	2.3E-08		
	72.2	2.4E-08		
3		2.5E-08		

AVERAGE LAST 4: 2.

Reviewed By:

2.3E-08

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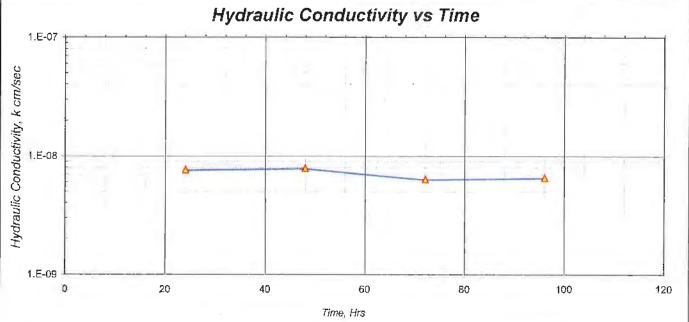
HYDRAULIC CONDUCTIVITY

REPORT

1620

Client / Project Name:
Project No:
Lab Sample Number:
10-04-05





SPECIMEN DATA

	SAMPLE ID:	3		
	DESCRIPTION:	RCS #2 - 3		
		<u>INITIAL</u>	FINAL	
	HEIGHT, in.	2,9	2,9	
	DIAMETER, in.	2.9	2.9	
	WATER CONTENT, %	14.6	17.5	
	DRY DENSITY, pcf	1 15	113	
	SATURATION, %	85	97	
	(Specific Gravity assumed as 2.7	J		
1	SAMPLE COLOR	Light Brown		
	SAMPLE CONSISTENCY	Clay		

COMMENTS:

Tap water used as permeant.

TEST DATA

	Method C		
EFFECTIVE STRESS:		5 psi	
GRADIE	ENT RANGE:	3 - 3	
IN / QU	T RATIO:	1.04	
-		HYDRAULIC	
TRIAL	TIME	CONDUCTIVITY	
nos.	<u>hrs.</u>	cm/sec	
1	24.1	7.6E-09	
	48.0	7.8E-09	
2			
3	72.2	6.3E-09	

AVERAGE LAST 4:

Reviewed By

7.0E-09

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Print Date: 04/19/10

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Endl LSN:

1620

DCN: EAE-QC-GRAPH (rev. 11/10/04)

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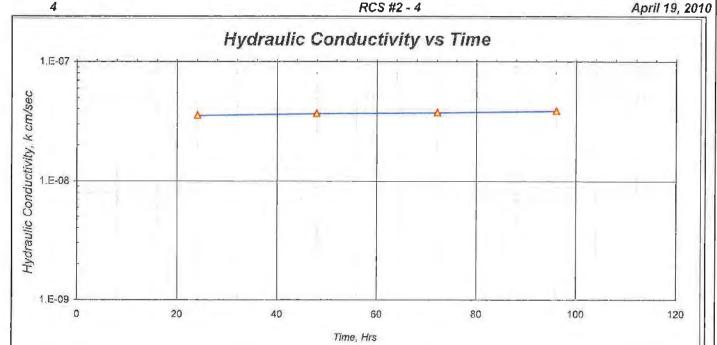
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LABORATORY SERVICES

EAE

REPORT

ASTM D-5084, Method C



SPECIMEN DATA

SAMPLE ID:	4		
DESCRIPTION;	RCS #2 - 4		
	<u>INITIAL</u>	<u>FINAL</u>	
HEIGHT, in.	4.4	4.5	
DIAMETER, in.	2.9	2.9	
WATER CONTENT, %	15.3	20.7	
DRY DENSITY, pcf	110	107	
SATURATION, %	77	97	
(Specific Gravity assumed as 2.7	')		
SAMPLE COLOR	Light Brown		
SAMPLE CONSISTENCY	Clay		

COMMENTS:

Tap water used as permeant.

TEST DATA

	ASTM D-5084.	
EFFECTIVE STRESS: GRADIENT RANGE:		5 psi
		2 - 2
IN/OU	T RATIO:	1.00
3		
		HYDRAULIC
TRIAL	TIME	CONDUCTIVITY
nos.	<u>hrs.</u>	<u>cm / sec</u>
1	24.1	3.5E-08
2	48.0	3.7E-08
3	72.2	3.7E-08
	96.1	3.9E-08

AVERAGE LAST 4:

3.7E-08

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Print Date:

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Horizon Dairy Hamilton County, Texas RCS #2 Expansion Capacity Certification

The survey capacity performed on April 7, 2009 by Enviro-Ag Engineering, Inc. for retention control structure (RCS) #2 Expansion with two vertical feet of dry freeboard is calculated as:

RCS #2 Expansion

Capacity:

117.81 ac-ft

RCS #2 Expansion Surface Area:

8.50 surface acres @ High Water Level

Prepared by:

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



Horizon Dairy Hamilton County, Texas RCS #2 Expansion Liner Certification

Nine 3-inch Shelby tube core samples were collected from RCS #2 Expansion to document the clay liner meets the requirements of the TCEQ for soil liner. The sample locations were backfilled with bentonite clay chips for sealing. The liner thickness was documented to be a minimum of 18 inches.

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

		· R
•	RCS #2 Expansion 1 (Lab #1182)	3.3 x 10 ⁻⁸ cm/sec
•	RCS #2 Expansion 2 (Lab #1183)	$7.4 \times 10^{-9} \text{ cm/sec}$
٠	RCS #2 Expansion 3 (Lab #1184)	8.6 x 10 ⁻⁹ cm/sec
•	RCS #2 Expansion 4 (Lab #1185)	1.7 x 10 ⁻⁸ cm/sec
•	RCS #2 Expansion 5 (Lab #1186)	$1.6 \times 10^{-8} \text{ cm/sec}$
•	RCS #2 Expansion 6 (Lab #1187)	$1.9 \times 10^{-8} \text{ cm/sec}$
•	RCS #2 Expansion 7 (Lab #1231)	$1.1 \times 10^{-8} \text{ cm/sec}$
•	RCS #2 Expansion 8 (Lab #1232)	8.4 x 10 ⁻⁹ cm/sec
•	RCS #2 Expansion 9 (Lab #1233)	4.1 x 10 ⁻⁹ cm/sec

The clay liner present in RCS #2 Expansion is determined to be in accordance with TCEQ specific discharge requirements of 1.1 x 10⁻⁶ cm/sec. The observed hydraulic conductivity from RCS #2 Expansion is considered protective of ground and surface water resources.

Supporting moisture and density laboratory results indicate the embankment and liners were installed at 95% maximum dry density and within the moisture range of minus 1% to plus 3% of optimum moisture content (see attached moisture/density test results). The liner present in RCS #2 Expansion is determined to be constructed in accordance with TCEQ requirements for soil liners

I certify that RCS #2 Expansion at Horizon Dairy meets the construction requirements of NRCS Practice Codes 313 (Waste Storage Ponds), 378 (Pond Embankment) and 521D (Pond Sealing or Lining, Compacted Clay Treatment). Erosion protection and emergency spillway are in place and the staff gauge is installed and calibrated.

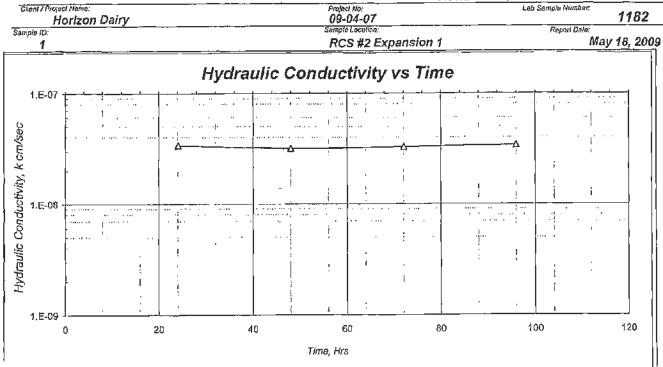
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REPORT ASTM D-5084, Melhod C



SPECIMEN DATA

SAMPLE ID:	1	
DESCRIPTION:	RCS #2 Expans	i <u>on 1</u>
	<u>INITIAL</u>	<u>FINAL</u>
HEIGHT, in.	2.8	2.8
DIAMETER, in.	2.8	2.9
WATER CONTENT, %	18.2	25.7
DRY DENSITY, pcf	103	99
SATURATION, %	78	99
(Specific Gravity assumed as 2,	7)	
SAMPLE COLOR	Dark Brown	
SAMPLE CONSISTENCY	Clay	

COMMENTS:

Tap water used as permeant.

TEST DATA

ACTAID FORA Mathed C			
ASTM D-5084, Method C			
EFFEC1	TIVE STRESS:	5 psi	
GRADIE	NT RANGE:	3 - 4	
IN/OUT	r RATIO:	0.95	
		HYDRAULIC	
TRIAL	TIME	CONDUCTIVITY	
<u>nos.</u>	<u>brs.</u>	<u>om / sec</u>	
1	24.2	3.4E-08	
2	48.1	3.2E-08	
3	72.1	3.3E-08	
4	96,0	3.4E-08	
41709	DACELARTA	3.315_08	

AVERAGE LAST 4:

3.3E-08

These results apply only to the above listed samples. The total and information are proprietry and can not be released without authorization of Enviro-Ag Engineering inc.

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Z.: Soils LabiPerms (2009) 09-04-07 \ 1182

Print Date:

Reviewed By:

LSN:

Z: Solls LabiPerms \2009 \ 09-04-07 \ 1182 DCN: EAE-QC-GRAPH (rev. 11/10/04)

05/18/09

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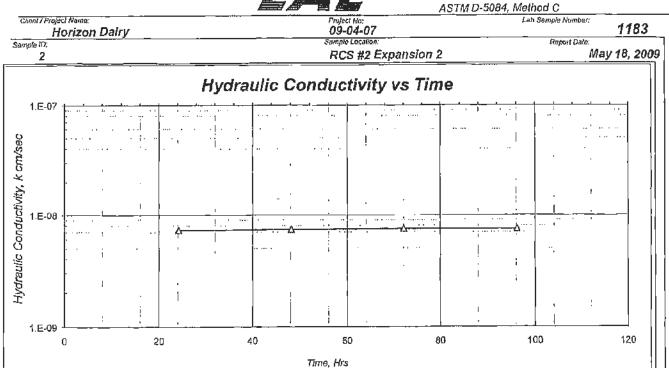
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REPORT



SPECIMEN DATA

SAMPLE ID:	2		
DESCRIPTION:	RCS #2 Expansion	12	
	INITIAL	FINAL	
,			
HEIGHT, In.	2.7	2.7	
DIAMETER, in.	2.8	2.8	
WATER CONTENT, %	23,8	29.7	
DRY DENSITY, pcf	94	93	
SATURATION, %	82	99	
(Specific Gravity assumed as 2	2.7 }		
SAMPLE COLOR	Dark Brown		
SAMPLE CONSISTENCY	Clay		

COMMENTS:

Tap water used as permeant.

TEST DATA

ASTM D-5084, Method C			
EFFECTIVE STRESS:		5 psi	
GRADIE	NT RANGE:	4 - 4	
IN/OUT	N/OUT RATIO: 1.00		
		HYDRAULIC	
TRIAL	TIME	CONDUCTIVITY	
<u>nos.</u>	hrs.	<u>cm / sec</u>	
1	24.2	7.3E-09	
2	48.2	7.4E-09	
3	72.1	7.5E-09	
4	96.2	7.5E-09	

AVERAGE LAST 4:

7.4E-09

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Dy accepting the data and results represented on this page, client agrees to find the liability of Enviro-Ag Engineering, Inc. from Client and all other parties claims existing out of the use of this date to the cost for the respective test(s) represented here, and Client agrees to indemnity and hold harmless Enviro-Ag from and against all liability in excess of the aforementioned limit. Reviewed By: Print Dale:

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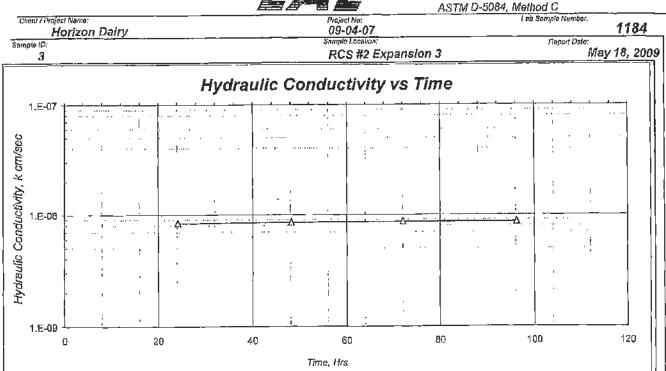
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REPORT



SPECIMEN DATA

3	
RCS #2 Expansio	n 3
<u>INITIAL</u>	<u>FINAL</u>
3.0	3.1
2.8	2.8
21.9	24.5
102	101
89	99
.7)	
Dark Brown	
Clay	
	3.0 2.8 21.9 102 89 .7)

COMMENTS:

Tep water used as permeant.

TEST DATA

ILSI DAIA				
ASTM D-5084, Method C				
EFFECT	IVE STRESS:	5 psi		
GRADIE	NT RANGE:	3 - 3		
IN / OUT RATIO:		1,00		
		HYDRAULIC		
TRIAL	TIME	CONDUCTIVITY		
<u>nos.</u>	<u>hrs.</u>	cm / sec		
1	24.2	8.4E-09		
2	48.2	8.5E-09		
3	72.1	8.7E-09		
4	96.2	8,6E-09		
AVE	RAGE LAST 4:	8.6E-09		
,				

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Z : Soils Lab\Perms \2009 \ 09-04-07 \ 1184

Print Dale: 05/18/09

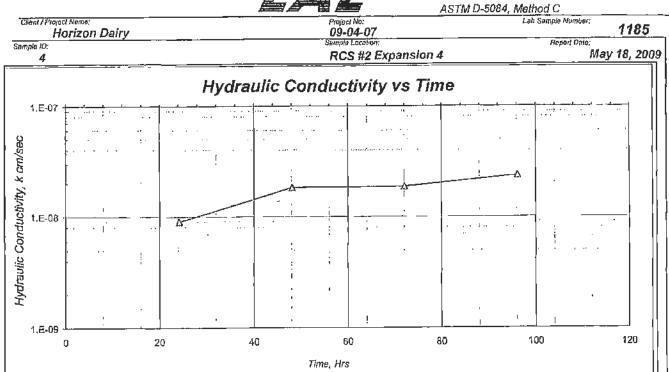
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REPORT



SPECIMEN DATA

SAMPLE ID:	А	
SAIMPLE ID.	~	
DESCRIPTION:	RCS #2 Expans	ilon 4
	<u>INITIAL</u>	<u>FINAL</u>
HEIGHT, in.	3.1	3.2
DIAMETER, In.	2.8	2.8
WATER CONTENT, %	16.3	22.5
DRY DENSITY, pcf	107	105
SATURATION, %	77	100
(Specific Gravity assumed as 2.	7)	
SAMPLE COLOR	Light Brown	/ Yellow
SAMPLE CONSISTENCY	Clay	

COMMENTS:

Tap water used as permeant.

TEST DATA

TEST DATA		
ASTM D-5084, Method C		
EFFECT	IVE STRESS:	5 psi
GRADIENT RANGE: IN / OUT RATIO:		3 - 3
		0.92
		HYDRAULIC
TRIAL	TIME	CONDUCTIVITY
nos.	<u>hrs.</u>	<u>cm / sec</u>
1	24.2	9.0E-09
2	48.2	1.8E-08
3	72.1	1.9E-08
4	96.2	2.4E-08
AVEF	RAGE LAST 4:	1.7E-08

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Ppni Dale: 05/18/09 Reviewed By: Miceh Mullin

1185

LSN:

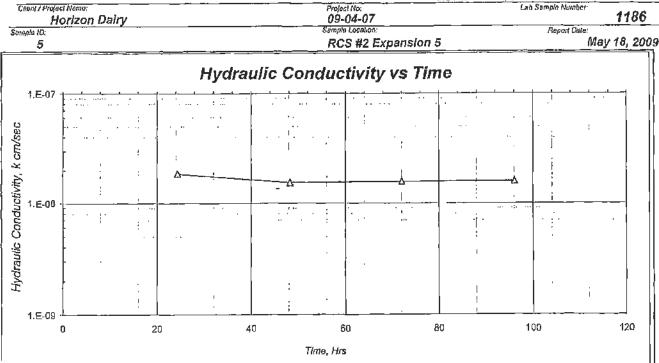
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LABORATORY SERVICES



REPORT ASTM D-5084, Method C



SPECIMEN DATA

r		
SAMPLE ID:	5	
DESCRIPTION:	RCS #2 Expans	ion 5
	INITIAL	FINAL
HEIGHT, in.	2.8	2.8
DIAMETER, in.	2.8	2.9
WATER CONTENT, %	22,5	28.7
DRY DENSITY, pcf	100	94
SATURATION, %	88	99
(Specific Gravity assumed as 2	.7)	
SAMPLE COLOR	Brown	
SAMPLE CONSISTENCY	Clay	
I		

COMMENTS:

Tap water used as permeant.

TEST DATA

,	<u> ASTM D-5084.</u>	<u>Method C</u>
EFFECT	IVE STRESS:	5 psi
GRADIE	NT RANGE:	4 - 4
IN / OUT	RATIO:	0.92
		HYDRAULIC
TRIAL	TIME	CONDUCTIVITY
nos.	hrs.	cm/sec
1	24.3	1.9E-08
2	48.2	1.5E-08
3	72.1	1.6E-08
	96.1	1.6E-08

AVERAGE LAST 4:

1.6E-08

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Z : Soils Lab\Perms \2009 \ 09-04-07 \ 1186

Print Date: 05/18/09 Reviewed By: Micah Mullin

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DCN: EAE-QC-GRAPH (rev. 11/10/04)

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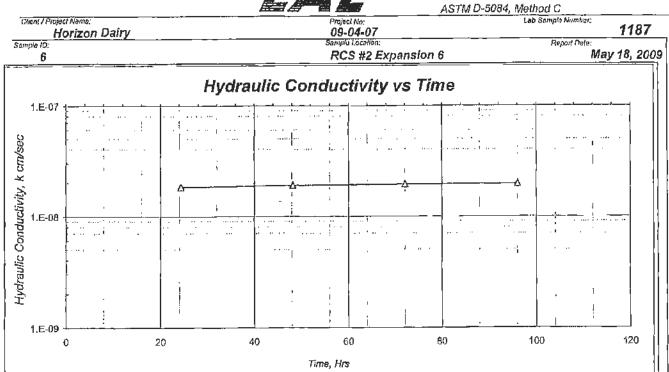
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REPORT



SPECIMEN DATA

SAMPLE ID:	6		
DESCRIPTION:	RCS #2 Expansion	16	
<u></u>	<u>INITIAL</u>	<u>FINAL</u>	
HEIGHT, in.	3.4	3.4	
DIAMETER, in.	2.6	2.8	
WATER CONTENT, %	21.9	27.7	
DRY DENSITY, pcf	98	95	
SATURATION, %	82	98	
(Specific Gravity assumed as 2.	.7)		
SAMPLE COLOR	Dark Brown		
SAMPLE CONSISTENCY	Clay		
l .			

COMMENTS:

Tap water used as permeant.

TEST DATA

:	<u> ASTM D-5084. I</u>	Method C	
EFFECTIVE STRESS:		5 psi	
GRADIE	NT RANGE:	3 - 3	•
IN/OUT	IN / OUT RATIO:	1.00	
		10/05/11/10	
		HYDRAULIC	
TRIAL	TIME	CONDUCTIVITY	
<u>nos.</u>	<u>hrs.</u>	<u>cm / sec</u>	
1	24.3	1.8E-08	
2	48.2	1.9E-08	
3	72.1	1.9E-08	
4	96.1	2.0E-08	
A1/GE	RAGE LAST 4:	1.9E-08	

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Z : Solls Lab\Porms 12009 \ 09-04-07 \ 1187

DCN: EAE-QC-GRAPH (rev. 11/10/04)

Print Date: 05/18/09

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Reviewed By: LSN: fullin

TRIAXIAL PERMEABILITY CHAIN of CUSTODY	STRU	CTURE	PERM REPORT I.D.	LAB LOG
1/	RC5#2 6		1 2 3 4 5 6	1183 1184 1185 1186 1187
RISTZ Expansion				
Facility Name: Horizon Dairy Project Engineer: Norman Mullin Sampled by: Corey Mullin Date Sampled: 04/07/09 Date to Lab: 4/10/09 Received: 124/18alin	ENV ENVEN		IO-Ag Enginee PAGINEERING CONSU SHOI AIMAY BORN AMARILD, TEXAS 3 ID(8) 353-8123 FAX (80	LTANTS Aud 19118

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REPORT

ASTM D-5084, Method C Client / Project Name Lab Sample Number, 1231 09-05-19 Horizon Dairy Report Date: Sample ID: Sample Location. RCS #2 - 7 June 2, 2009 Hydraulic Conductivity vs Time 1.E-07 Hydraulic Conductivity, k cm/sec 1.E-08 1.E-09 60 80 100 120 40 0 20 Time, Hrs

SPECIMEN DATA

SAMPLE ID:	1	
DESCRIPTION:	RCS#2 - 7	
	<u>INITIAL</u>	<u>FINAL</u>
ì		
HEIGHT, in.	3.6	3,6
DIAMETER, in.	2.8	2.8
WATER CONTENT, %	14.7	17.8
DRY DENSITY, pof	114	114
SATURATION, %	83	100
(Specific Gravity assumed as 2.7)		'
SAMPLE COLOR	Brown / Yeild	wc
SAMPLE CONSISTENCY	Clay	

COMMENTS:

Tap water used as permeant.

TEST DATA

	<u>ASTM D-5084,</u>	<u>Method C</u>
EFFECT	IVE STRESS:	5 psi
GRADIENT RANGE:		3 - 3
IN / OUT	RATIO: 0.87	
	<u> </u>	HYDRAULIC
TRIAL	TIME	CONDUCTIVITY
<u>nos.</u>	hrs.	<u>cm / sec</u>
1	23.9	1.6E-08
2	48.1	9,9E-09
3	71.8	1.0E-08
	95.9	1.0E-08

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Z : Soils LabVerms \2009 \ n9-05-19 \ 1231

Print Date: 06/02/09 Reviewed By. Micah Mullin

AVERAGE LAST 4:

1231

1.1E-08

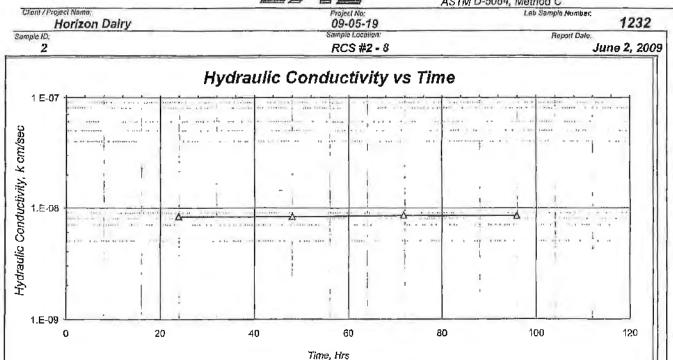
HYDRAULIC CONDUCTIVITY

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REPORT

ASTM D-5084, Method C



SPECIMEN DATA

SAMPLE ID:	2	
DESCRIPTION:	RCS #2 - 8	
	INITIAL	<u>FINAL</u>
HEIGHT, in.	2,9	2.9
DIAMETER, in.	2.8	2.8
WATER CONTENT, %	19.9	25,2
DRY DENSITY, pef	100	100
SATURATION, %	79	100
(Specific Gravity assumed as 2.7))	
SAMPLE COLOR	Brown / Yell	ow
SAMPLE CONSISTENCY	Clay	

COMMENTS:

Tap water used as permeant.

TEST DATA ASTM D-5084, Method C

EFFEC:	TIVE STRESS:	5 psi
GRADIENT RANGE:		3 - 3
IN/OU	I/OUT RATIO: 1.00	
		HYDRAULIC
TRIAL	TIME	CONDUCTIVITY
nos.	hrs.	<u>cm / sec</u>
1	23.9	8.3E-09
2	48.1	8.3E-09
3	71.8	8.6E-09
J		

AVERAGE LAST 4:

8.4E-09

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Z: Soils LabVerms 12009 1 09-05-19 1 1232

Print Date:

Reviewed By:

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DCN: EAE-QC-GRAPH (rev. 11/10/04)

08/02/09

Micah Mullin

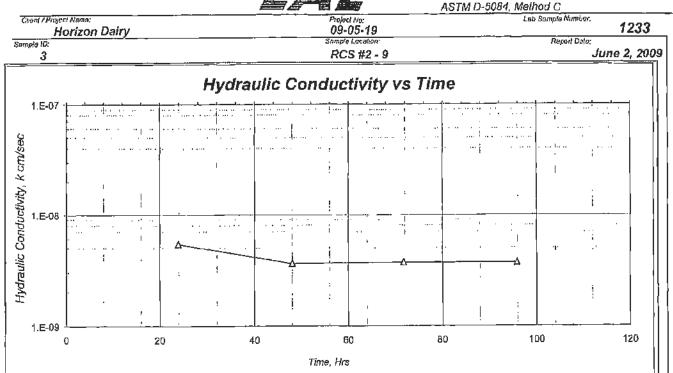
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3404 Aleway Bird., Amerillo, TX 79118 (808) 353-6123

LABORATORY SERVICES



REPORT



SPECIMEN DATA

SAMPLE ID:	3	
DESCRIPTION:	RCS #2 - 9	
	<u>INITIAL</u>	<u>FINAL</u>
HEIGHT, in.	3.3	3,3
DIAMETER, In.	2.8	2.8
WATER CONTENT, %	24.9	29.1
DRY DENSITY, pcf	95	94
SATURATION, %	87	100
(Specific Gravity assumed as 2.7)		
SAMPLE COLOR	Dark Brown	
SAMPLE CONSISTENCY	Clay	
I .		

COMMENTS:

Tap water used as permeant.

TEST DATA

:	ASTM D-5084, Method C	
EFFECT	IVE STRESS:	5 psi
GRADIE	NT RANGE:	3 - 3
IN / OUT	RATIO:	0.87
		HYDRAULIC
TRIAL	TIME	CONDUCTIVITY
nos.	<u>hrs.</u>	cm/sec
1	23.9	5.4E-09
2	48.1	3.6E-09
3	71.0	3.7E-09
		3.7E-09

AVERAGE LAST 4:

4.1E-09

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Z ; Soils Lab\Perms\2009\09-05-19\1233 DCN: EAE-QC-GRAPH (rev. 11/10/04) Print Date: 06/02/09

Micah Mullin

Reviewed By: L.

TRIAXIAL PERMEABILITY CHAIN of CUSTOD	STRUCTURE	PERM" LAB REPORT LOG I.D.
	1365#2-7 1965#2~8 1965#2-9	1231
Rc5#2.		
7. 18 N		
Facility Name: Horizon Dairy Project Engineer: Norman Mullin Sampled by: Norman Mullin Date Sampled: 05/19/2009 Date to Lab: 5/20/09 Received: 1204 13alin	ENGINEERING DAG TEL (BOG	-Ag Engineering, Inc., anserand consultants 3-00 Amay Souleward MARBLO, TEXAS 79118 0) 353-6123 FAX (600) 353-4132



Horizon Dairy Hamilton County, Texas RCS #3 Capacity Certification

The as-built survey capacity for the retention control structure (RCS) #3 at Horizon Dairy with 2 vertical feet of freeboard is as follows:

RCS #3 Capacity

15.02 Acre-Fcet

RCS #3 Surface Area

2.37 Surface Acres @ HWL

This capacity meets or exceeds the volume required by the TCEQ Individual Permit.

Prepared by:

Norman Mullin, P.E.

Enviro-Ag Engineering, Inc.



Horizon Dairy Hamilton County, Texas RCS #3 Liner Certification

Three 3-inch Shelby tube core samples were collected from RCS #3 to document the clay liner meets the requirements of the TCEQ for soil liner. The sample locations were backfilled with bentonite clay chips for scaling. The liner thickness was documented to be a minimum of 18 inches.

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

RCS #3-1 (Lab #1179)
 RCS #3-2 (Lab #1180)
 RCS #3-3 (Lab #1181)
 9.6 x 10⁻⁹ cm/sec
 RCS #3-3 (Lab #1181)
 4.9 x 10⁻⁸ cm/sec

The clay liner present in RCS #3 is determined to be in accordance with TCEQ specific discharge requirements of 1.1×10^{-6} cm/sec. The observed hydraulic conductivity from RCS #3 is considered protective of ground and surface water resources.

Supporting moisture and density laboratory results indicate the embankment and liners were installed at 95% maximum dry density and within the moisture range of minus 1% to plus 3% of optimum moisture content (see attached moisture/density test results). The liner present in RCS #3 is determined to be constructed in accordance with TCEQ requirements for soil liners

I certify that RCS #3 at Horizon Dairy meets the construction requirements of NRCS Practice Codes 313 (Waste Storage Ponds), 378 (Pond Embankment) and 521D (Pond Sealing or Lining, Compacted Clay Treatment). Erosion protection and emergency spillway are in place and the staff gauge is installed and calibrated.

Prepared box 75 19/09

Filomonical Mullim, 5/9/09

NORMA: CLLIN

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Normal Charles L.

Enviro-Ag Engineering, Inc.

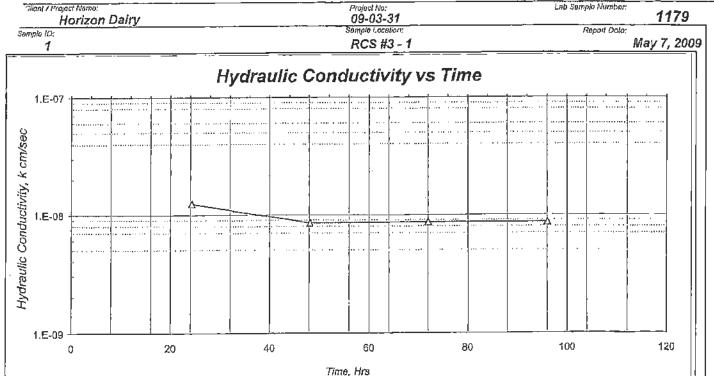
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LABORATORY SERVICES



REPORT ASTM D-5084, Method C



SPECIMEN DATA

	SAMPLE ID:	1	
	DESCRIPTION:	RCS #3 - 1	<u></u>
		<u>IŅITIAL</u>	<u>FINAL</u>
	HEIGHT, in.	2.9	2.9
	DIAMETER, In.	2.7	2.7
	WATER CONTENT, %	22.2	26,5
ı	DRY DENSITY, pcf	99	98
ı	SATURATION, %	85	100
	(Specific Gravity assumed as 2.7))	
	SAMPLE COLOR	Dark Brown	
	SAMPLE CONSISTENCY	Clay	
١			

COMMENTS:

Tap water used as permeant.

TEST DATA

	ASTM D-5084,	Method C
EFFEC?	TIVE STRESS:	5 psi
GRADIE	NT RANGE:	4 - 4
IN / OUT	TRATIO:	0.87
		HYDRAULIC
TRIAL	TIME	CONDUCTIVITY
nos.	<u>hrs.</u>	<u>cm / seç</u>
1	24,3	1,2E-08
2	48.2	8.5E-09
3	72.1	8.6E-09
4	96.1	8.6E-09
		I
AVE	RAGE LAST 4:	9.6 E-09

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Print Date:

Micah Mullin

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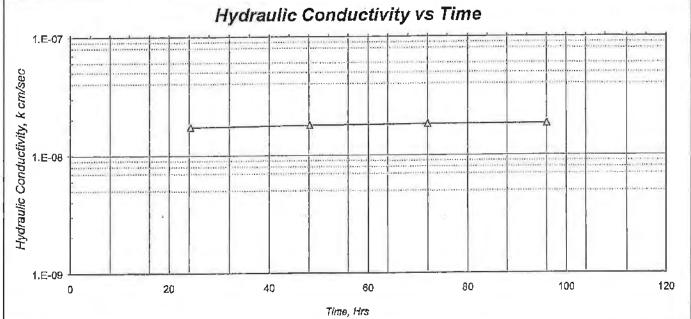
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LABORATORY SERVICES



REPORT



SPECIMEN DATA

1	SAMPLE ID:	2	
	DESCRIPTION:	RCS #3 - 2	
1		<u>INITIAL</u>	<u>FINAL</u>
i	HEIGHT, in.	3.1	3.1
	1	***	
	DIAMETER, in.	2.8	2.8
	WATER CONTENT, %	20.4	2 5.9
	DRY DENSITY, pcf	101	99
	SATURATION, %	83	99
	(Specific Gravity essumed as 2.7)		
	\$AMPLE COLOR	Dark Brown	
	SAMPLE CONSISTENCY	Clay	

COMMENTS:

Tap water used as permeant.

TEST DATA

	ASTM D-5084,	Method C	
EFFECTIVE STRESS: GRADIENT RANGE:		5 psi 3 - 3	
-		HYDRAULIC	
TRIAL	TIME	CONDUCTIVITY	
nos.	<u>hrs.</u>	cm/sec	
1	24.3	1.7E-08	
2	48.2	1,8E-08	
3	72. 1	1.8E-08	
-		1.8E-08	

AVERAGE LAST 4:

1.8E-08

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Reviewed By:

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05/07/09

Reviewed By: Miceh Mullin

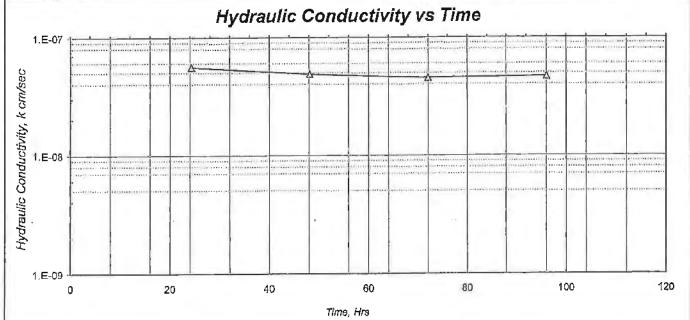
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LABORATORY SERVICES



REPORT ASTM D-5084, Method C



SPECIMEN DATA

3	
RCS #3 - 3	
<u>INITIAL</u>	<u> FINAL</u>
3.6	3.6
2.9	2.9
11.0	18.1
116	113
66	100
7)	
Dark Brown	
Clay	
	3.6 2.9 11.0 116 66 7)

COMMENTS:

Tap water used as permeant.

TEST DATA

	IESTU	MIM
	ASTM D-5084, N	<u> 1ethod C</u>
EFFECT	IVE STRESS:	5 psi
GRADIENT RANGE: 2 - 3 IN/OUT RATIO: 1.00		2 - 3
		1.00
		HYDRAULIC
TRIAL	TIME	CONDUCTIVITY
nos.	<u>hrs.</u>	<u>ст / sec</u>
1	24.3	5,6E-08
2	48.2	4.9E-08
3	72,1	4.5E-08
4	96.1	4.7E-08
AVER	RAGE LAST 4 :	4.9E-08

Those results apply only to the above listed samples. The data and information are proprietary and can not be released without authorization of Enviro-Ag Engineering Inc.

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05/07/09

Print Date:

Micah Mullin

Reviewed By:



Horizon Dairy Hamilton County, Texas Settling Basin #1 Liner Disturbance Certification

Two 3-inch Shelby tube core sample were collected from SB #1 to document that the liner meets the requirements of the TCEQ for soil liner. The liner thickness was documented to be at least 18 inches.

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

SB #1-1 (Lab #2017)

1.2 x 10⁻⁸ cm/sec 1.7 x 10⁻⁸ cm/sec

SB #1-2 (Lab #2018)

Based on the above documentation the liner in SB #1 is certified 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. This certification is to be maintained in the PPP for documentation,



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



Horizon Dairy Hamilton County, Texas Settling Basin #2 Liner Disturbance Certification

Two 3-inch Shelby tube core sample were collected from SB #2 to document that the liner meets the requirements of the TCEQ for soil liner. The liner thickness was documented to be at least 18 inches.

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

• SB #2-1 (Lab #2019)

 $3.4 \times 10^{-8} \text{ cm/sec}$

• SB #2-2 (Lab #2020)

2.0 x 10⁻⁸ cm/sec

Based on the above documentation the liner in SB #2 is certified 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. This certification is to be maintained in the PPP for documentation.



2/24/2011

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



Horizon Dairy Hamilton County, Texas Settling Basin #3 Liner Disturbance Certification

Three 3-inch Shelby tube core sample were collected from SB #3 to document that the liner meets the requirements of the TCEQ for soil liner. The liner thickness was documented to be at least 18 inches.

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

SB #3-1 (Lab #2021)
 SB #3-2 (Lab #2022)
 SB #3-3 (Lab #2023)
 SD #3-3 (Lab #2023)

Based on the above documentation the liner in SB #3 is certified 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. This certification is to be maintained in the PPP for documentation.

Throng And In 2/24/200

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

NORMAN H. MULLI



Horizon Dairy Hamilton County, Texas Settling Basin #4 Liner Disturbance Certification

Three 3-inch Shelby tube core sample were collected from SB #4 to document that the liner meets the requirements of the TCEQ for soil liner. The liner thickness was documented to be at least 18 inches.

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

•	SB #4-1 (Lab #2024)	2.0 x 10 ⁻⁸ cm/sec
٠	SB #4-2 (Lab #2025)	7.1 x 10 ⁻⁸ cm/sec
•	SB #4-3 (Lab #2026)	6.0 x 10 ⁻⁸ cm/sec

Based on the above documentation the liner in SB #4 is certified 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. This certification is to be maintained in the PPP for documentation.

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

TBPE Firm # 2507

NORMAN H. MULL®

(Supporting Documentation Attached)

TRIAXIAL PERMEABILITY CHAIN of CUSTODY	STRUCTURE	PERM REPORT I.D.	LAB
2 03 8B4 1 5B3 200			
Project Engineer: 1/0157 Sampled by: Date Sampled: 1/24/// Date to Lab: Received:	302 Me B Stepher (254	organ Mill Road Idg C nville, TX 76401 1) 965-3500 254) 965-8000	

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. Attached are two NUP/NMP for crop year 2025, one for Phase 1 and one for Phase 2.

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. 4P Pastures, LLC 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

Executive Summary Horizon Dairy WQ0004842000

LMU Summary:

LMUs 1 and 17 are planted in corn and small grains. LMU's 1A, 2A, 2B, 2C, 3A, 3B, 3C, 5, 6, 7, 8, 9, 11, 13, 14 and 15 are established in coastal Bermudagrass overseeded with small grains for perennial coverage. LMU's 10, 16, 18, 20, 21, 23, Mayhugh 1, Mayhugh 2, Watson 1, and Watson 2 are planted in sorghum and small grains. LMU 4 is available for grazing.

Nutrient Summary:

LMU#	Max N	Max P205	Planned N	Planned P
17110#	Lb/ac	Lb/ac	Lb/ac	Lb/ac
	Application	Application	Application	Application
	Rates	Rates	Rates	Rates
1	254	132	64	33
1A	400	227	200	114
2A	400	227	200	114
2B	401	209	100	52
2C	401	209	100	52
3A	400	227	200	114
3B	401	209	100	52
3C	401	209	100	52
4	400	227	200	114
5	600	341	300	170
6	600	341	300	170
7	600	341	300	170
8	600	341	300	170
9	600	341	300	170
10	400	227	200	114
11	400	227	200	114
13	400	227	200	114
14	400	227	200	114
15	400	227	200	114
16	401	209	100	52
17	440	229	110	57
18	400	227	200	114
20	400	227	200	114
21	400	227	200	114
23	401	209	_100	52
Mayhugh I	296_	168	148	84
Mayhugh 2	296	168	148	84
Watson 1	296	168	148	84
Watson 2	296_	168	148	84

Supplemental nutrients will be necessary to achieve the desired yields. Commercial fertilizer applications should be split such that individual application events do not exceed 100 lb/Ac.

All 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.

LMU 2 has been split into LMU's 2B and 2C and were originally sampled by TCEQ as one field. For this plan, LMU's 2B and 2C will utilize the Soil Analysis from LMU 2. LMU 3 has been split into LMU's 3B and 3C and were originally sampled by TCEQ as one filed. For this plan, LMU's 3B and 3C will utilize Soil Analysis from LMU 3. Additionally, at the time of this plan's creation, LMU's Mayhugh 1, Mayhugh 2, Watson 1 and Watson 2 have not been sampled by TCEQ. This plan will utilize the "worst case scenario" for those fields and set the Phosphorous levels to "200ppm". This plan will be updated once those fields have been sampled.

Horizon Dairy 4483 E FM 219 Hico, TX 76457

TCEQ Permit Number:

WQ0004842000

Owner

4P Pastures, LLC 4483 East FM 219 Hico, TX 76457 (254)918-3156

Operator

Horizon Dairy, LLC 4483 FM 219 Hico, TX 76457

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)965-3500

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

8/18/25 3:15 PM

Permit #

Attached Executive	nt Management Plan Summary		^

LOCATION AND PURPOSE OF THE PLAN

EXECUTIVE SUMMARY:

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 10000 head will be confined with the average weight of 1325 pounds. The animals will be confined 24 hours per day for 365 days per year.

Page 1 - Printed on: 8/18/25 3:15 PM Plan is based on: 590 Organic Nutrient Manageme

TABLES 1, 2 and 2a Permit #: WO0004842000

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 <u>must</u> 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.

Page 2 - Printed on: 8/18/25 3:15 PM Plan is based on: 590 Organic Nutrient Manageme

SOLIDS APPLICATION: (cont) Permit #: WO0004842000

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 huild-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 K₂O 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.

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EFFLUENT APPLICATION: (cont)

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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 offsite.

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 Onc-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.

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EFFLUENT APPLICATION: (cont) Permit #: WO0004842000

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.

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MORTALITY MANAGEMENT: (cont) Permit #: WQ0004842000

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.

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EFFLUENT AND SOLIDS STORAGE & TESTING:

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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 cFOTG 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 **Mchlieb III with inductively coupled plasma (ICP)**. The area will be tested and analyzed at least annually to monitor P build up.

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RECORD KEEPING: Permit #: WQ0004842000

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.

waste lea	iving the farm or u	sed as feed.	Estimated Annual Excess
Date	Amount	Hauler or Re	ecipient
			
-			
			

Excess Remaining May be continued on additional sheets

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OPERATION AND MAINTENANCE:

Permit #:

WQ0004842000

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: 8/18/2025

Plan Approved by: Date: 8/18/25

Producer Signature: Discussed with Publication Date: 8/18/25

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.

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Table 1 - Estimated Effluent and Solids Quantities Produced

Permit #:

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Avg. Number of Animals 10,000

Type of Waste	
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* 2,098

Estimated Tons Solids to be Land Applied Annually (on or off site)* 145,918.9

*l'rom engineering design

Estimated	Nutrient Availab	oilty			Estimated !	Nutrient Av	ailabilty	
Effluent					Solids			
		Pounds /	Pounds /			pounds /	pounds /	
	pounds/yr	1000 gal	Acre Inch			yr	ton	
N	62,762	1.10	29.9	* *	N	658,246	4.5	**
P2O5	32,665	0.57	15.6		P2O5	373,879	2.6	
к20	199,697	3.51	95.2		K2O	647,621	4.4	
**	Effluent Values	Based on An	alysis		** Solids V	alues Based	on Analysis	S.
date	d:	June 18, 2025	5		dated;	June 1	8, 2025	

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 31	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 1/1 is:

- equal to or greater than 200 ppm in non-arid areas ^{2/} or
- equal to or greater than 350 ppm in arid areas ^{2l} with a named stream greater than one mile or
- equal to or greater than 200 ppm in arid areas 21 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 Mchlich 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.</p>
- 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.

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PI Index by Field

Printed on: 8/18/25 3:15 PM This plan is based on: [utrient Management Plan V 5.0] Permit #: WO0004842000 Client Name: Horizon Dairy Date: 8/18/2025 Planner: Stephen Colby Location: Hamilton Rainfall: >25.0 inches Rate Appl 65 of Appl to Appl **Total Index Points** norganic Method Organic Method 8 Timing Soil Test P Level Inorganic P₂O₅ Rate Stream P.05 Runoff Curve Erosion Runoff Class Proximity Organic Named Slope Soil Test Soil LMU or Fields Crop P Runoff Potential Date: 89 6 1.3% 8 0 0 0.5 0 2 1.5 18 Silage - Corn16-20T;SG GreenChop-6-7T Medium: 11/21/24 1A 78 8 6 1.25 1.5 Coastal GC (30%DM) 9-11T; SG GC 6-7T 1.0% 0 0 4 1 21.75 Medium 11/21/24 2A Coastal GC (30%DM) 9-11T; SG GC 6-7T 1.0% 78 8 0 6 0 4 0 1 0 19 Medium 11/14/24 2B 78 8 0 6 0 0 Coastal GC (30%DM) 9-11T; SG GC 6-7T 1.5% 0 0.5 15.5 Medium: 11/14/24 2C 78 8 6 0 0.5 0 1.5% 0 1 0 15.5 Medium: Coastal GC (30%DM) 9-11T; SG GC 6-7T 11/14/24 3A 2.5% 78 8 0 6 4 2.5 2 0 0 22.5 Medium Coastal GC (30%DM) 9-11T; SG GC 6-7T 11/13/24 3B 1.1% 78 8 0 6 2 0 0.5 2.5 0 19 Medium Coastal GC (30%DM) 9-11T; SG GC 6-7T 11/13/24 3C 1.1% 78 8 0 6 0 0.5 2.5 2 0 19 Medium Coastal GC (30%DM) 9-11T; SG GC 6-7T 11/13/24 4 6 1 Coastal graze 1 AU/1 ac, SG mod graze 1.9% 80 8 0 0 4 0 0 19 Medium 11/13/24 5 5 2.1% 78 8 0 6 0 2 0 25 Coastal GC (30%DM) 21-23T; SG GC 6-7T 4 High 11/13/24 6 2.7% 71 8 0 6 0 1.25 2 0 21.25 Coastal GC (30%DM) 21-23T; SG GC 6-7T 4 Medium 11/14/24 3.1% 71 8 0 6 0 4 1.25 2 0 21.25 Medium Coastal GC (30%DM) 21-23T; SG GC 6-7T 11/14/24 8 1.0% 78 8 0 6 0 0 1 0 19 Coastal GC (30%DM) 21-23T; SG GC 6-7T 4 Medium 11/14/24 9 Coastal GC (30%DM) 21-23T; SG GC 6-7T 4.7% 78 8 0 6 0 4 0 0 22 Medium 4 11/21/24 10 4.5% 89 8 0 6 0 0 0 22 Silage - Sorg-11-15 T;SG GreenChop-6-7T 4 4 Medium 11/21/24 11 2.2% 78 8 0 6 0 0 2 0 20 4 Medium 11/21/24 Coastal GC (30%DM) 9-11T; SG GC 6-7T 13 5.7% 78 8 0 6 2.5 0 0 4 24.5 Coastal GC (30%DM) 9-11T; SG GC 6-7T 4 High 11/13/24 14 2.5% 78 8 0 6 0 5 2 0 25 Coastal GC (30%DM) 9-11T; SG GC 6-7T 4 11/13/24 High 15 5.1% 78 8 0 6 0 4 5 4 0 27 Coastal GC (30%DM) 9-11T; SG GC 6-7T High 11/21/24 16 Silage - Sorg-11-15 T;SG GreenChop-6-7T 4.7% 89 8 0 6 0 4 1.25 4 1.5 24.75 High 11/14/24 17 Silage - Corn16-20T;SG GreenChop-6-7T 2.5% 89 8 0 6 0 0.5 1.25 1.5 21.25 4 Medium 11/14/24 18 3.7% 89 8 0 6 0 2.5 1.5 26 4 Silage - Sorg-11-15 T;SG GreenChop-6-7T 4 High 11/14/24 6.9% 89 8 0 6 0 0 1.5 23.5 20 Silage - Sorg-11-15 T;SG GreenChop-6-7T 4 4 High 11/14/24 5.7% 89 8 6 0 0 1.5 23.5 21 Silage - Sorg-11-15 T;SG GreenChop-6-7T 0 4 4 Hìgh 11/14/24 23 Silage - Sorg-11-15 T;SG GreenChop-6-7T 2.8% 89 8 0 6 0 0.5 0 4 1.5 20 Medium 11/14/24 Mayhugh 1 Silage - Sorg-11-15 T;SG GreenChop-6-7T 1.6% 89 8 0 6 0 4 0 2 1.5 21.5 Medium **TBD** Mayhugh 2 Silage - Sorg-11-15 T;SG GreenChop-6-7T Printed on 8/18/2025 3:15 PM 1.6% 8 89 0 0 O 2 1.5 21.5 4 Medium TBD

PI Index by Field

Client Name:	Horizon Dairy	_										Date:	8/18/2025	
Planner:	Stephen Colby	_										Location:	Hamilton	_
												Rainfall:	>25.0 inches	
LMU or Fields	Crop	Slope	Runoff Curve	Soil Test P Level	Inorganic P ₂ O ₅ Appl Rate	Organic P ₂ O _s 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:
Watson 1	Silage - Sorg-11-15 T;SG GreenChop-6-7T	1.6%	89	8	0	6	0	4	0	2	1.5	21.5	Medium	TBD
Watson 2	Silage - Sorg-11-15 T;SG GreenChop-6-7T	1.6%	89	8	0	6	0	4	0	2	1.5	21.5	Medium	TBD

Table 3 - Crop Removal Rates (For Information Only)

Permit #: WQ0004842000

Table 5 -	Crop K	emoval Rates (For Information Unity)				Permit #:	WQ
			TOFO	Actual Crop Analysis or Default	Total Est.	Total Est.	Total Est.
LMU or			TCEQ Plan	ual C Iysis ruft	N Removal	P ₂ O ₅ Removal	K ₂ O Remoyal
Field No.	Acres	Crop and P Index Level	Туре	Actual C Analysis Default	lbs/Ac/Yr	lbs/Ac/Yr	lbs/Ac/Yr
1	102.0	Silage - Corn16-20T;SG GreenChop-6-7T M	NUP	Default	341	132	214
1A	36.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
2A	60.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
2B	105.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
2C	73.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
3A	104.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
3B	142.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
3C	38.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
4	56.0	Coastal graze 1 AU/1 ac, SG mod graze M	NMP	Default	300	90	267
5	37.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T H	NMP	Default	503	155	320
6	65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	NMP	Default	503	155	320
7	65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	NMP	Default	503	155	320
8	84.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	NMP	Default	503	155	320
9	20.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	NMP	Default	503	155	320
10	120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	NMP	Default	337	112	171
11	22.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
13	90.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	NMP	Default	330	104	190
14	77.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	NMP	Default	330	104	190
15	58.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	NMP	Default	330	104	190
16	85.0	 Silage - Sorg-11-15 T;SG GreenChop-6-7T H	NMP	Default	337	112	171
17	85.0	Silage - Corn16-20T;SG GreenChop-6-7T M	NMP	Default	341	132	214
18	113.0	 Silage - Sorg-11-15 T;SG GreenChop-6-7T H	NMP	Default	337	112	171
20	120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	NMP	Default	337	112	171
21	24.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	NMP	Default	337	112	171
23	90.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	NMP	Default	337	112	171
' 'dayhugh	70.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	NUP	Default	337	112	171
Mayhugh :		Silage - Sorg-11-15 T;SG GreenChop-6-7T M	NUP	Default	337	112	171
Watson 1	1	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	NUP	Default	337	112	171
Watson 2	1	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	NUP	Default	337	112	171
]
'							
							•
							1

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

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Table 4 - Maximum Solids Application per Field

Permit #:

			<u>.</u>	I		Ι_		N. Francis
Est. Solids				Current	Max	Annual/Biennial	Maximum	Maximum Allowable
Produced	LMU or			Soil Test	Annual	Bie	Solids	Application
Annually	Field			P Level	P2O5	nual	Allowable	Per field
(wet tons)	No.	Acres	Crop Management and PI runoff potential	(ppm)	lbs/acre	A.	Tons/Acre	(Tons)
145,919]]							
	1A	36.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	41	227	Α	88.7	3192
	2A	60.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	118	227	A	88.7	5320
	2B							
	2C							
	3A	104.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	83	227	Α	88.7	9222
	3B							
	3C			,				
	4	56.0	Coastal graze 1 AU/1 ac, SG mod graze M	133	227	A	88.7	4966
	5	37.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T H	125	341	Α	133.0	4921
	6	65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	166	341	Α	133.0	8645
	7	65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	194	341	Α	133.0	8645
	8	84.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	113	341	Α	133.0	11173
	9	20.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	102	341	Α	133.0	2660
	10	120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	149	227	Α	88.7	10641
	11	22.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	40	227	Λ	88.7	1951
	13	90.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	123	227	Α	88.7	7980
	14	77.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	114	227	Α	88.7	6828
	15	58.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	71	227	Α	88.7	5143
	16							
	17							
	18	113.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	111	227	A	88.7	10020
Total Solids	20	120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T II	118	227	A	88.7	10641
Application	21	24.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	31	227	A	88.7	2128
Acres	23							
	/layhugh	70.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	168	A	65.7	4598
	Mayhugh	92.0	Silage - Sorg-I1-15 T;SG GreenChop-6-7T M	200	168	A	65.7	6044
1	Watson I	125.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	168	A	65.7	8211
Application	Watson 2		Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	168	A		11036
Allowable	.,					``	33.7	
on-site								
(tons)								
143965.0	1							
Not	1							
Adequate								
2. Sequito	1							
Solids to be								
used off								
site (tons)]							
1,954.0	1			1				
1,757.0				1	<u> </u>		<u> </u>	

Table 5 - Nutrients Applied/Needs at Maximum Solids Rates

Permit #:

•		pplied When Ap Maximum Rate		Supplement	al Nutrients Nee Maximu	eded When Ap m Rates	plication is at
LMU / Field #	N Lb/ac	P ₂ O ₅ Lb/ac	K ₂ O Lb/ac	N Lb/ac	P ₂ O ₅ Lb/ac	K ₂ O Lb/ac	Lime T/Ac
1							
1A	400	227	394	0	0	0	0
2A	400	227	394	0	0	0	0
2B							
2C							
3Λ	400	227	394	0	0	0	0
3B							
3C							
4	400	227	394	0	0	0	0
5	600	341	590	0	0	0	0
6	600	341	590	0	0	0	0
7	600	341	590	0	0	0	0
8	600	341	590	0	0	0	0
9	600	341	590	0	0	0	0
10	400	227	394	0	0	0	0
11	400	227	394	0	0	0	0
13	400	227	394	0	0	0	0
14	400	227	394	0	0	0	0
15	400	227	394	0	0	0	0
16					ļ		
17					į,		
18	400	227	394	0	0	0	0
20	400	227	394	0	0	0	0
21	400	227	394	0	0	0	0
23	201	1.00	202			_	
Mayhugh I	296	168	292	0	0	0	0
Mayhugh 2	296	168	292	0	0	0	0
Watson 1	296	168	292	0	0	0	0
Watson 2	296	168	292	0	0	0	0
			}				
					{		
		.l	 }	<u> </u>		J	<u>I</u>

Table 6 - Planned Solids Application Rates

Table 0 - 1			Solids Application Rates				t Cititit #.	11 0000	1042000
	le crop			Current Soil Test	Annual / Biennial	Max	% of Maximum	Planned	Planned Solids per
LMU or Field No.	λo <u>u</u> t	Acres	Crop Management and PI runoff potential	P ppm	Vini)	Rate tons/ac	to apply	Solids tons/ac	ਜਿੰਦੀਹੀ (tons)
1		7 2010.5	Crop management and t transit potential	L ppin	7 3	tono de	то арріз	101137 110	(10113)
l A		36.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	41	A	88.7	50	44.3	1596.1
2A		60.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	118	Α	88.7	50	44.3	2660.1
2B									
2C									
3A		104.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	83	A	88.7	50	44.3	4610.9
3B									
3C									
4		56.0	Coastal graze 1 AU/1 ac, SG mod graze M	133	Α	88.7	50	44.3	2482.8
5		37.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T H	125	Α	133.0	50	66.5	2460.6
6		65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	166	Α	133.0	50	66.5	4322.7
7		65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	194	Α	133.0	50	66.5	4322.7
8		84,0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	113	Α	133.0	50	66.5	5586.3
9		20.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	102	Α	133.0	50	66.5	1330.1
10		120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	149	Α	88.7	50	44.3	5320.3
11		22.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	40	Α	88.7	50	44.3	975.4
13		90.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	123	Α	88.7	50	44.3	3990.2
14		77.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	114	A	88.7	50	44.3	3413.8
15		58.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	71	A	88.7	50	44.3	2571.5
16									
17									
18			Silage - Sorg-11-15 T;SG GreenChop-6-7T H	111	A	88.7	50	44.3	5009.9
20		120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	118	A	88.7	50	44.3	5320.3
21		24.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	31	A	88.7	50	44.3	1064.1
23					1		15205		
Mayhugh 1		l .	Silage - Sorg-11-15 T;SG GreenChop-6-7T M Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	A	65.7	50	32.8	2299.2
Mayhugh 2			Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	A	65.7	50	32.8	3021.8
Watson I				200	A	65.7	50	32.8	4105.7
Watson 2		168.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	A	65.7	50	32.8	5518.0
								· ·	
		[
Acres		1606.0		Will the	plant	ed per a	acre applic	ation rates	71982.5
1459	15)	Tons of wet solids produced Annually		us	e all of t	he Solids?		NO
0			Tons to be used off-site at Max. rates	Tons to	be u	sed off-	site at plai	nned rates	73936
	Tons to be used off-site at Max. rates Tons to be used off-site at planned rates 73								

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Permit #:

Table 7 - Nutrients Applied/Needed at Planned Solids Rates

Permit #:

WQ0004842000

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		Applied at Plan	ned Rates	Supplemen	ntal Nutrients Ne	eded at Planne	d Rates
LMU / Field #	N Lb/ac	P ₂ O ₅ Lb/ac	K₂O Lb/ac	N Lb/ac	P ₂ O ₅ Lb/ac	K ₂ O Lb/ac	Lime T/Ac
1						t	
1A	200	114	197	155	20	0	0
2A	200	114	197	175	0	0	0
2B							
2C							
3A	200	114	197	145	0	0	0
3B							
3C							
4	200	114	197	125	0	0	0
5	300	170	295	270	0	0	0
6	300	170	295	255	0	0	0
7	300	170	295	265	0	0	0
8	300	170	295	260	0	0	0
9	300	I 70	295	270	0	0	0
10	200	114	197	140	0	0	0
11	200	114	197	175	20	0	0
13	200	114	197	175	0	0	0
14	200	I14	197	165	0	0	0
15	200	114	197	165	0	0	0
16							
17							
18	200	114	197	140	0	0	0
20	200	114	197	105	0	0	0
21	200	114	197	135	0	0	0
23							
Mayhugh 1	148	84	146	50	0	0	0
Mayhugh 2	148	84	146	50	0	0	0
Watson 1	148	84	146	50	0	0	0
Watson 2	148	84	146	50	0	0	0
] ,							
	l						
			<u> </u>				

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Table 8 - Maximum Effluent Application Per Field

Permit #:

			_					1	3.4- 2
					Current		Annual/Biennial	Maximum	Maximum Effluent
Est. Available			CTO		Soil Test	Max Annual	Biei	Effluent	Allowable
Effluent	LMU or		uble		P Level	P ₂ O ₅	nual	Allowable	/ Field
(ac inches)	Field No.	Acres	å	Crop Management and PI runoff potential	(ppm)	(lbs/acre)		(ac in/ac)	(ac in)
2098	1	102.0		Silage - Corn16-20T;SG GreenChop-6-7T M	239	132	Α	8.5	866
Source:	1A						Ш		
	2A						Ш		
	2B	105.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	126	208	$ _{A} $	13.4	1407
Dairy Lagoon	2C	73.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	126	208	A	13.4	978
' '	3A			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
	3B	142.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	78	208	A	13.4	1903
	3C	38.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	78	208	A	13.4	509
	4	36.0		Coastal GC (3076DW) 9-111, 3G GC 0-71 W	/ 6	200	^	13.4	309
	5								
	6								
	7								
	8						1		
	9								
	10								
	11								
	13								
	14								
	15						П		
	16	85.0		Silage - Sorg-11-15 T;SG GreenChop-6-7T H	91	208	A	13.4	1139
	17	85.0		Silage - Corn16-20T;SG GreenChop-6-7T M	116	229	A	14.7	1250
Total	18		ĺ	,					
Effluent	20							1	
Application	21		l						
Acres	23	90.0	l	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	171	208	Α	13.4	1206
	/ayhugh		1	G					
	Mayhugh '		l						
Maximum	Watson [
EMuent	Watson 2		l						
Application	watson 4								
Allowable								1	
On-Site									
(ac in)	ł								
9258								İ	
Adequate								l:	
Effluent to be									
used Off-Site									
(ac in)							$ \ $		
0			L				Ш		

Table 9 - Nutrients Applied/Needed at Maximum Effluent Rates Permit #: WQ0004842000

Nutrients Applied When Application is at Supplemental Nutrients Needed When Application is

	Nutrients Ap	pflied When Ap Maximum Rate	plication is at s	Supplement	al Nutrients Ne Maximu	eded When Ap m Rates	plication is at
LMU / Field #	N Lb/ac	P ₂ O ₅ Lb/ac	K ₂ O Lb/ac	N Lb/ac	P ₂ O ₅ Lb/ac	K ₂ O Lb/ac	Lime T/Ac
J	254	132	809	125	0	0	0
1 A							
2A							
2B	401	209	1275	0	0	0	0
2C	401	209	1275	0	0	0	0
3A							
3B	401	209	1275	0	0	0	0
3C	401	209	1275	0	0	0	0
4							
5							
6							
7							
8							
9							
10							
11							
13							
14							
15							
16	401	209	1275	0	0	0	0
17	440	229	1399	15	0	0	0
18							
20							
21							
23	401	209	1275	0	0	0	0
Mayhugh 1						l	
Mayhugh 2						{	1
Watson 1							
Watson 2							
		-					
		1					
	J	1	ı l		1	<u> </u>	<u>l</u>

Table :	10 - Pl	an	ned Effluent Application Rates		_	Permit #:		WQ000484	2000
		Double crop		Current	I./ al	Maximum	% of	Planned	Planned Effluent
LMU or	A	ouble	Cross Managarant and Blanca ff activities	Soil Test	Annual / Biennial	Effluent	Maximum	Effluent	/ field
Field No.	Acres 102.0	Ä	Crop Management and PI runoff potential Silage - Corn16-20T;SG GreenChop-6-7T M	P ppm 239	A A	(ac in/ac) 8.5	to apply	(ac in/ac) 2.1	(Ac. ln) 216
lA	102.0		Shage - Contro-2013XI Treehenop-0-71 W	239	_ ^	6.5	25.0	2.1	210
2A									
2B	105.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	126	A	13,4	25.0	3.4	352
2C	73.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	126	A	13,4	25.0	3,4	245
3Λ									
3B	142.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	78	Α	13.4	25.0	3.4	476
3C	38.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	78	A	13.4	25.0	3.4	127
4									
5							·		
6									
7 8									
9									
10									
11									
13									
14									
15							20.70		
16	85.0		Silage - Sorg-11-15 T;SG GreenChop-6-7T II	91	Λ	13.4	25.0	3.4	285
17	85.0		Silage - Corn16-20T;SG GreenChop-6-7T M	116	A	14.7	25.0	3.7	313
18									
20 21									
23	90.0		Silage - Sorg-11-15 T;SG GreenChop-6-7T M	17 1	A	13.4	25.0	3.4	302
/ayhugh	70.0		bridge song tr 15 t,500 dicementary of the	1,,,	'`	15.4	25.0	3.4	50 2
1ayhugh									
Watson I									
Watson 2									
		L							
Acres	720.0				Will	the planne	d applicat	ion rates	2315

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use all of the Effluent?

YES

Table 11 - Nutrients Applied/Needed at the Planned Effluent Rates

Permit #:

WQ0004842000

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	Nutrients	Applied at Plar			tal Nutrients N	eeded at Plann	ed Rates
LMU / Field #	N Lb/ac	P ₂ O ₅ Lb/ac	K ₂ O Lb/ac	N Lb/ac	P ₂ O ₅ Lb/ac	K ₂ O Lb/ac	Lime T/Ac
1	64	33	202	315	0	0	0
1A							
2A							
2В	100	52	318	260	0	0	0
2C	100	52	318	260	0	0	0
3A		1					
3B	100	52	318	260	10	0	0
3C	100	52	318	260	10	0	0
4							
5							
6							
7							
8							
9							
10							
11							
13							
14							
15							
16	100	52	318	245	0	0	0
17	110	57	350	345	0	0	0
18							
20							
21							
23	100	52	318	245	0	0	0
Mayhugh I							
Mayhugh 2							
Watson 1							
Watson 2							

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

LMU / Field #	AWC (inches)	Restrictive Texture	LMU / Field #	AWC (inches)	Restrictive Texture
1	2.34	Gravelly Clay Loain			
1 A					
2Λ					
2B	2.34	Gravelly Clay Loam			
2C	2.34	Gravelly Clay Loam			
3A					
3B	2.34	Gravelly Clay Loam			
3C	2.34	Gravelly Clay Loam			
4					
5					
6					
7					
8					
9					
10					
11					
13					
14					
15					
16	2.125	glesby Gravelly Cla			
17	2.34	idcoke Gravelly Cla			
18					
20					
21					
23	3.36	Slidell Clay			
Mayhugh 1					
Mayhugh 2					
Watson 1					
Watson 2					
	J				
	}				
L	1				

Table 13 - Non Application Areas by Field

Permit #: WQ0004842000 FS = 393-Filter Strip; FB = 386-Field Border, RFB = 391-Riparian Forest Buffer; OLEA = Other Land Excluded Ar

-		т —					21-Kipari					Excluded Ar
LMU /	FS	FB	RFB	OLEA	ſ		LMU/	FS	FB	RFB	OLEA	Total
Field #	Acres	Acres	Acres	Acres	Excluded		Field #	Acres	Acres	Acres	Acres	Excluded
1 1	0.0	0.0										
1A	0.0	0.0										
2A	0.0	0.0										
2B	0.0	0.0										
2C	0.0	0.0										
3A	0.0	0.0										
3B	0.0	0.0										
3C	0.0	0.0										
4	0.0	0.0										
5	0.0	0.0										
6	0.0	0.0										
7	0.0	0.0										
8	0.0	0.0										
9	0.0	0.0										
10	0.0	0.0										
11	0.0	0.0										
13	0.0	0.0										
14	0.0	0.0										
15	0.0	0.0										
16	0.0	0.0										
17	0.0	0.0										
18	0.0	0.0										
20	0.0	0.0										
21	0.0	0.0										
23	0.0	0.0										
Mayhugh	0.0	0.0										
layhugh	0.0	0.0										
Watson 1		0.0										
Watson 2	0.0	0.0										
See App	lication 1	Map for l	ocation of	f buffers		1	l'otals	0.0	0.0	0.0	0.0	0.0
Tr										V		2.0

See Application Map for location of buffers Total 590-633 application acres: 2326.0

0.00.00.0Total 590-633 Field Acres:

2326.0

Waste Utilization and Nutrient Management Data Entries

General Data

Date: 8/18/2025 Farmer Name: Horizon 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 #: WQ0004842000

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: 10000 Approximate Weight: 1325 Days per year in confinement: 365

Hours per day confined: 24

ACRE FEET of effluent to be irrigated*: 174.83

Estimated annual gallons of effluent to be

irrigated/applied annually: 56968005.84

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)*; 32394

Is this the first Year of the AFO-CAFO Operation?

No

Analysis Information

Effluent Information

Date of Analysis: 6/18/2025
Manure Source: Dairy Lagoon
Nitrogen % From Analysis: 0.0165
Phosphorus % From Analysis: 0.003
Potassium % From Analysis: 0.035
Moisture % From Analysis: 99.8

Manure / Solids Information

Date of Analysis: 6/18/2025

Manure Source: Other Solids Explain Other:
Nitrogen % From Analysis: 1,27 Slurry

Phosphorus % From Analysis: 0.252
Potassium % From Analysis: 0.833
Moisture % From Analysis: 77.8

What will be Applied to Fields on this Farm? Both Effluent and Solids

Is this Farm part of an AFO-CAFO?

This plan is based on: rganic Nutrient Management Plan
Printed on: 8/18/25 3:15 PM

Field and Buffer Entries

Permit #:

WQ0004842000

Printed on: 8/18/25 3:15 PM

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 Exclusiou 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	102					0.0	102.0	
1A	36					0.0	36.0	
2A	60				*	0.0	60.0	
2B	105					0.0	105.0	
2C	73					0.0	73.0	
3A	104					0.0	104.0	
3B	142					0.0	142.0	
3C	38					0.0	38.0	
4	56					0.0	56.0	
5	37					0.0	37.0	
6	65					0.0	65.0	
7	65					0.0	65.0	
8	84					0.0	84.0	
9	20					0.0	20.0	
10	120					0.0	120.0	
11	22					0.0	22.0	
13	90	-				0.0	90.0	
14	77					0.0	77.0	
15	58					0.0	58.0	1-
16	85					0.0	85.0	
17	85					0,0	85.0	
18	113					0.0	113.0	
20	120					0.0	120.0	
21	24					0.0	24.0	
23	90	-				0.0	90.0	
layhugh	70					0.0	70.0	
layhugh	92					0.0	92.0	
Vatson 1	125					0.0	125.0	
Watson 2	168					0.0	168.0	
_							1	
-								
			7/-					

Soil Test, Crop Information and Plant Analysis Data Entries

F	Printed on:	:15 PM	Plan is	based on:	590 Organ	ic Nutrient Management Plan V 5.0			Permit #:	W	Q00048	42000	
	Soil Test	Analysis							<u>s</u>		•		tional) Use is Required
N (ppm)	P (ppm)	K (ppm)	Lime (enter amt or leave blank)	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)	% N	% P	% K	Yield Air Dry Production (lbs/ac/yr)
61.626	239	2168			1	102.0	Silage - Com16-20T;SG GreenChop-6-7T M	E	N				
21.561	40.5	342			1A	36.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	S	N				
11.978	118	322			2A	60.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	S	N				
21.097	126	949			2B	105.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	E	N				
21.097	126	949			2C	73.0	Coastal GC (30%DM) 9-11T: SG GC 6-7T M	Ε	N				
27.942	82.5	370			3A	104.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	S	N				
18.989	78.4	559			3B	142.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	E	N				
18.989	78.4	559			3C	38.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	E	N				
37.451	133	431			4	56.0	Coastal graze 1 AU/1 ac, SG mod graze M	S	N				
14.353	125	404			5	37.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T H	S	N				
22.252	166	384			6	65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	S	N				
17.364	194	326			7	65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	S	N				
19.758	113	327			8	84.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	S	N				
15.687	102	289			9	20.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	S	N				
30.2	149	398			10	120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	S	N				
12.123	40	325			11	22.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	S	N				
13.687	123	327			13	90.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	S	N				
18.538	114	286			14	77.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	S	N				
16.354	70.6	340			15	58.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	S	N				
28.268	91	361			16	85.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	E	N				
23.653	116	411			17	85.0	Silage - Corn16-20T;SG GreenChop-6-7T M	E	N	1			
30.846	111	483			18	113.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	S	N	0.0			
47.918	118	451			20	120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	S	N		-		
33.211	31.4	243			21	24.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	S	N				
27.029	171	382			23	90.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	E	N				
100	200	100			Mayhugh	70.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	S	N				
100	200	100			Mayhugh :	92.0	Silage - Sorg-11-15 T;SG GreenChop-6-7f M	S	N				

Soil Test, Crop Information and Plant Analysis Data Entries

	Printed on: Soil Test	Analysis		I Factor I		or organ	ic Nutrient Management Plan V 5.0				nalysis & hen Crop	
N (ppm)	P (ppm)	K (ppm)	Lime (enter amt or leave blank)	This column only for Dry Poultry	L M U 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)	% N	% P	% K
100	200	100			Watson 1	125.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	S	N			
100	200	100			Watson 2	168.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	S	N			
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Solids Application Rate Entries

4.450	110	Set the Planned Application Rates			ALL A COMPANY	Permit #:	W	
145919		"Wet tons" of solids produced Annually	Will the planned rates use all of th					
			Tons to be used off-site at plan					
LMU or Field No.	Acres	Crop Mหกลgement หกd Pl runoff potential	Current Soil Test P ppm	Crop P ₂ O ₅ Req.	Annual or Biennial Application Cycle	Maximum Solids Allowable Tons/Ac	Enter % of Maximum Planned to Apply	
1								
1A		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	41	205	Annual	88.7	50.0	
2A	60.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	118	205	Annual	88.7	50.0	
2B 2C								
3A	104.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	83	205	Annual	88.7	50.0	
3B	10410		113	200	TENTURE	CALL T	1,010	
3C								
4	56.0	Coastal graze 1 AU/1 ac, SG mod graze M	133	175	Annual	88.7	50.0	
5.	37.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T II	125	250	Annual	133.0	50.0	
6	65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	166	250	Annual	133.0	50.0	
7	65,0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	194	250	Annual	133.0	50.0	
н	84.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	113	250	Annual	133.0	50.0	
9	20.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	102	250	Annual	133.0	50.0	
10	1	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	149	155	Annual	88.7	50.0	
11	22.0	Constal GC (30%DM) 9-11T; SG GC 6-7T M	40	205	Annual	88.7	50.0	
13	90.0	Constal GC (30%DM) 9-11T; SG GC 6-7T II	123	205	Annual	88.7	50.0	
14 15	58.0	Constal GC (30%DM) 9-11T; SG GC 6-7T H	114	205 205	Annual	88.7 88.7	50.0	
16 17	2010	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	71	205	Annual	00.7	50.0	
18	113.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	111	155	Annual	88.7	50.0	
20		Silage - Sorg-11-15 T;SG GreenChop-6-7T H	118	155	Annual	88.7	50.0	
21 23		Silage - Sorg-11-15 T;SG GreenChop-6-7T H	31	155	Annual	88.7	50.0	
ayhugh	70.0	Silage - Sorg-11-15 T(SG GreenChop-6-7T M	200	155	Annual	65.7	50.0	
ayhugh	92.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	155	Annual	65.7	50.0	
Vatson	125.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	155	Annual	65.7	50.0	
Vatson	168.0	Silnge - Sorg-11-15 T;SG GreenChop-6-7T M	200	155	Annual	65.7	50.0	
Vatson			200	155				

Printed on: 8/18/25 3:15 PM Plan is based on: 590 Organi

Effluent Application Rate Entries

Effluent - Set the Planned Application Rates	Permit #	WQ0004842000
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56968006 Gallons of Effluent to be used annually				11011 (1	WQ00048420				
56968006				Will the planned rates use all of the effluer				the effluent?	? Yes
LMU or	2098	Acre mones of Emident to be used annually	Current	Crop	Annual or Bienniat	Max Efficent	Enter % of Maximum	Planned	Planned Effluent
Field No.	Acres	Crop Management and PI runoff potential	Soil Test P (ppm)	P2O5 Req.	Application Cycle	Allowable (ne in/ae)	Planned to Apply	Effluent (ac in/ac)	per field (acre inches)
l 1A	102.0	Silage - Corn16-20T;SG GreenChop-6-7T M	239	180	Annual	8.5	25.0	2.12	216
2A									
2B	105.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	126	205	Annual	13.4	25.0	3.35	352
2C		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	126	205	Annual	13,4	25.0	3.35	245
3A									
3B	142.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	78	205	Annual	13.4	25.0	3,35	476
3C	38.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	78	205	Annual	13.4	25.0	3.35	127
4							1		, i
5									
6 7									
8									
9									W
10									1
11							1 1		4 11
13									
14									
15									
16	85.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	91	155	Annual	13.4	25.0	3.35	285
17	85.0	Silage - Corn16-20T(SG GreenChop-6-7T M	116	180	Annual	14.7	25.0	3.68	313
18									d.
20 21									
23	90.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	171	155	Annual	13.4	25.0	3.35	302
ayhugh	3 (41)	Sings Evig 17 to 1,50 disentially over the					200	Diot.	02
ayhugh									
atson									
atson									
									- }
							Total Eff	luent This Page	2315

Printed on: 8/18/25 3:15 PM

Available Water Capacity Entries

	Printed on:	8/18/2	25 3:15	5 PM		Plan	is bas					Manager	nent Pla	Pe	rmit #:	W	Q000	4842000
LMU or Fields receiving Effluent	Texture of the soil layer within the upper 24	0	3_	0.12	0.2	3	14 En	0.16	0.21	14	18	0.08	0.12	18	24	0	0	Availabl Water Holding Capacit (AWC) c
	inches of the soil profile that has the lowest permeability	Fi La (inc	th of irst yer thes)	Fi La (in	C of rst yer /in)	Sec La (inc	th of ond yer hes)	AW Sec La (in	C of ond yer /in)	Dep Th La (inc	th of ird yer hes)	AW Th La	C of ird yer /in)	Fou La (inc	th of urth yer hes)	For La	C of urth yer (in)	the upper 24 inches of the so profile (Inches)
1	Cravelly Clay Loan	0	11	0.11	0.15	11	18	0.11	0.15	18	24	0	0	24				2.34
2B 2C	Gravelly Clay Loan Gravelly Clay Loan	0	11	0.11	0.15 0.15	11 11	18 18	0.11 0.11	0.15 0.15	18 18	24 24	0	0	24 24				2.34 2.34
3B 3C	Gravelly Clay Loan Gravelly Clay Loan	0	11	0.11	0.15	11	18	0.11	0.15	18	24	0	0	24				2.34
16 17	glesby Gravelly Cli dcoke Gravelly Cli	0	17 11	0.1	0.15 0.15	17 11	35 18	0 0.11	0 0.15	35 18	80	0	0	0 80				2.13 2.34
23	Slidell Clay	0	19	0.1	0.18	19	32	0.1	0.18	32				0				3.36

Available Water Capacity Entries

_	Printed on:	8/18/2	25 3:15	5 PM				ed on:				Manager	nent Pla	Pe	rmit #:	W	/Q0004	1842000
							EX	AMPLE	ENTR	RIES					-			
	Texture of the soil layer within the upper 24	0	3	0.12	0.2	3	14 En	0.16 ter Da	0.21 ta for t	14	18 24" (0.12	18	24	, 0	0	Available Water Holding Capacity (AWC) of
LMU or Fields receiving Effluent	inches of the soil profile that has the lowest permeability (Don't Abbreviate)	Fi La	th of rst yer hes)	Fi La	C of rst yer /in)	Sec La	th of ond yer hes)	AW Sec La	C of ond yer /in)	Dep Th La	th of ird yer hes)	AW Th La	C of ird yer /in)	Foi La	th of urth yer hes)	For La	C of urth yer /in)	the upper 24 inches of the soil profile (Inches)
				ļ .														1
																		
									_									
			-															
							<u> </u>				<u> </u>							

A. Sample collection

) Samples were collected for the land management unit (LMU) identified below.					
elow. Attach a copy of the laboratory analyses					
MU below with the exception of the tables.					
Sample Collection Date: 11/21/2024					

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon 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: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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			7

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

Soil Sample Parameter	o-6 inches soil depth	6-24 inches soil depth		
Nitrate-Nitrogen (NO ₃ -N), ppm	61.626	34.535		
Phosphorus (extractable), ppm	239	25.6		
Potassium (extractable), ppm	2168	921		
Sodium (extractable), ppm	324	431		
Magnesium (extractable), ppm	926	531		
Calcium (extractable), ppm	15878	31431		
Electrical Conductivity/Soluble Salts, dS/m	0.837	0.708		
pH, SU	8.06	8.12		

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: David DeJong / Owner

Signature: July Malli fr -

Date: 3/3/25

Telephone Number: (254) 918-3156

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:

A. Sample collection

1)	Samples were collected for the land management	ent unit (LMU) identified below.
7	Yes, complete this form and Tables 1 and 2 be to this soil monitoring report form.	low. Attach a copy of the Iaboratory analyses
	No, provide the facility information for the LN	MU below with the exception of the tables.
2)	Reporting Year: 2024	Sample Collection Date: 11/21/2024
	MA	

B. Facility Information

1) Permit Number: WQ0004842000

2) Sitc Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 1A

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	21.561	8.912
Phosphorus (extractable), ppm	40.5	7.78
Potassium (extractable), ppm	342	278
Sodium (extractable), ppm	98.0	133
Magnesium (extractable), ppm	361	228
Calcium (extractable), ppm	19518	32158
Electrical Conductivity/Soluble Salts, dS/m	0.407	0.453
pH, SU	7.74	7.88

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: David DeJong / Owner

Signature: Ish Mulh 10-3

Date: 3/3/25

Telephone Number: (254) 918-3156

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:

A. Sample collection

1) Sa	Samples were collected for the land management unit (LMU) identified below.						
√ Y€	es, complete this form and Tables 1 and 2 bo to this soil monitoring report form.	clow. Attach a copy of the laboratory analyses					
\square_{N}	o, provide the facility information for the L	MU below with the exception of the tables.					
2) R	eporting Year: 2024	Sample Collection Date: 11/14/2024					

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon 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: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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			q con depth
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	o-6 inches soil depth	6-24 inches soil depth		
Nitrate-Nitrogen (NO ₃ -N), ppm	21.097	4.042		
Phosphorus (extractable), ppm	126	8.79		
Potassium (extractable), ppm	949	441		
Sodium (extractable), ppm	117	256		
Magnesium (extractable), ppm	678	408		
Calcium (extractable), ppm	16100	36379		
Electrical Conductivity/Soluble Salts, dS/m	0.545	0.549		
pH, SU	7.85	8.06		

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: David DeJong / Owner

Signature: Jehn Mulle for

Telephone Number: (254) 918-3156

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:

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 analyse 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: 11/14/2024					

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 2A

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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
Nitratc-Nitrogen (NO3-N), ppin			
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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	11.978	4.939
Phosphorus (extractable), ppm	118	10.6
Potassium (extractable), ppm	322	322
Sodium (extractable), ppm	22.2	73.8
Magnesium (extractable), ppm	368	304
Calcium (extractable), ppm	12451	29082
Electrical Conductivity/Soluble Salts, dS/m	0.449	0.508
pH, SU	7.56	7.78

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: David DeJong / Owner

Signature: John Malli for

Date: 5/3/25

Telephone Number: (254) 918-3156

D. How to Submit

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A. Sample collection

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	to this soil monitoring report form.				
	No, provide the facility information for the LMU below with the exception of the tables.				
	Reporting Year: 2024	Sample Collection Date: 11/13/2024			

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon 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: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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		77.	
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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	18.989	3.136
Phosphorus (extractable), ppm	78.4	9.64
Potassium (extractable), ppm	559	312
Sodium (extractable), ppm	78.0	242
Magnesium (extractable), ppm	465	264
Calcium (extractable), ppm	14584	27793
Electrical Conductivity/Soluble Salts, dS/m	0.582	0.548
pH, SU	7.66	7.91

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: David DeJong / Owner

Signature: John Malli h->

Date: 3/3/25

Telephone Number: (254) 918-3156

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) Reporting Year: 2024	Sample Collection Date: 11/13/2024
to this soil monitoring repor No, provide the facility information f	t form. for the LMU below with the exception of the tables.

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon Dairy
- 3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 3A
- 4) Name of Owner/Operator: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	27.942	12.688
Phosphorus (extractable), ppm	82.5	15.9
Potassium (extractable), ppm	370	333
Sodium (extractable), ppm	39.9	93.5
Magnesium (extractable), ppm	376	233
Calcium (extractable), ppm	16860	29485
Electrical Conductivity/Soluble Salts, dS/m	0.594	0.628
pH, SU	7.54	7.78

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: David DeJong / Owner

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✓	Yes, complete this form and Tables 1 and 2 be to this soil monitoring report form.	low. Attach a copy of the laboratory analyses			
	No, provide the facility information for the LMU below with the exception of the tables.				
	Reporting Year: 2024	Sample Collection Date: 11/13/2024			

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon 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: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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			January Cont Goptia
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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	37.451	10.688
Phosphorus (extractable), ppm	133	23.7
Potassium (extractable), ppm	431	361
Sodium (extractable), ppm	32,6	50.2
Magnesium (extractable), ppm	423	274
Calcium (extractable), ppm	16797	26833
Electrical Conductivity/Soluble Salts, dS/m	0.697	0.736
pH, SU	7,43	7.52

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: David DeJong / Owner

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2)	Reporting Year: 2024	Sample Collection Date: 11/13/2024			

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon 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: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	14.353	1.732
Phosphorus (extractable), ppm	125	13.0
Potassium (extractable), ppm	404	296
Sodium (extractable), ppm	58.0	87.4
Magnesium (extractable), ppm	432	248
Calcium (extractable), ppm	14716	40168
Electrical Conductivity/Soluble Salts, dS/m	0.811	0.848
pH, SU	7.33	7.64

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: David DeJong / Owner

Signature: Jh Mali & ->
Date: 3/3/25

Telephone Number: (254) 918-3156

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B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon 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: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	22.252	2,912
Phosphorus (extractable), ppm	166	13.4
Potassium (extractable), ppm	384	276
Sodium (extractable), ppm	61.2	145
Magnesium (extractable), ppm	438	258
Calcium (extractable), ppm	16828	37976
Electrical Conductivity/Soluble Salts, dS/m	1.12	0.75
pH, SU	7.13	7.78

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Print Name and Title of Responsible Official or Authorized Agent: David DeJong / Owner

Signature: Juli Malli hr ->
Date: 3/3/25

Telephone Number: (254) 918-3156

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1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 7

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	17.364	3.855
Phosphorus (extractable), ppm	194	15.3
Potassium (extractable), ppm	326	280
Sodium (extractable), ppm	54.7	203
Magnesium (extractable), ppm	468	285
Calcium (extractable), ppm	16124	38766
Electrical Conductivity/Soluble Salts, dS/m	0.679	0.869
pH, SU	7.23	7.69

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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: 11/14/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 8

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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		6.	
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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	19.758	3.794
Phosphorus (extractable), ppm	113	13.5
Potassium (extractable), ppm	327	247
Sodium (extractable), ppm	34.8	60.8
Magnesium (extractable), ppm	389	221
Calcium (extractable), ppm	13908	33904
Electrical Conductivity/Soluble Salts, dS/m	0.455	0.409
pH, SU	7.55	7.8

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.

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	No, provide the facility information for the LM	IU below with the exception of the tables.
2)	Reporting Year: 2024	Sample Collection Date: 11/21/2024

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon Dairy
- 3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 9
- 4) Name of Owner/Operator: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	15.687	1.527
Phosphorus (extractable), ppm	102	6.73
Potassium (extractable), ppm	289	260
Sodium (extractable), ppm	14,9	57.5
Magnesium (extractable), ppm	315	212
Calcium (extractable), ppm	14579	33720
Electrical Conductivity/Soluble Salts, dS/m	0.377	0.343
pH, SU	7.48	7.79

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Print Name and Title of Responsible Official or Authorized Agent: David DeJong / Owner

Signature: Och Maler fr-

Date: 3/5/25

Telephone Number: (254) 918-3156

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	No, provide the facility information for the LN	MU below with the exception of the tables.
	Reporting Year: 2024	Sample Collection Date: 11/21/2024

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon Dairy
- 3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 10
- 4) Name of Owner/Operator: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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 (NO3-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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	30.2	16.28
Phosphorus (extractable), ppm	149	12.1
Potassium (extractable), ppm	398	222
Sodium (extractable), ppm	31.1	37.2
Magnesium (extractable), ppm	348	243
Calcium (extractable), ppm	16231	40367
Electrical Conductivity/Soluble Salts, dS/m	0.469	0.395
pH, SU	7.55	7.79

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Print Name and Title of Responsible Official or Authorized Agent: David DeJong / Owner

Signature: Jul Malei fors
Date: 3/2/25

Date: 3/1/25

Telephone Number: (254) 918-3156

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A. Sample collection

	 Samples were collected for the land 	d management unit (LMU) identified below.
	Yes, complete this form and Tables to this soil monitoring rep	s 1 and 2 below. Attach a copy of the laboratory analyses ort form.
	No, provide the facility information	n for the LMU below with the exception of the tables.
	2) Reporting Year: 2024	Sample Collection Date: 11/21/2024
B.	Facility Information	
	1) Permit Number: WQ0004842000	

- 2) Site Name: Horizon Dairy
- 3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 11
- 4) Name of Owner/Operator: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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			o = 4 mones oon depen
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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	12.123	0.842
Phosphorus (extractable), ppm	40.0	3.90
Potassium (extractable), ppm	325	297
Sodium (extractable), ppm	68.8	159
Magnesium (extractable), ppm	372	220
Calcium (extractable), ppm	23514	36776
Electrical Conductivity/Soluble Salts, dS/m	0.482	0.667
pH, SU	7.68	7.84

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: David DeJong / Owner

Signature:

Date: 3/3/25

Telephone Number: (254) 918-3156

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:

A. Sample collection

 ✓ 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.
No, provide the facility information for the LMU below with the exception of the tables.
2) Reporting Year: 2024 Sample Collection Date: 11/13/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 13

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	13.687	3.014
Phosphorus (extractable), ppm	123	9.35
Potassium (extractable), ppm	327	288
Sodium (extractable), ppm	41.2	71.1
Magnesium (extractable), ppm	382	261
Calcium (extractable), ppm	19399	35100
Electrical Conductivity/Soluble Salts, dS/m	0.464	0.374
pH, SU	7.69	7.91

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: David DeJong / Owner Signature:

Date: 3/3/25

Telephone Number: (254) 918-3156

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:

A. Sample collection

1)	Samples were collected for the land managem	ent unit (LMU) identified below.
√	Yes, complete this form and Tables 1 and 2 be to this soil monitoring report form.	low. Attach a copy of the laboratory analyses
	No, provide the facility information for the LN	MU below with the exception of the tables.
2)	Reporting Year: 2024	Sample Collection Date: 11/13/2024

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon Dairy
- 3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 14
- 4) Name of Owner/Operator: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	18.538	4.811
Phosphorus (extractable), ppm	114	14.9
Potassium (extractable), ppm	286	268
Sodium (extractable), ppm	43,3	73.0
Magnesium (extractable), ppm	388	223
Calcium (extractable), ppm	16808	29438
Electrical Conductivity/Soluble Salts, dS/m	0.43	0.441
pH, SU	7.65	7.92

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: David DeJong / Owner

Signature:

Date: 3/3/25

Telephone Number: (254) 918-3156

D. How to Submit

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A. Sample collection

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√	Yes, complete this form and Tables to this soil monitoring rep	s 1 and 2 below. Attach a copy of the laboratory analyses ort form.
	No, provide the facility informatio	n for the LMU below with the exception of the tables.
	Reporting Year: 2024	Sample Collection Date: 11/21/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 15

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	16.354	4,034
Phosphorus (extractable), ppm	70.6	5.16
Potassium (extractable), ppm	340	360
Sodium (extractable), ppm	57.4	78.9
Magnesium (extractable), ppm	364	224
Calcium (extractable), ppm	15899	27076
Electrical Conductivity/Soluble Salts, dS/m	0.343	0.486
pH, SU	7,68	7.85

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: David DeJong / Owner

Signature:

Date: 3/3/25

Telephone Number: (254) 918-3156

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:

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

A. Sample collection

1)	Samples were collected for the land manager	nent unit (LMU) identified below.
✓	Yes, complete this form and Tables 1 and 2 be to this soil monitoring report form.	elow. Attach a copy of the laboratory analyses
	No, provide the facility information for the L	
	Reporting Year: 2024	Sample Collection Date: 11/14/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 16

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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			The state of the s
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	o-6 inches soil depth	6-24 inches soil depth
Nitratc-Nitrogen (NO ₃ -N), ppm	28.268	28.268
Phosphorus (extractable), ppm	91.0	7.82
Potassium (extractable), ppm	361	226
Sodium (extractable), ppm	89.5	96.1
Magnesium (extractable), ppm	406	204
Calcium (extractable), ppm	16066	34351
Electrical Conductivity/Soluble Salts, dS/m	0.599	0.485
pH, SU	7.68	7.87

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 (mmbols/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 helief, 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: David DeJong / Owner

Signature: Liket for

Date: 3/3/25

Telephone Number: (254) 918-3156

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

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

A. Sample collection

1)	Samples were collected for the la	nd management unit (LMU) identified below.
√	Yes, complete this form and Tabl to this soil monitoring re	es 1 and 2 below. Attach a copy of the laboratory analyses port form.
	No, provide the facility informati	on for the LMU below with the exception of the tables.
	Reporting Year: 2024	Sample Collection Date: 11/14/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 17

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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 (NO3-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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	23.653	21.279
Phosphorus (extractable), ppm	116	4.63
Potassium (extractable), ppm	411	198
Sodium (extractable), ppm	105	111
Magnesium (extractable), ppm	451	202
Calcium (extractable), ppm	16927	36271
Electrical Conductivity/Soluble Salts, dS/m	0.591	0.559
pH, SU	7.9	7.78

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: David DeJong / Owner

Signature: LRA

Date: 3/3/25

Telephone Number: (254) 918-3156

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

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

A. Sample collection

1)	Samples were collected for the land manager	nent unit (LMU) identified below.
✓	Yes, complete this form and Tables 1 and 2 be to this soil monitoring report form.	elow. Attach a copy of the laboratory analyses
	No, provide the facility information for the L	MU below with the exception of the tables.
2)	Reporting Year: 2024	Sample Collection Date: 11/14/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 18

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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		<u> </u>	
Phosphorus (extractable), ppm			-
Potassium (extractable), ppm			
Sodium (extractable), ppm			
Magnesium (extractable), ppm		_	
Calcium (extractable), ppm			
Flectrical Conductivity/Soluble Salts, dS/m	_		
pH, SU			

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

Soil Sample Parameter	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	30.846	30.09
Phosphorus (extractable), ppm	111	9.69
Potassium (extractable), ppm	483	258
Sodium (extractable), ppm	50.6	66.3
Magnesium (extractable), ppm	386	207
Calcium (extractable), ppm	15031	31133
Electrical Conductivity/Soluble Salts, dS/m	0.55	0.59
pH, SU	7.69	7.83

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: David DeJong / Owner

Signature: L. K. S. Gor

Date: 3/3/25

Telephone Number: (254) 918-3156

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

1)	Samples were collected for the land managem	ent unit (LMU) identified below.
V.	Yes, complete this form and Tables 1 and 2 be to this soil monitoring report form.	low. Attach a copy of the laboratory analyses
	No, provide the facility information for the LM	IU below with the exception of the tables.
	Reporting Year: 2024	Sample Collection Date: 11/14/2024

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon Dairy
- 3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 20
- 4) Name of Owner/Operator: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	•		The state of the s
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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	47.918	12.095
Phosphorus (extractable), ppm	118	12.7
Potassium (extractable), ppm	451	273
Sodium (extractable), ppm	84.7	227
Magnesium (extractable), ppm	416	306
Calcium (extractable), ppm	18265	34005
Electrical Conductivity/Soluble Salts, dS/m	0.621	1.57
pH, SU	7.73	7.75

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: David DeJong / Owner

Signature:

Date: 3/3/25

Telephone Number: (254) 918-3156

D. How to Submit

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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

1) Samples were collected for the land	d management unit (LMU) identified below.
✓ Yes, complete this form and Tables to this soil monitoring repo	s 1 and 2 below. Attach a copy of the laboratory analyses ort form.
No, provide the facility information	n for the LMU below with the exception of the tables.
2) Reporting Year: 2024	Sample Collection Date: 11/14/2024

B. Facility Information

1) Permit Number: WQ0004842000

Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 21

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	33.211	12.528
Phosphorus (extractable), ppm	31.4	5.95
Potassium (extractable), ppm	243	177
Sodium (extractable), ppm	30.3	39.1
Magnesium (extractable), ppm	251	220
Calcium (extractable), ppm	24451	44769
Electrical Conductivity/Soluble Salts, dS/m	0.307	0.312
pH, SU	7.91	8.01

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: David DeJong / Owner

Signature: A Age

Date: 3/3/25

Telephone Number: (254) 918-3156

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

1)	Samples were collected for the land managem	ent unit (LMU) identified below.
√	Yes, complete this form and Tables 1 and 2 be to this soil monitoring report form.	low. Attach a copy of the laboratory analyses
	No, provide the facility information for the LM	MU below with the exception of the tables.
	Reporting Year: 2024	Sample Collection Date: 11/14/2024

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon Dairy
- 3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 23
- 4) Name of Owner/Operator: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	27.029	19.769
Phosphorus (extractable), ppm	171	15.2
Potassium (extractable), ppm	382	278
Sodium (extractable), ppm	63.4	198
Magnesium (extractable), ppm	468	354
Calcium (extractable), ppm	18881	33468
Electrical Conductivity/Soluble Salts, dS/m	0.569	0.64
pH, SU	7.79	8

Note: ppin = parts per million, considered to be equivalent to milligrains 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: David DeJong / Owner Signature:

Date: 3/3/25

Telephone Number: (254) 918-3156

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

IEXAS COMMISS ENVIRON QUALITY	IMENTAL		Ch	ain	of	Cust	od	y ł	Rec	ord	55831		
Location:	Horizo	(Do not fil	ru indhis shada	ad area	if the fac	cility inform	ation	must I	be confid	dential)	Permit # 42		
Region:	Organization		PCA Code			Progran	n-	1Q		Sampler telephone number:	_		
E-Mail ID:			(signature)		Lar	Dn	_			Sampler: (please print clearly)	drew		
Lab ID Number	Sample ID	Date	Time	# of Bottles	Grab/ Comp.	Matrix L,S,M,O,T	CL2	ρН	Cand	Analyses Requested	REMARKS		
N506	-01	11-21-24	9:47							SURFA	LMUI	0-6	
14507	-02		9:47									6-20	
14508	-03		9:30								LMUIA	0-6	
14509	-04		9:30									6-21	
14510	-05	11-14-24	13 40									0-6	
14511	-06	11-14-24	13:40									6-20	
14512	-07	11-14-24	0 00								1.	0-6	
14513	-08	11-14-24	13:20								1 00.100	6-2t	
14514	-09	13-84	1030									0-6	
14515	-179	1	Q S D									6-24	
Relinquished		1416	Time	Receiv	et by:	Va 1	フ-/	7-2	24	For Laboratory Use:	\wedge		
Relinquished by	K.	Date	Time	Recei	ed by	V(, _	,	Received on ice: Y	N dec	g. C	
Relinquished by	r.	Date	Time	Receiv	ed by:					Preservatives; Y	N	,	
Relinquished by	r.	Date	Time	Receiv	ed by:					COC Seal: Y	N		
Shipper name: FLO E) 0EQ-10065 (11/02		Shipper N	lumber:	481		27 (5 ellow-Lab	7			Seals Intact: Y	N/		

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

Report ID: 055831a-45700 Print Date: 12-Feb-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: Horizon Dairy
Client address: not provided

Standard Sample Report TCEQ COC# 055831

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.
14506	55831-01	0-6	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14507	55831-02	6-24	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14508	55831-03	0-6	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14509	55831-04	6-24	11/21/2024	Vanessa Gardner	4	12/17/2024	sail	12/17/2024	12/31/2024	TLP
14510	55831-05	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14511	55831-D6	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14512	55831-07	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14513	55831-08	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14514	55831-09	0– 6	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	Tt.P
14515	55831-10	6-24	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	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.SQP

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.O. 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, U.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 JU 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

Print Date: 12-Feb-25

Standard Sample Report TCEO COC# 055831

Pagnagia Com	pid (repert			- 033031									
Laboratory ID:	TCEQ/client	Mehlich III	Mehlich ()	Mehlich III	Mehlich (()	Mehlich III	Mehlich III	Mehlich III	Mehlich III				
_	Sample ID:	Picano.	P units	Kicana,	K units	Са солс.	Ca units	Mg cond.	Mg units	Sicone.	S units	Na conc.	Na units
14506	55831-01	239	ррm	2168	ppm	15878	ppm	926	ррп	147	ppm	324	ppm
14507	55831-02	25.6	ppm	921	ppm	31431	ppm	531	ррт	233	ppm	431	ррт
14508	55831-03	40.5	ppm	342	ppm	19518	ppm	361	ppm	145	ppm	98.0	ppm
14509	55831-04	7.78	ppm	278	ppm	32158	ppm	228	ppm	210	ppm	133	ppm
14510	55831-05	126	ppm	949	ppm	16100	ppm	674	ppm	131	ppm	117	ppm
14511	55831-06	8.79	ppm	441	ppm	36379	ppm	408	ppm	229	ppm	256	ppm
14512	55831-07	118	ppm	322	ppm	12451	ррп	368	ppm	101	ррш	22.2	ppm
14513	55831-08	10.6	ppm	322	ppm	29082	ppm	304	ppm	184	ppm	73.8	p pm
14514	55831-09	78.4	ppm	559	ppm	14584	ppm	465	ррт	111	ppm	78.0	ppm
14515	55831-10	9.64	ρpm	312	ppm	27793	ррт	264	ρρm	187	ppm	242	ppm

Laboratory ID:	Mehlich III											
	P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Мд солс.	Sicond.	S units	Na conc.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm										

Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample ID:	Extract Date	Extract Tech	Anal.Date	Anal, Tech
14506	55831-01	1/26/2025	FMR	1/27/2025	JLP
14507	55831-02	1/26/2025	FMR	1/27/2025	JLP
14508	55831-03	1/26/2025	FMR	1/27/2025	JLP
14509	55831-04	1/26/2025	FMR	1/27/2025	JLP
14510	55831-05	1/26/2025	FMR	1/27/2025	JLP
14511	5 5831-0 6	1/26/2025	FMR	1/27/2025	JLP
14512	55831-07	1/26/2025	FMR	1/27/2025	JLP
14513	55831-08	1/26/2025	FMR	1/27/2025	J LP
14514	55831-09	1/26/2025	FMR	1/27/2025	JLP
14515	55831-10	1/26/2025	FMR	1/27/2025	JLP

Report ID: 055831a-45700 Standard Sample Report Print Date: 12-Feb-25 TCEQ COC# 055831

Gilling Gill	mpic report		. 054 004	00000			
Laboratory ID:	TCEQ/client	рН	р Н	Conductivity	Conductivity	Nitrate-N	Nitrate-N
	Sample ID:		ยกits		units		units
14506	55831-01	8.06	NA.	0.837	dS/M	61.626	ppm
14507	55831-02	8.12	NA	0.708	dS/M	34.535	ppm
14508	55831-03	7.74	NA	0.407	dS/M	21.561	ppm
14509	55831-04	7.88	NA	0.453	dS/M	8.912	ppm
145†0	55831-05	7.85	NA	0.545	dS/M	21.097	фрm
14511	55831-06	8.06	NA	0.549	dS/M	4.042	ppm
14512	55831-07	7.56	NA	0.449	d\$/M	11.978	p pm
14513	55831-08	7.78	NA	0.508	dS/M	4.939	ppm
14514	55831-09	7.66	NA	0.582	dS/M	18.989	ppm
14515	55831-10	7.91	NA	0.548	dS/M	3.136	ppm

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

Laboratory ID:	TCEQ/client	pH/Conduct	ivity prep	pH Ana	lysis	Conduc	tivity	Nitate-N I	Extract	Nitrate-N A	Analysis
	Sample ID:	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
14506	55831-01	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14507	55831-02	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FM R	1/27/2025	JW
14508	55831-03	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14509	55831-04	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14510	55831-05	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14511	55831-06	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	J₩
14512	55831-07	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14513	55831-08	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14514	55831-09	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FM R	1/27/2025	J₩
14515	55831-10	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW

Report ID: 055831a-45700 Quality Control Report

Print Date: 12-Feb-25

Laboratory ID:		Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich []]	Mehlich III	Mehlich fil					
		P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc	Mg conc.	S conc.	S units	Na conc.	Na units
14519	IC1049	54.3	ppm	326	ррт	2599	ppm	373	ppm	40.2	ppm	49.0	ppm
14520	IC1050	55.7	ppm	339	ррлп	2635	ppm	385	ppm	40.4	ppm	50.1	ppm
	Mean IC	0	ррт	0	ppm	0	ppm	0	ррт	0	ppm	0	ppm
	IC Lower	49.8	ppm	268.0	ppm	2047.0	ppm	318.0	ppm	30.0	ppm	33.0	ppm
	IC Upper	55.7	ppm	375.0	ppm	2701.0	ppm	388.0	ppm	48.0	ppm	49.0	ppm
	blk226	< 0.007280	ppm	< 0.142	ppm	<2.49	ppm	< 0.341	ppm	< 0.0100	ppm	<0.1000	ppm

Laboratory ID:	Mehlich III Picono.	Mehlich III Plunits	Mehlich III Kicone.	Mehlich III K units	Mehlich III Ca conc.	Mehlich III Ca units	Mehlich III Ma conc.	Mehlich III				
<u> </u>		. 0,110		IX GITTES	Od COITC.	Ca units	my conc.	Mg conc.	S conc.	S units	Na cone.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ррт	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm

Laboratory ID;	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Extract Date	Extract Tech	Anal.Date	Anal, Tech
IC1049	1/26/2025	FMR	1/27/2025	JLP
IC1050	1/26/2025	FMR	1/27/2025	JLP
blk226	1/26/2025	FMR	1/27/2025	JLP

Report ID: 055831a-45700 Print Date: 12-Feb-25

Quality Control Report

Laboratory ID:		рН	рН	Conductitity	Conducitity	Nitrate-N	Nitrate-N	Nitrate-N
			un ts	conc.	units	conc.	units	% recovery
14519	[C1049	6.2	na	0.135	dS/M	5.548	ppm	
14520	IC1050	6.1	na	0.128	dS/M	5.026	ppm	
	Mean IC	6.13	na	0.1315	dS/M	5.287	ppm	
14520spike	Spiked sample	-	-	-	-	4.0	ppm	80.9
	IC lower	6.010	па	0.113	dS/M	3.7	ppm	
	JC Upper	6.200	∩a	0.161	dS/M	5.7	ppm	
	blk226	-	na	0	dS/M	0.001	ppm	

Laboratory ID:	рН	pН	Conducitity	Conducitity	Nitrate-N	Nitrate-N
		units	conc.	units	conc.	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/Conduct	ivity prep	pH Analysis		Conduc	tivity	Nitate-N	Extract	Nitrate-N Analysis		
	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech	
IC1049	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW	
IC1050	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW	
blk226	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW	

TEXAS COMMIS ENVIRO QUALITY	SSTON ON NMENTAL Y		Çh	ain	of	Cust	tod	y F	Rec	ord	558	32
Location:	Horizo	1 Dai	/ Y in this shade	ed area i	if the fac	ality inform	ation	must l	be confid	lential)	Permit # 42	
Region;	Organizatio	n #:	PCA Code	е:		Program	11	JQ.		Sampler telephone number: (254) 552-1900		
E-Mail ID:		Sampler	(signature)	20	Hav	· Q.	_	_		Sampler: (please print clearly)	caner	
Lab ID Number	Sample ID	Date	Time	# of Bottles	Grab/	Matrix L,S,M.O,	CL2	рН	Cond	Analyses Requested	REMAR	KS
14516	-01	Y.3/24	0945	100	5					See RTA	LMU3A	0-6
14517	-02	1/3/24	0945	5							LMU3A	6-24
14518	-03	1/3/24	⁰ 945								Lmu4	0-6
1452	-04	Y.3/24	० 945								LMU4	6-24
14522	-05	1/13/24	1055								LMUS	0-6
14523	-06	1/13/24	1055								LMUS	6-24
14524	-07	14/24	1120								LMUL	0-6
1983	-08	11/21/20									Lmu6	6-20
14526	-09	11/14/24									LMU7	0-6
14.537	-10	14/24	1155		10	1					LMUT	6-24
Refinquished	by:	12 20 Z	Time		1	412	-17	-25	1	For Laboratory Use:		
Relinquished	by.	Date	Time	Recei	d by:					Received on ice: Y	M	deg. C
Relinquished	by:	Date	Time	Receiv	ved by:					Preservatives: Y	N	
Relinquished	by:	Date	Time	Receiv	ved by:					COC Seal: Y	N	
Shipper name	ed tx	Shipper N	iginal) -Lab	8		86 a	_	ת	Pi	Seals Intact: Y	N Soldenrod-Collector Co	OEV

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

Report ID: 055832a-45700 Print Date: 12-Feb-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:

Horizon Dairy

Client address:

not provided

Standard Sample Report TCEQ COC# 055832

Laboratory ID:	TCEQ/client	Sample	Sample Coll.	Collector	TCEQ	Date	Sample	Sample opened	Sample Ground	Process
	Sample ID	Depth (inches)	Date:	Name:	Region #	Received	Type:	Date	□ate	Tech.
14516	55832-01	0-6	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14517	55832-02	6-24	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14518	55832-03	0-6	11/13/2024	Vanessa Gardner	4	12/17/2024	sail	12/17/2024	12/31/2024	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

Print Date: 12-Feb-25

Standard Sample Report

Laboratory ID:	TCEQ/client	Mehlich III	Mehlich (N										
	Sample ID:	Piconc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg units	S conc.	S units	Na conc.	Na units
14516	55832-01	82.5	ppm	370	ppm	16860	ppm	376	ppm	131	ppm	39.9	ppm
14517	55832-02	15.9	ppm	333	ppm	29485	ppm	233	ppm	198	ppm	93.5	ppm
14518	55832-03	133	ppm	431	ppm	16797	ppm	423	ppm	145	ppm	32.6	ppm

Laboratory (D:	Mehlich III											
	Р солс.	P units	K cond.	K units	Calcond.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conc.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	ppm	1	ppm	1	ppm	1_	ppm	1	ррт

Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample ID:	Extract Date	Extract Tech	Anal.Date	Anal. Tech
14516	55832-01	1/26/2025	FMR	1/27/2025	JLP
14517	55832-02	1/26/2025	FMR	1/27/2025	JLP
14518	55832-03	1/26/2025	FMR	1/27/2025	JLP

Print Date: 12-Feb-25

Standard Sample Report

			1000	II BOOODE			
Laboratory ID:	TCEQ/client	pН	pΗ	Conductivity	Conductivity	Nitrate-N	Nitrate-N
	Sample ID.		units		units		units
14516	55832-01	7.54	NA	0.594	dS/M	27.942	ppm
14517	55832-02	7.78	NA	0.628	dS/M	12.688	ppm
14518	55832-03	7.43	NA	0.697	dS/M	37.451	ppm

Laboratory ID:	рН	pH units	Conductivity	Conductivity	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/Conduct	ivity prep	pH Ana	llysis	Conduc	tivity	Nitate-N	Extract	Nitrate-N A	Analysis
<u> </u>	Sample ID	<u>Date</u>	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
14516	55832-01	1/26/2025	TĽ₽	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14517	55832-02	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14518	55832-03	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW

Print Date: 12-Feb-25

Quality Control Report

Laboratory ID:		Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III
		P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S cone.	S units	Na conc.	Na units
14519	IC1049	54.3	ppm	32 6	ppm	2599	ppm	373	ppm	40.2	ppm	49.0	ppm
14520	IC1050	55.7	ppm	339	ppm	2635	ррm	385	ppm	40.4	ppm	50.1	ppm
	Mean IC	D	ppm	0	ppm	0	ppm	0	ppm	0	ppm	0	ppm
	IC Lower	49.8	ррт	268.0	ppm	2047.0	ppm	318.0	ppm	30.0	ppm	33.0	ppm
	IC Upper	55.7	ρ ρ m	375.0	ppm	2701.0	ppm	388.0	ppm	48.0	ppm	49.0	ppm
	bik226	<0.007280	ррт	< 0.142	ppm	<2,49	ppm	< 0.341	ppm	<0.0100	ррт	<0.1000	ppm

Laboratory ID:	Mehlich III	Mehlich (()	Mehlich III									
	P conc.	P units	K conc.	K units	Са сопс.	Ca_units	Mg conc.	Mg conc.	Siconc.	S units	Na conc.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	bbш	1	ppm	1	ppm	1	ppm	_ 1	ppm

Laboratory ID:	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Extract Date	Extract Tech	Anal.Date	Anal, Tech
IC1049	1/26/2025	FMR	1/27/2025	JLP
IC1050	1/26/2025	FMR	1/27/2025	JLP
blk226	1/26/2025	FMR	1/27/2025	JLP

Print Date: 12-Feb-25

Ouality Control Report

Laboratory ID:		ρН	рН	Conducility	Conducitity	Nitrate-N	Nitrate-N	Nitrate-N
			units	conc.	units	conc.	units	% recovery
14519	fC1049	6.2	na	0.135	dS/M	5.548	ppm	
14520	IC1050	6.1	na	0.128	dS/M	5.026	ppm	
	Mean IC	6.13	па	0.1315	dS/M	5.287	ppm	
14520spike	Spiked sample	-	-	_	-	4.0	ppm	80.9
	IC lower	6.010	na	0.113	dS/M	3.7	ppm	
	IC Upper	6.200	na	0.161	dS/M	5.7	ppm	
	blk226	-	na	0	dS/M	0.001	ppm	

Laboratory IO:	pН	H pH Conducitily		Conducitity	Nîtrate-N	Nitrate-N
		units	conc.	units	conc.	units
Detection Limit	0.01	na	0.001	d\$/M	0.01	ppm
Reporting Limit	0.1	0.1 na f		dS/M	1	p pm

Laboratory ID	pH/Conduct	ivity prep	pH Ana	l y sis	Conduc	tivity	Nitate-N	Extract	Nitrate-N Analysis	
	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
IC1049	1/26/2025	∏L P	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
IC1050	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
blk226	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW

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

Report ID: 055832b-45700

Print Date:

12-Feb-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: Client address: Horizon Dairy not provided

Standard Sample Report

TCEQ COC# 055832

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.
14521	55832-04	6-24	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	ПΡ
14522	55832-05	0-6	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	πLP
14523	55832-06	6-24	11/13/2024	Vanessa Gardner	4	12/17/2024	soii	12/17/2024	12/31/2024	πp
14524	55832-07	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14525	55832-08	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14526	55832-09	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soīl	12/17/2024	12/31/2024	TLP
14527	55832-10	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	πP

Methods and Sample Preparation:

Receiving of samples

Processing - SWFTL0097R0_SQP

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 theo 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 - SWFTL0015R1SOP

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

Print Date: 12-Feb-25 TCEQ COC# 055832

Standard Sample Report

	P.O 1 12 P.O.1		000	- 100 0 02									
Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehtich III	Mehlich III	Mehlich III	Mehlich III	Mehlich (II	Mehlich III	Mehlich III
<u> </u>	Sample ID:	P conc.	P units	K conc.	K units	Ca conc.	Ca units	Ma conc.	Mg units	Sicono.	S units	Na солс.	Na units
14521	55832-04	23.7	ppm	361	ppm	26833	ppm	274	ppm	180	ppm	50.2	ppm
145 <u>22</u>	55832-05	125	ppm	404	ppm	14716	ppm	432	ppm	141	ppm	58.0	• •
14523	55832-06	13.0	ppm	296	ppm	40168	ppm	248		277	• • • • • • • • • • • • • • • • • • • •		ppm
14524	55832-07	166	• • •	384	• • • • • • • • • • • • • • • • • • • •		• • • • • • • • • • • • • • • • • • • •		ppm		ppm	87.4	ppm
			mgģ		ppm	16828	ppm	438	ppm	181	ppm	61.2	ppm
14525	55832-08	13.4	ppm	276	ppm	37976	ppm	258	ppm	253	ppm	145	ррп
14526	55832-09	194	ppm	326	ppm	16124	mag	468	ppm	165	••	54.7	
14527	55832-10	15.3		200			Ppin		ppin		ppm	U 4 , /	ppm
1-027	33032-10	13.5	ррт	280	ppm	38766	ppm	285	ppm	275	ppm	203	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 (II Mg conc.	Mehlich III Ma conc.	Mehlich III S conc.	Mehlich III S units	Mehlich III Na conc.	Mehlich III Na units
Detection Limit	0.0129	ppm	0.1073	ррт	0,1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	ppm	1	ppm	1	ppm	11	ppm	1	ppm

Laboratory ID:	TCEQ/client	Meblich III	Mehlich III	Mehlich III	Mehlich III
	Sample ID:	Extract Date	Extract Tech	Anal.Date	Anal, Tech
14521	55832-04	1/26/2025	FMR	1/27/2025	JLP
14522	55832-05	1/26/2025	FMR	1/27/2025	JUP
14523	55832-06	1/26/2025	FMR	1/27/2025	JLP
14524	55832-07	1/26/2025	FMR	1/27/2025	JLP
14525	55832-08	1/26/2025	FMR	1/27/2025	JLP
14526	55832-09	1/26/2025	FMR	1/27/2025	JLP
14527	55832-10	1/26/2025	FMR	1/27/2025	JUP

Print Date: 12-Feb-25

Standard Sample Report

Nitrate-N	Conductivity	Conductivity	pН	рН	TCEQ/client	Laboratory ID:
	បរាits		units		Sample ID:	
10.688	dS/M	0.736	NA.	7.52	55832-04	14521
14.353	dS/M	0.811	NA.	7.33	55832-05	14522
1.732	dS/M	0.848	NA	7.64	55832-06	14523
22.252	dS/M	1.12	NA	7.13	55832-07	14524
2.912	dS/M	0.75	NA	7.78	55832-08	14525
17,364	dS/M	0.679	NA	7.23	55832-09	14526
3.855	dS/M	0,869	NA	7.69	55832-10	14527
	10.688 14.353 1.732 22.252 2.912 17.364	dS/M 10.688 dS/M 14.353 dS/M 1.732 dS/M 22.252 dS/M 2.912 dS/M 17.364	Units 0.736 dS/M 10.688 0.811 dS/M 14.353 0.848 dS/M 1.732 1.12 dS/M 22.252 0.75 dS/M 2.912 0.679 dS/M 17.364	units units NA 0.736 dS/M 10.688 NA 0.811 dS/M 14.353 NA 0.848 dS/M 1.732 NA 1.12 dS/M 22.252 NA 0.75 dS/M 2.912 NA 0.679 dS/M 17.364	units units 7.52 NA 0.736 dS/M 10.688 7.33 NA 0.811 dS/M 14.353 7.64 NA 0.848 dS/M 1.732 7.13 NA 1.12 dS/M 22.252 7.78 NA 0.75 dS/M 2.912 7.23 NA 0.679 dS/M 17.364	Sample ID: units units 55832-04 7.52 NA 0.736 dS/M 10.688 55832-05 7.33 NA 0.811 dS/M 14.353 55832-06 7.64 NA 0.848 dS/M 1.732 55832-07 7.13 NA 1.12 dS/M 22.252 55832-08 7.78 NA 0.75 dS/M 2.912 55832-09 7.23 NA 0.679 dS/M 17.364

Laboratory ID:	рН	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	па	0.001	dS/M	1	mag

Laboratory ID:	TCEQ/client	pH/Conduct	ivity prep	pH Ana	lysis	Conduc	tívity	Nitate-N	Extract	Nitrate-N A	Analysis
	Sample ID:	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
14521	55832-04	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14522	55832-05	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	ΊLP	1/26/2025	FMR	1/27/2025	JW
14523	55832-06	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14524	55832-07	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
1452 5	55832-08	1/26/2025	TLP	1/27/2025	Т∟Р	1/27/2025	ΠLP	1/26/2025	FMR	1/27/2025	JW
14526	55832-09	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14527	55832-10	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW

Report ID: 055832b-45700 Quality Control Report

Print Date: 12-Feb-25

Laboratory D:		Mehlich III	Mehiich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III						
		P conc.	P_units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conc.	Na units
14539	IC1051	51.4	ppm	321	ppm	2604	ррп	368	рргп	37.4	ppm	47.8	ppm
14540	IC1052	54.1	ppm	324	ppm	2647	ppm	376	ppm	38.8	ppm	48.5	ppm
	Mean IC	٥	ppm	0	ppm	0	ppm	O	ррт	0	ppm	0	ppm
	IC Lower	49.8	ppm	268.0	ppm	2047.0	ppm	318.0	ppm	30.0	ppm	33.0	ррп
	IC Upper	55.7	ppm	375.0	ppm	2701.0	ppm	388.0	ppm	48.0	ppm	49.0	ppm
	blk226	<0.007280	ppm	<0.142	ppm	<2.49	ppm	<0.341	ppm	< 0.0100	ppm	<0.1000	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	Mehlich III	Mehlich III	Mehfich III	Mehlich III	Mehlich III
<u> </u>		i uiiig	IN CONC.	IX UI IJIŞ	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conç.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	ррпі	1	ppm	1_	ppm	1	ppm	1	ppm

Laboratory ID:	Mehlich Itt	Mehlich III	Mehlich III	Mehlich III
	Extract Date	Extract Tech	Anal.Date	Anal, Tech
IC1051	1/26/2025	FMR	1/27/2025	JLP
IC1052	1/26/2025	FMR	1/27/2025	JLP
blk226	1/26/2025	FMR	1/27/2025	JLP

Print Date: 12-Feb-25

Quality Control Report

Laboratory 1D:		ρН	pН	Conducitity	Conducitity	Nitrate-N	Nitrate-N	Nitrate-N
			units	сопс	units	conc.	units	% recovery
14539	IC1051	6.1	ла	0.143	dS/M	5.622	ррт	_
14540	IC1052	6.2	na	0.14	dS/M	4.893	ppm	
	Mean IC	6.135	na	0.1415	dS/M	5.2575	ppm	
14540spike	Spiked sample	-	-	~	•	4.0	ppm	80.9
	IC lower	6.010	na	0.113	dS/M	3.7	ppm	
	IC Upper	6.200	па	0.161	dS/M	5.7	ppm	
	blk226		na	O.	dS/M	0.001	ppm	

Laboratory ID:	рН рН		Conducitity	Conductity	Nitrate-N	Nitrate-N
		units	conc.	units	conc.	นดใร
Detection Limit	0.01	na	0.001	d\$/M	0.01	ppm
Reporting Limit	0.1	na	0.001	dS/M	1	ppm

Laboratory ID:	pH/Conductivity prep		рН Ала	llysis	Conduc	tivity	Nitate-N	Extract	Nitrate-N Analysis		
	Date Tech		Date	Tech	Date	Tech	Date	Tech	Date	Tech	
IC1051	1/26/2025	TLP	1/27/2025	ΤЪР	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW	
IC1052	1/26/2025	TLΡ	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW	
b!k226	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	WL	

TEXAS COMMIS ENVIRO	NIMENTAL		Cł	nain d	of Cu	ıstoc	— ly I	Rec	ord		551	833
Location:	Horiza	on D	aily								Permit #	
Region:	Organizatio	(Do not f n #:	PCA Cod	ed area if the e:	e facility in	ocam:	must JQ		Sampler telephone nu 35 4) 55	umber: 2- 190	49	42
E-Mail ID:		1	(signature	11	an Q	·	- 4		Sampler: (please prin	t clearly)	edner	
Lab ID Number	Sample ID	Date	Time		ab/ Matr		рН	Cond.	Analyses Req	uested	REMAI	RKS
14457	-01	11-21-20	1 11:20						Sec. RFA		LMU8	0-6
14458	-02		(1:20						1		LMU 8	6-24
14461	-03		11:45								LMU9	0-6
14462	-04		11:48								LMU9	6-24
14463	-05		10:10								LMUID	
14464	-06		10:10								LMUID	6-29
14465	-07		10:40								LMUII	0-6
14466	-08	7	10:40								LMUII	6-24
14467	-09	1/3/2	41215								LMU13	D-6
14468	-10	1/13/2	41215	10	1				_		LMU13	6-24
Relinquished b	Sarkh_	13/42	1200	Received	XII	2-17	2	4	For Laboratory Use:			
Relinquished b	•	Date	Time	Received	бу: Ч				Received on ice:	Y	N	deg. C
Relinquished b		Date	Time	Received	by:				Preservatives:	Y	N	
Relinquished by	y:	Date	Time	Received					COC Seal:	Y	N	
Shipper name:	y Ex	Shipper	Number OL	168 9	5167	-			Seals Intact:	Υ -		

Shipper Number 0468 5167

Υ

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

Report ID: 055833a-45700

Print Date:

12-Feb-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: Client address: Horizon Dairy not provided

Standard Sample Report

TCEQ COC# 055833

Laboratory ID:	TCEQ/dient Sample ID:	Sample Depth (inches)	Sample Cell. Date:	Collector Name:	TCEQ Region#	Date Received	Sample Type:	Sample opened Date	Sample Ground Date	Process Tech.
14457	55833-01	0-6	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	πP
14458	55833-02	6-24	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	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 650 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 - SWFTL0015R1.50P

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 - SWFTL0079R1.50P/M3 ANALYSIS - SWFTL0081R2.50P

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

Print Date: 12-Feb-25

Standard Sample Report

													
Laboratory ID:	TCEQ/dient	Mehlich III	Mehilah ili	Mehlich ()	Mehlich III	Mehlich III							
	Sample 1D:	P conc.	Punits	K conc.	_ K units	Ca conc.	Ca units	Mg conc.	Mg units	S conc.	Sunits	Na conc.	Na units
14457	55833-01	113	ppm	327	ppm	13908	ppm	389	ppm	108	ppm	34.8	ррт
14458	55833-02	13.5	ppm	247	ppm	33904	ppm	221	ppm	221	ppm	60.8	ррлі

Laboratory ID:	Mehlich III	Mehfich III	Mehlich III	Mehlich III	Mehlich III	LIABE-E III	NJ-1-6-6 101					
Laboratory i.b.	MICHIGAT III	MCMICH III	MERKENIN	Menuci III	Menlich III	Mehlich III	Mehiich III	Mehlich III	Mehlich III	Mehlich (II	Mehlich III	Mehlich III
	P conc.	P units	K cong.	K units	Calcond.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conc.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	<u>_1</u>	ppm	_ 1	opm	1	ppm	1	ppm	1	ppm	1	ppm

Laboratory ID:	TCEQ/dient	Mehiich ())	Mehlich III	Mehlich III	Mehlich III
	Sample ID:	Extract Date	Extract Tech	Anal.Date	Anal, Tech
14457	55833-01	1/26/2025	FMR	1/27/2025	JLP
14458	55833-02	1/26/2025	FMR	1/27/2025	JLP

Report ID: 055833a-45700 Standard Sample Report

Print Date: 12-Feb-25

Laboratory ID:	TCEQ/client	рН	pН	Conductivity	Conductivity	Nitrate-N	Nitrate-N	_
	Sample ID:		units		units		units	
14457	55833-01	7.5	55 NA	0.455	dS/M	19.758	рρіπ	_
14458	55833-02	7.8	AN B	0.409	dS/M	3.794	ppm	

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

Laboratory ID:	TCEQ/dient	pH/Conduct	ivity prep	pH Ana	ilysis	Conduc	ativity	Nitate-N Extract		Nitrate-N Analysis	
	Sample ID:	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
14457	55833-01	1/28/2025	TLP	1/27/2025	ТЪ	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14458	55833-02	1/26/2025	TLΡ	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW

Report ID: 055833a-45700 Quality Control Report

Print Date: 12-Feb-25

Laboratory ID:		Mehlich III	Mehlich III	Mehlich [i]	Mehlich III								
		Picono.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Ма сопс.	S conc.	Sunits	Na conc.	Na units
14459	IC1043	54.4	ppm	330	ppm	2626	ppm	376	ррп	39.8	ррт	49.0	ppm
14460	IC1044	53.1	ppm	326	рртп	2744	ppm	376	ppm	39.9	ppm	45.2	ppm
	Mean IC	0	ppm	0	ppm	0	ppm	0	ppm	0	ррт	0	ppm
	IC Lower	49.8	ppm	268.0	ppm	2047.0	ppm	318.0	ppm	30.0	ppm	33.0	ррт
	IC Upper	55.7	mqq	375.0	ppm	2701.0	ppm	388.0	ppm	48.0	ppm	49.0	ppm
	blk225	<0.007280	ppm	< 0.142	ppm	<2.49	opm	< 0.341	ppm	<0.0100	ppm	<0.1000	ppm

Laboratory ID:	Mehlich }	Mehlich III										
	P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	\$ солс.	\$ units	Na conc.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ppm	0_0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	_ ppm	1	ppm	1	ppm	1	<u>p</u> pm	1	ppm

Laboratory ID:	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Extract Date	Extract Tech	Anal.Date	Anal, Tech
IC1043	1/26/2025	FMR	1/27/2025	115
IC1044	1/26/2025	FMR	1/27/2025	JLP
blk225	1/26/2025	FMR	1/27/2025	JLP

Print Date: 12-Feb-25

Quality Control Report

Laboratory ID:		ρН	pН	Conducility	Conducitity	Nitrate-N	Nitrate-N	Nitrate-N
			units	conc.	บทสีร	conc.	units	% recovery
14459	IC1043	8.1	na	0.135	dS/M	4.919	ppm	
14460	IC1044	6.1	na	0.145	dS/M	4.912	ppm	
	Mean IC	6.075	па	0.14	dS/M	4.9155	ppm	
14460spike	Spiked sample		-	-	-	4.0	ppm	79.5
	IC lower	6.010	па	0.113	dS/M	3.7	рргп	
	IC Upper	6.200	па	0.161	dS/M	5.7	ppm	
	blk225	-	na	0	dS/M	0.029	ppm	

Laboratory ID:	PΗ	pH units	Conducitity conc.	Conductity units	Nitrate-N	Nitrate-N units
Detection Limit	0.01	na	0.001	dS/M	0.01	pom
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	Oate	Tech	Date	Tech
IC1043	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	πp	1/26/2025	FMR	1/27/2025	JW
IC1044	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
blk225	1/26/2025	π_Ρ	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW

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

Report ID: 055833a-45700 Print Date: 12-Feb-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: Client address: Horizon Dairy not provided

Standard Sample Report

TCEQ COC# 055833

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.
14461	55833-03	0-6	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14462	55833-04	6-24	11/21/2024	Vanessa Gardner	4	12/17/2024	lioz	12/17/2024	12/31/2024	TLP
14463	55833-05	0-6	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14464	55833-06	6-24	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14465	55833-07	8-0	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	\mathbf{TLP}
14466	55833-08	6-24	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14467	55833-09	0-6	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
1446 8	55833-10	6-24	11/13/2024	Vanessa Gardner	4	12/17/2024	sail	12/17/2024	12/31/2024	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 theo 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 -- Meblich 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: 055833a-45700

Print Date: 12-Feb-25

Standard Sample Report

	F												
Laboratory ID:	TCEQ/client	Mehlich III	Mehlich (II	Mehlich III	MeNich III	Mehlich III	Mehlich III	Mehlich III	Mehlich [II	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample ID:	Piconc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg units	S conc.	S units	Na conc.	Na units
14461	55833-03	102	ppm	289	ррт	14579	ppm	315	ppm	108	ppm	14.9	ppm
14462	55833-04	6.73	ppm	260	ppm	33720	ppm	212	ppm	212	ppm	57.5	ppm
14463	55833-05	149	ppm	398	ppm	16231	ppm	348	ррл	128	ppm	31.1	ppm
14464	55833-06	12.1	ppm	222	ppm	40367	ppm	243	ppm	265	ppm	37.2	ppm
14465	55833-07	40.0	ppm	325	ppm	23514	рргп	372	ppm	167	ppm	68.8	ppm
14466	55833-08	3.90	ppm	297	ppm	36776	ppm	220	рргп	270	ppm	159	ppm
14487	55833-09	123	ppm	327	ppm	19399	ppm	382	ppm	150	ppm	41.2	ppm
1 4 468	55833-10	9.35	ppm	288	ppm	35100	ppm	261	ppm	235	ppm	71.1	ppm

Laboratory IO:	Mehlich III	Mehlich (II	Mehlich III	Mehlich III								
l	P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conc.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	p pm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	ppm	1_	ppm	1	ppm	1	ppm	1	ppm

Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample ID	Extract Date	Extract Tech	Anai.Date	Anal. Tech
14461	55833-03	1/26/2025	FMR	1/27/2025	JLP
14462	55833-04	1/26/2025	FMR	1/27/2025	JLP
14463	55833-05	1/26/2025	FMR	1/27/2025	JLP
14464	55833-06	1/26/2025	FMR	1/27/2025	JLP
14465	55833-07	1/26/2025	FMR	1/27/2025	JLP
14 46 6	55833-08	1/26/2025	FMR	1/27/2025	JLP
14467	55833-09	1/26/2025	FMR	1/27/2025	JLP
14468	55833-10	1/26/2025	FMR	1/27/2025	JLP

Report ID: 055833a-45700

55833-09

55833-10

7.69

7.91

Print Date:

12-Feb-25

14467

14468

					_		
Standard Sa	mple Report		TCEQ COC	# 055833			
Laboratory ID:	TCEQ/client	pН	pН	Conductivity	Conductivity	Nitrate-N	Nitrate-N
	Sample ID;		units		units		units
14461	55833-03	7.48	NA.	0.377	dS/M	15.687	ppm
14462	55833-04	7.79	NA	0.343	dS/M	1.527	ppm
14463	55833-05	7.55	NA	0.469	dS/M	30.2	ppm
14464	55833-06	7.79	NA	0.395	dS/M	16.28	ppm
1 44 65	55833-07	7.68	NA	0.482	dS/M	12,123	ppm
14466	55833-08	7.84	NA	0.667	dS/M	0.842	ppm

0.484

0.374

dS/M

dS/M

13.687

3.014

ppm

ppm

Laboratory ID:	pН	ρH units	Conductivity	Conductivity units	Nitrate-N	Nitrate-N units
Detection Limit	0.01	na	0.001	dS/M	0.01	ррлі
Reporting Limit	0.1	na	0.001	dS/M	1	ррлі

NA

NA

Laboratory (D:	TCEQ/client	pH/Conduct	ivity prep	pH Ana	lysis	Conduc	tivity	Nitate-N I	Extract	Nitrate-N A	Analysis
	Sample IO:	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
14481	55833-03	1/26/2025	TLP	1/27/2025	TL₽	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14462	55833-04	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14463	55833-05	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14464	55833-06	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	WL
14465	55833-07	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14466	55833-08	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14467	55833-09	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14468	55833-10	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW

Report ID: 055833a-45700 Quality Control Report

Print Date: 12-Feb-25

Laboratory ID:		Mehlich III	Mehlich It	Mehlich III									
-		Picone.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Мд солс.	S conc.	S units	Na conc.	Na units
11479	IC1045	51.0	ppm	312	ppm	2308	ppm	331	ppm	38.6	ppm	42.0	ppm
11480	IC1046	49.9	ppm	308	ppm	2149	ppm	325	ppm	37.2	ppm	40.1	ppm
	Mean IC	0	ppm	0	ppm								
	IC Lower	49.8	ppm	268.0	ppm	2047.0	ppm	318.0	ppm	30.0	ppm	33.0	mqq
	IC Upper	55.7	ppm	375.0	ppm	2701.0	ppm	388.0	ppm	48.0	ppm	49.0	ppm
	blk225	< 0.007280	ppm	< 0.142	ppm	<2.49	ppm	< 0.341	ppm	<0.0100	ppm	< 0.1000	ppm

Laboratory ID:	Mehlich III											
	Piconc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conc.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	11	ppm_	1	ppm	1	mgg	1	ppm_	1	mąq	1	bbw

Laboratory ID:	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Extract Date	Extract Tech	Anal.Date	Anal, Tech
IC1045	1/26/2025	FMR	1/27/2025	JLP
IC1046	1/26/2025	FMR	1/27/2025	JLP
blk225	1/26/2025	FMR	1/27/2025	JLP

Report ID: 055833a-45700

Print Date: 12-Feb-25

Ouality Control Report

Laboratory ID:		рН	Hq elinu	Conducitity conc.	Conducitity units	Nîtrate-N conc.	Nitrate-N units	Nitrate-N % recovery
11479	IC1045	6.1	na	0.155	dS/M	5.361	magg	
11480	IC1046	6.2	na	0.137	dS/M	5.081	pρm	
	Mean IC	6.15	na	0.146	dS/M	5. 2 21	ppm	
11480spike	Spiked sample	-	-	-		4.0	ppm	79.5
	IC lower	6.010	na	0.113	dS/M	3.7	ppm	
	iC Upper	6.200	na	0.161	dS/M	5.7	ppm	
	blk225	_	na	0	dS/M	0.029	p p m	

Laboratory ID:	pН	pH units	Conducitity conc.	Conductity 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 1D:	pH/Conduct	ivity prep	рН Ала	lysis	Conduc	tivity	Nitate-N	Extract	Nitrate-N	Analysis
	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
IC1045	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	ΠLP	1/26/2025	FMR	1/27/2025	JW
IC1046	1/28/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
blk225	1/26/2025	TLP	1/27/2025	<u>110</u>	1/27/2025	πP	1/26/2025	FMR	1/27/2025	JW

TEXAS COMMISS ENVIRON QUALITY	IMENTAL		Ch	ain	of	Cust	tod	y F	Rec	ord	55834
Location:	ori za	1 Dail	My shade	d area	if the fac	ility inform	nation	must t	ne confid	rential)	Permit #: 48 42
Region:	Organizatio		PCA Code			Program	n-	10		Sampler telephone number:	700
E-Mail ID:			(signature)		Harl)~-				Sampler: (please print clearly)	Sner
Lab ID Number	Sample ID	Date	Time	# of	Grab/ Comp.	Matrix L,S,M,O,	CL2	pН	Cond	Analyses Requested	REMARKS
14469	-01		1135							See RFA	LM414 0-6
14470	-02	1/3/24	1135								LMU14 6-24
14471	-03	11-21-24	12:20								LMUB 0-6
14472	-04	11-21-24	12:20								LMU 15 6-24
14473	-05	11-14-24	10.34								LMU16 0-6
14474	-06	11-14-24	10:34								LMU16 6-2
14475	-07	11-14-24	10:15								LMU17 0-6
14476	-08	11-14-24	10:13								LMU17 6-24
14477	-09	11-14-24	10:55								LMU 18 0-6
14478	-10	(1-14-24	10:55		1	1					LMU18 6-24
Relinquished to	les Dron	12/14/24	1200	Recei	vel by	1 1.	2-1	7-7	4	For Laboratory Use:	^
Relinquished b		Date	Time	Beco	wed by:				•	Received on ice: Y	√ deg. C
Relinquished b	py:	Date	Time	Recei	ived by:					Preservatives: Y	N
Relinquished t	-	Date	Time	Recei	ived by:					COC Seal: Y	N
Shipper name:	EdEx	Shipper N	S D4	68	g1(Fo				Seals Intact: Y	į N

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

Report ID: 055834a-45700 Print Date: 12-Feb-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: Client address: Horizon Dairy not provided

Standard Sample Report

TCEQ COC# 055834

Laboratory ID:	TCEQ/client Sample ID:	Sample Depth (inches)	Sample Colf. Date:	Collector Name:	TCEQ Region #	Date Received	Sample Type.	Sample opened Date	Sample Ground Date	Process Tech.
14469	55834-01	0-6	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14470	55834-02	6-24	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14471	55834-03	0-6	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14472	55834-04	6-24	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14473	55834-05	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14474	55834-06	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14475	55834-07	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14476	55834-08	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14477	55834-09	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	lios	12/17/2024	12/31/2024	TLP
14478	55834-10	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	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 650 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

Soil Nitrate-N KCl Extractable with Cd-Reduction Analyses

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. 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: 055834a-45700 Standard Sample Report Print Date: 12-Feb-25 TCEQ COC# 055834

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Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample ID:	Picone.	P units	K conc.	K units	Calcone.	Ca units	Mg conc.	Mg units	Sicond.	S units	Na conc.	Na units
14469	55834-01	114	ppm	286	ррп	16808	ррт	388	ppm	138	ppm	43.3	ppm
14470	55834-02	14.9	ppm	268	ppm	29438	ppm	223	ppm	210	₽pm	73.0	ppm
14471	55834-03	70.6	ø p m	340	ррm	15899	ppm	364	ppm	132	ppm	57.4	ppm
14472	55834-04	5.16	ppm	360	ppm	27076	ppm	224	ppm	206	pp m	78.9	ppm
14473	55834-05	91.0	ppm	361	ppm	16066	ppm	406	ppm	137	рргп	89.5	ppm
14474	55834-06	7.82	ppm	226	ррпп	34351	ppm	204	חספ	254	ppm	96.1	ppm
14475	55834-07	116	ppm	411	ppm	16927	ppm	451	ρ p m	151	ppm	105	ppm
14476	55834-08	4.63	ppm	198	ppm	36271	ppm	202	ppm	277	ppm	111	ppm
14477	55834-09	111	ppm	483	ppm	15031	ppm	386	ppm	132	ppm	50.6	ppm
14478	55834-10	9.69	ppm	258	ppm	31133	ppm	207	ppm	236	ppm	66.3	ppm

Laboratory ID:	Mehlich III											
	Picone.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	\$ units	Na conc.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ρpm	1	ppm								

Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample_ID	Extract Date	Extract Tech	Anal.Date	Anal. Tech
14469	55834-01	1/26/2025	FMR	1/27/2025	JLP
14470	55834-02	1/26/2025	FMR	1/27/2025	JLP
14471	55834-03	1/26/2025	FMR	1/27/2025	JLP
14472	55834-04	1/26/2025	FMR	1/27/2025	JLP
14473	5 5 83 4 -05	1/26/2025	FMR	1/27/2025	JLP
14474	55834-06	1/26/2025	FMR	1/27/2025	JLP
14475	55834-07	1/26/2025	FMR	1/27/2025	JLP
14476	55834-08	1/26/2025	FMR	1/27/2025	JLP
14477	55834-09	1/26/2025	FMR	1/27/2025	JLP
14478	55834-10	1/26/2025	FMR	1/27/2025	JĻP

Report ID: 055834a-45700

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Standard Sample Report

TCFQ COC# 055834

Otalida, d. Oa	mpie report		1020	># 033034	_		
Laboratory ID:	TCEQ/client	рН	pН	Conductivity	Conductivity	Nitrate-N	Nitrate-N
	Sample ID:		units		⊔nits		units
14469	55834-01	7.6	5 NA	0.43	dS/M	18.538	ppm
14470	55834-02	7.9	2 NA	0.441	dS/M	4.811	ppm
14471	55834-03	7.6	8 NA	0.343	dS/M	16.354	ppm
14472	55834-04	7.8	5 NA	0.486	dS/M	4.034	ρpm
14473	55834-05	7.6	88 N A	0.599	dS/M	28.268	ppm
14474	55834-06	7.8	7 NA	0.485	dS/M	12.808	ppm
14475	55834-07	7.5	9 NA	0.591	dS/M	23.653	ppm
14476	55834-08	7.7	'8 NA	0.559	dS/M	21.279	ppm
14477	55834-09	7.6	9 NA	0.55	dS/M	30.846	ppm
14478	55834-10	7.8	3 NA	0.59	dS/M	30.09	ppm

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

Laboratory ID:	TCEQ/client	pH/Conduct	ivity prep	pH Ana	lysis	Conduc	tivity	Nilate-N f	Extract	Nitrate-N A	\nalysis
	Sample ID	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
14469	55834-01	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14470	55834-02	1/28/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
1447 1	55834-03	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14472	55834-04	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14473	55834-05	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14474	55834-06	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14475	55834-07	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14476	55834-08	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14477	55834-09	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	J₩
14478	55834-10	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	J₩

Report ID: 055834a-45700 Quality Control Report

Prinf Date: 12-Feb-25

Laboratory ID		Mehtich (II 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	Mehlich III
11479	IC1045	51,0							ing conc.		5 units	Na conc.	Na units
_	_	a 1.0	ppm	312	ppm	2308	ppm	331	ppm	38.6	ppm	42.0	ppm
11480	IC1046	49.9	ppm	308	ppm	2149	ppm	325	ppm	37.2	ppm	40.1	ppm
	Mean (C	0	ppm	G	ppm	0	ppm	0	ppm	0	ppm	0	ppm
	iC Lower	49.8	ppm	268,0	ppm	2047.0	ppm	318.0	ррт	30.0	ppm	33.0	ppm
	IC Upper	55.7	ppm	375.0	ppm	2701.0	ppm	388.0	ppm	48.0	ppm	49.0	ppm
	blk225	<0.007280	ppm	<0.142	ppm	<2.49	ppm	< 0.341	ppm	<0.0100	ppm	< 0.1000	ppm

Laboratory ID:	Mehlich III											
	P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na cone.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	pprn	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	ppm	1	ppm	1	ppm	1	máa	1	ppm

ſ	Laboratory ID;	Mehlich III	Mehlich III	Mehlich III	Mehlich III
L		Extract Date	Extract Tech	Anal.Date	Anal. Tech
	IC1045	1/26/2025	FMR	1/27/2025	JLP
	IC1046	1/26/2025	FMR	1/27/2025	JLP
	b/k225	1/26/2025	FMR	1/27/2025	JLP

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Quality Control Report

Laboratory (D:		pΗ	ρН	Conducitily	Conducitity	Nitrate-N	Nitrate-N	Nitrate-N
			units	conc.	units	conc.	units	% recovery
11479	IC1045	6.1	na	0.155	dS/M	5.361	ppm	
11480	IC1046	6.2	na	0.137	dS/M	5.081	ppm	
	Меал (С	6.15	na	0.146	dS/M	5.221	ppm	
11480spike	Spiked sample		-	-	_	4.0	ppm	79.5
	IC lower	6.010	na	0.113	dS/M	3.7	ppm	
	IC Upper	6.200	na	0.161	dS/M	5.7	ppm	
	blk225		na	0	dS/M	0.029	ppm	

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

Laboratory ID:	pH/Conduct	ivity prep	рН Ала	lysis	Conduc	tivity	Nitate-N	Extract	Nitrate-N Analysis		
	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech	
IC1045	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW	
IC1046	1/26/2025	TLP	1/27/2025	T∟P	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW	
blk225	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW	

TEXAS COMMISS ENVIRON QUALITY	NMENTAL		Ch	ain	of	Cust	od	y F	Reco	ord	5 5835
Location:	orizon	Dai 19	in this shade	d area i	f the fac	ility inform	ation	must b	e confid	ential)	Permit #: 4842
Region:	Organization		PCA Code			Progran		υû		Sampler telephone number: 19	00
E-Mail ID:			(signature)		Jan	In	_			Sampler: (please print clearly)	a biardner
Lab ID Number	Sample 1D	Date	Time	# of Bottles	Grab/ Comp.	Matrix L,S,M,O,	CL2	рН	Cond.	Analyses Requested	REMARKS
14528	-01	11-14-24	11:25							See BA	LM420 0-6
14529	-02		11:25								LMU20 6-3
14520	-03		12:20								Lmy 21 0-6
14531	-04		12:20								LMU al 6-a
14532	-05		12:40								LMU 23 0-1
1453	-06	T	12:40								LM4 23 6-
	-07										
	-08										
	-09										
-0	230				10						
Reimquished	-	12 10 Z	Time		ved by.	M	12-	17-	24	For Laboratory Use:	
Relinquished I	by:	Date	Time	Recei	be by:					Received on ice: Y	N deg. C
Relinquished	by:	Date	Time	Receiv	ved by:					Preservatives: Y	N
Relinquished I	by:	Date	Time	Receiv	ved by:					COC Seal: Y	N
Shipper name TCEQ-10065 (11/7)	Fed to		lumber: 08 0 iginal) -Lab	481) a	270 Yellow-Lab	7		- E:	Seals Intact: Y	N Goldenrod-Collector Copy

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

Report ID: 055835a-45700 Print Date: 12-Feb-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: Client address Horizon Dairy not provided

Standard Sample Report

TCEQ COC# 055835

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.
14528	55835-01	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14529	55835-02	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14530	55835-03	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14531	55835-04	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14532	55835-05	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14533	55835-06	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP

Methods and Sample Preparation:

Receiving of samples

Processing - SWFTL0097R0.SQP

Upon opening of sample thesis, all samples are identified and organized as listed on COC to insure completeness and condition of shipment. Individually each sample is spread acress a non-reactive tray where foreign materials is physically removed and discarded. The sample(s) are then placed inside a 65C drying over and allow to remain until dry. Individual samples were then removed from drying over and pulverized with an Agvise sail pulzerized fitted with a shoking 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 caps 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

Rhosdes, 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. KC, 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: 055835a-45700 Standard Sample Report Print Date: 12-Feb-25

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Laboratory ID:	TCEQ/client	Mehlich III	Mehlich (II	Mehlich III									
	Sample ID:	P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg units	S conc.	S units	Na conc.	Na units
14528	55835~01	118	ppm	451	ppm	18265	ppm	416	ppm	135	ppm	84.7	ppm
14529	55835-02	12,7	ppm	273	ppm	34005	ppm	306	ppm	441	ppm	227	ррті
14530	55835-03	31.4	ppm	243	ppm	24451	mqq	251	ppm	162	рргп	30.3	ppm
14531	55835-04	5.95	ppm	177	ppm	44769	ppm	220	ppm	259	ppm	39.1	ррm
14532	55835-05	171	ppm	382	ppm	18881	ppm	468	ppm	137	ppm	63.4	ppm
14533	55835-06	15.2	ppm	278	ppm	33468	ppm	354	pp m	232	ppm	198	ppm

Laboratory ID:	Mehlich III	Mehřich III	Mehlich III	Mehlich III	Mehlich III	Mehlich (II	Mehlich III					
	P conc.	P unils	K conc.	K units	Ca conc.	Ca units	Mg conc.	Мд сопс.	Siconc.	S units	Na conc.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	ppm	1	ppm	1	ррл	1	ррл	1	ppm

Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample ID:	Extract Date	Extract Tech	Anal.Date	Anal. Tech
14528	55835-01	1/26/2025	FMR	1/27/2025	JLP
14529	55835-02	1/26/2025	FMR	1/27/2025	JLP
14530	55835-03	1/26/2025	FMR	1/27/2025	JLP
14531	55835-04	1/26/2025	FMR	1/27/2025	JLP
14532	55835-05	1/26/2025	FMR	1/27/2025	JLP
14533	55835-06	1/26/2025	FMR	1/27/2025	JLP

Report ID: 055835a-45700

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Laboratory ID:	TCEQ/client	pН	pН	Conductivity	Conductivity	Nitrate-N	Nitrate-N
	Sample ID:		units		units		units
14528	55835-01	7.73	NA	0.621	dS/M	47.918	ppm
14529	55835-02	7.75	NA	1.57	dS/M	12.095	ppm
14530	55835-03	7.91	NA	0.307	dS/M	33.211	ppm
1 4531	55835-04	8.01	NA	0.312	dS/M	12.528	ppm
14532	55835-05	7.79	NA	0.569	dS/M	27.029	ppm
14533	55835-06	8	NA	0.64	dS/M	19.769	ppm

Laboratory ID:	pН	pН	Conductivity	Conductivity	N trate-N	Nitrate-N
		units		units		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/Conduct	ivity prep	pH Ana	lysis	Conduc	tivity	Nitate-N	Extract	Nitrate-N A	nalysis
	Sample ID	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
14528	55835-01	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14529	55835-02	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14530	55835-03	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14531	55835-04	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14532	55835-05	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14533	55835-06	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TL₽	1/26/2025	FMR	1/27/2025	WL

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Quality Control Report

Laboratory ID:		Mehlich III Piconc.	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
14539	IC1051	51.4	ppm	321	ppm	2604	ррт	368	ppm	37.4	ppm	47.8	ppm
14540	IC1052	54.1	ppm	324	ppm	2647	ppm	376	ppm	38.8	ppm	48.5	ppm
	Mean IC	0	ppm	O	ppm	0	ppm	Ð	ppm	0	ppm	0	ppm
	IC Lower	49.8	ppm	268.0	ρpm	2047.0	ppm	318.0	ppm	30.0	ppm	33.0	ppm
	IC Upper	55.7	ppm	375.0	ppm	2701.0	mqq	388.0	ppm	48.0	ppm	49.0	ppm
	blk226	<0.007280	pprn	<0.142	ppm	<2.49	ppm	<0.341	ppm	<0.0100	pam	<0.1000	ррп

Laboratory ID:	Mehlich III											
	P conc.	P units	K conc.	Klunits	Calcond.	Ca units	Mg conc.	Mg cone.	S conc.	Sunits	Na conc.	Na units
Detection Limit	0.0129	ppm	0 1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	ppm	1	baw		ppm	1	apm	1	ppm

Laboratory ID:	Mehlich III	Mehlich III	Mehlich []]	Mehlich III
	Extract Date	Extract Tech	Anal.Date	Anal. Tech
IC1051	1/26/2025	FMR	1/27/2025	JLP
IC1052	1/26/2025	FMR	1/27/2025	JLP
b/k226	1/26/2025	FMR	1/27/2025	JLP

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Quality Control Report

Laboratory ID:		рН	ρН	Conducitity	Conducitity	Nitrate-N	Nitrate-N	Nitrate-N	
			units	cond.	units	conc.	units	% гесоvелу	
14539	IC1051	6.1	na	0.143	dS/M	5.622	ppm	-	
14540	IC1052	6.2	na	0.14	d\$/M	4.893	ppm		
	Mean IC	6.135	па	0.1415	dS/M	5.2575	ppm		
14540spike	Spiked sample	-	-	-	•	4.0	ppm	80.9	
	IC lower	6.010	na	0.113	dS/M	3.7	рртп		
	IC Upper	6.200	na	0.161	dS/M	5.7	ppm		
	blk226	-	na	0	dS/M	0.001	ppm		

Laboratory ID:	рН	pH units	Conductity conc.	Conductify units	Nitrate-N conc.	Nitrate-N units
Detection Limit	0.01	na	0.001	d\$/M	0.01	ppm
Reporting Limit	0.1	na	0.001	dS/M	1	ppm

Laboratory ID:	pH/Conductivity prep		pH Analysis		Conduc	tivity	Nitate-N	Extract	Nitrate-N	Nitrate-N Analysis	
	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech	
IC1051	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW	
IC1052	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW	
blk226	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW	

Phone: 806.677.0093

800,557,7509 Fax: 806,677,0329

b No.: 4298	LABO	PRATORY A	ANALYSIS	REPORT	Report	t Date: 06	/30/2025 (05:03 pm	
Send To: 6224	ENVIRO-AG 3404 AIRWA AMARILLO,		INC	_		anyMeier			
					1	Am) Data Revie	y Meier w Coordin	ator	
Results For: Sample ID: Location	HORIZON D. SLURRY HAMILTON (Received Sampled Invoice No P.O. #	i: 06/18/2 o: 428535	2025	GE		
	-				Total	content	Estimated first y		
			Analysis (dry basis)	Analysis (as rec'd)	lbs per Acre-in	lbs per 1000 gal	lbs per Acre-in 1	lbs per 1000 gal	
NUTRIENTS					_		_		
Nitrogen			-10"	5 252	6636				
Total Nitros Organic Ni		% %	1.27	0.282	2879.7				
Ammonium		%	0.928 0.3415	0.206 0.07582	2103.6 774.3	18.5 6.8			
	rite Nitrogen	%	<0.0045	< 0.07562	0	<0.1		-	
Major and Sec	ondary Nutrient	s							
Phosphoru		%	0.252	0.056					
Phosphoru	s as P2O5	%	0.577	0.128	1307.1	11.5	261.3	2 10	
Potassium Potassium	as K2O	% %	0.833 1.00	0.185 0.222	2267.0	20.0	503.	3 20	
OTHER PROPERT	TES				<u>-</u>				
Moisture		%		77.8					
Total Solids	5	%		22.2	226700	1998			
	nic Matter	%	34.7	7.7	78630	693			
Ash		%		14.5		1305			
C:N Ratio		ratio		15.8					
Density		lbs/gal	42,3	9.4					

^{*} Assumes 36% 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.

ENVIRO-AG ENGINEERING, INC.

Enviro-Ag Engineering, Inc. 9855 FM 847, Dublin, TX 76446 Tel. 254-965-3500 Fax 254-965-8000

MANURE CHAIN OF CUSTODY RECORD

Producer/Facility: Horizon Dairy

County: Hamilton

Date Sampled: 6/18/2025

Date Shipped: 6/19/2025

Project Manager: Richard George

Sample Type Sample ID		Number of Containers	Test Package	Proper Preservation	Matrix	
Slurry 429	-	1	EAE TX CO KS SLURRY	Y	SL	
1120000		73 1 123		and general a	053	
100			1971 151			
			TALL STATE	THE PERSON	1940	
LEGIS		111 728	THE PLANT			
				The sales	100	
12/20/20		11111111	31		17/12	
/15/10/2009				THE REAL PROPERTY.	752	
Later party		1 2 1 15	168	THE REAL PROPERTY.	Vol.	

elinquished By: Ref. Internal COC	Relinquished By:	Lisa Postmus	Relinquished By:	
Company: EAE	Company:	EAE	Company:	ServiTech Lab
	Date/Time:	419,12	\mathcal{D}	
	Received By:	MALIAN		



Phone: 806,677.0093

Fax: 806.677.0329

800.557.7509

.ab No: 4 260	LABORA	TORY	ANALYSI	S REPORT	Report Date: 06/30/	2025 04:38 pri
Send To: 6224	ENVIRO-AG ENGIN 3404 AIRWAY BLV AMARILLO, TX 79	D	NC		Amy Me	eier
Client Name: Sample ID: Location	HORIZON DAIRY RCS 2A HAMILTON COUNT	Y		Received: Sampled: Invoice No: P.O. #:	428535	
NUTRIENTS		Analysis	s results	lbs/ac	re-in	meq/L
Nitrogen						
Total Nitrogen Organic Nitrogen Ammonium Nitrogen Nitrate+Nitrite Nitrogen		165 49 116.1 <0.20	ppm ppm ppm ppm		11.8 3.5 8.3 0	
Major and Se	econdary Nutrients					
Phospho Potassiu	Phosphorus Phosphorus as P2O5 Potassium Potassium as K2O		ppm ppm ppm ppm	7	16 95	9.0
OTHER PROPER	TIES					
Moisture Total Sol Orga Ash C:N Ratio	ids anic Matter	99.8 0.2 0.1 <0.10 3.5	% % % % ratio		453 227	

AMARILLO - STEPHENVILLE - ARTESIA Enviro-Ag Engineering, Inc.

Enviro-Ag Engineering, Inc. 9855 FM 847, Dublin, TX 76446 Tel. 254-965-3500 Fax 254-965-8000

WASTEWATER CHAIN OF CUSTODY RECORD

Producer/Facility: Horizon Dairy

County: Hamilton

Date Sampled: 6/18/2025

Date Shipped: 6/19/2025

Project Manager: Richard George

Sample Type Sample ID	Number of Containers	Test Package	Proper Preservation	Matrix	
Wastewater 4260 RCS #2A	2	EAE TX CO KS LAGOON	Y	ОТ	
Wastewater 4 261 RCS #2B	2	EAE TX CO KS LAGOON	Υ	OT	
Wastewater 4261 RCS #2B Wastewater 4262 RCS #3	2	EAE TX CO KS LAGOON	У	ОТ	
		101112			
HERENE TO THE	1201 314		1 - 10000	3-6	
	1100	100		0	
			0 1 1 1		
			PILE BE		
	100				

Relinquished By: Ref.	nternal COC	Relinquished By: Lisa Postmus	Relinquished By:	
Company:	EAE	Company: EAE	Company:	ServiTech Lab
		Date/Time:	200	
		Received By:	_	

Executive Summary Horizon Dairy (Phase II) WQ0004842000

LMU Summary:

LMUs 1 and 17 are planted in corn and small grains. LMU's 1A, 2A, 2B, 2C, 3A, 3B, 3C, 5, 6, 7, 8, 9, 11, 13, 14 and 15 are established in coastal Bermudagrass overseeded with small grains for perennial coverage. LMU's 10, 16, 18, 20, 21, 23, Mayhugh 1, Mayhugh 2, Watson 1, and Watson 2 are planted in sorghum and small grains. LMU 4 is available for grazing.

Nutrient Summary:

LMU#	Max N	Max P205	Planned N	Planned P
	Lb/ac	Lb/ac	Lb/ac	Lb/ac
	Application	Application	Application	Application
	Rates	Rates	Rates	Rates
1	254	132	107	56
1A	400	227	200	114
_ 2A	400	227	200	114
2B	401	209	168	87
2C	401	209	164	85
3A	400	227	200	114
3B	401	209	164	85
3C	401	209	164	85
4	400	227	200	114
5	600	341	300	170
6	600	341	300	170
7	600	341	300	170
8	600	341	300	170
9	600	341	300	170
10	400	227	200	114
11	400	227	200	114
13	400	227	200	114
14	400	227	200	114
15	400	227	200	114
16	401	209	168	87
17	440	229	185	96
18	400	227	200	114
20	400	227	200	114
21	400	227	200	114
23	401	209	168	87
Mayhugh 1	296	168	148	84
Mayhugh 2	296	168	148	84
Watson 1	296	168	148	84
Watson 2	296	168	148	84

Supplemental nutrients will be necessary to achieve the desired yields. Commercial fertilizer applications should be split such that individual application events do not exceed 100 lb/Ac.

All 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.

LMU 2 has been split into LMU's 2B and 2C and were originally sampled by TCEQ as one field. For this plan, LMU's 2B and 2C will utilize the Soil Analysis from LMU 2. LMU 3 has been split into LMU's 3B and 3C and were originally sampled by TCEQ as one filed. For this plan, LMU's 3B and 3C will utilize Soil Analysis from LMU 3. Additionally, at the time of this plan's creation, LMU's Mayhugh 1, Mayhugh 2, Watson 1 and Watson 2 have not been sampled by TCEQ. This plan will utilize the "worst case scenario" for those fields and set the Phosphorous levels to "200ppm". This plan will be updated once those fields have been sampled.

PI Index by Field

Printed on: 8/22/25 8:47 AM Client Name: Horizon Dairy

Permit #:

WQ0004842000 8/22/2025

Date:

Plai	nner; Stephen Colby											Location:	Hamilton	_
			1				, _					Rainfall:	>25.0 inches	-
LMU or Fi	elds Crop	Slope	Runoff Curve	Soil Test P Level	Inorganic P₂O₅ Appl Rate	Organic P ₂ O ₅ Appl Rate	Inorganic Method & Timing	Organic Method & Timing	Proximity of Appl to Named Stream	Runoff Class	Soil Erosian	Total Index Points	P Runoff Potential	Soil Test Date:
1	Silage - Com16-20T;SG GreenChop-6-7T	1.3%	89	8	0	6	0	0.5	0	2	1.5	18	Medium	11/21/24
1A	Coastal GC (30%DM) 9-11T; SG GC 6-7T	1.0%	78	8	0	6	0	4	1.25	1	1.5	21.75	Medium	11/21/24
2A	Coastal GC (30%DM) 9-11T; SG GC 6-7T	1.0%	78	8	0	6	0	4	0	1	0	19	Medium	11/14/24
2B	Coastal GC (30%DM) 9-11T; SG GC 6-7T	1.5%	78	8	0	6	0	0.5	0	1	0	15.5	Medium	11/14/24
2C	Coastal GC (30%DM) 9-11T; SG GC 6-7T	1.5%	78	8	0	6	0	0.5	0	1	0	15.5	Medium	11/14/24
3A	Coastal GC (30%DM) 9-11T; SG GC 6-7T	2.5%	78	8	0	6	0	4	2.5	2	0	22.5	Medium	11/13/24
3B	Coastal GC (30%DM) 9-11T; SG GC 6-7T	1.1%	78	8	0	6	0	0.5	2.5	2	0	19	Medium	11/13/24
3C	Coastal GC (30%DM) 9-11T; SG GC 6-7T	1.1%	78	8	0	6	0	0.5	2.5	2	0	19	Medium	11/13/24
4	Coastal graze 1 AU/1 ac, SG mod graze	1.9%	80	8	0	6	0	4	0	1	0	19	Medium	11/13/24
5	Coastal GC (38%DM) 21-23T; SG GC 6-7T	2.1%	78	8	0	6	0	4	5	2	0	25	Hìgh	11/13/24
6	Coastal GC (30%DM) 21-23T; SG GC 6-7T	2.7%	71	8	0	6	0	4	1.25	2	0	21.25	Medium	11/14/24
7	Coastal GC (30%DM) 21-23T; SG GC 6-7T	3.1%	71	8	0	6	0	4	1.25	2	0	21.25	Medium	11/14/24
8	Coastal GC (30%DM) 21-23T; SG GC 6-7T	1.0%	78	8	0	6	0	4	0	1	0	19	Medium	11/14/24
9	Coastal GC (30%DM) 21-23T; SG GC 6-7T	4.7%	78	8	0	6	0	4	0	4	0	22	Medium	11/21/24
10	Silage - Sorg-11-15 T;SG GreenChop-6-7T	4.5%	89	8	0	6	0	4	0	4	0	22	Medium	11/21/24
11	Coastal GC (30%DM) 9-11T; SG GC 6-7T	2.2%	78	8	0	6	0	4	0	2	0	20	Medium	11/21/24
13	Coastal GC (30%DM) 9-11T; SG GC 6-7T	5.7%	78	8	0	6	0	4	2.5	4	0	24.5	High	11/13/24
14	Coastal GC (30%DM) 9-11T; SG GC 6-7T	2.5%	78	8	0	6	0	4	5	2	0	25	High	11/13/24
15	Coastal GC (30%DM) 9-11T; SG GC 6-7T	5.1%	78	8	0	6	0	4	5	4	0	27	High	11/21/24
16	Silage - Sorg-11-15 T;SG GreenChop-6-7T	4.7%	89	8	0	6	0	4	1.25	4	1.5	24.75	High	11/14/24
17	Silage - Corn16-20T;SG GreenChop-6-7T	2.5%	89	8	0	6	0	0.5	1.25	4	1.5	21.25	Medium	11/14/24
18	Silage - Sorg-11-15 T;SG GreenChop-6-7T	3.7%	89	8	0	6	0	4	2.5	4	1.5	26	High	11/14/24
	20 Silage - Sorg-11-15 T;SG GreenChop-6-7T	6.9%	89	8	0	6	0	4	a	4	1.5	23.5	High	11/14/24
	21 Silage - Sorg-11-15 T;SG GreenChop-6-7T	5.7%	89	8	0	6	0	4	0	4	1.5	23.5	High	11/14/24
	23 Silage - Sorg-11-15 T;SG GreenChop-6-7T	2.8%	89	8	0	6	0	0.5	0	4	1.5	20	Medium	11/14/24
Mayhugh		1.6%	89	8	0	6	0	4	0	2	1.5	21.5	Medium	TBD
Mayhugh Printe	2 Silage - Sorg-11-15 T:SG GreenChop-6-7Т d on 8/22/2025 8:47 AM	1.6%	89	8	0	6	0	4	0	2	1.5	21.5	Medium	TBD

Pl Index by Field

Client Name											Date:	8/22/2025		
Planner	: Stephen Colby											Location:	Hamilton	_
							,					Rainfall:	>25.0 inches	
LMU or Fields	з Сгор	Slope	Runoff Curve	Soil Test P Level	Inorganic P ₂ O ₅ Appl Rate	Organic P ₂ O 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:
Watson 1	Silage - Sorg-11-15 T;SG GreenChop-6-7T	1.6%	89	8	0	6	0	4	0	2	1.5	21.5	Medium	TBD
Watson 2	Silage - Sorg-11-15 T;SG GreenChop-6-7T	1.6%	89	8	0	6	0	4	0	2	1.5	21.5	Medium	TBD

Horizon Dairy 4483 E FM 219 Hico, TX 76457 (Phase II Digester)

TCEQ Permit Number:

WQ0004842000

Owner

4P Pastures, LLC 4483 East FM 219 Hico, TX 76457 (254)918-3156

Operator

Horizon Dairy, LLC 4483 FM 219 Hico, TX 76457

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)965-3500

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

8/22/25 3:42 PM

Permit #:

WQ0004842000

	This Nutrie	ent Management	Plan has fiel	ds that med	et NMP and/	or NUP requ	uirements	s.
See Attac	hed Executive	Summary				•		

LOCATION AND PURPOSE OF THE PLAN

EXECUTIVE SUMMARY:

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.

2025 and will remain in effect until revision based on new soil or manure analysis The plan is for the year of 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 10000 head will be confined with the average weight of 1325 pounds. The animals will be confined 24 hours per day for 365 days per year.

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Plan is based on: 590 Organic Nutrient Manageme

TABLES 1, 2 and 2a Permit #: WQ0004842000

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 P₂O₅ 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 he 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 hy 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 <u>must</u> 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.

Page 2 - Printed on: 8/22/25 3:42 PM Plan is based on: 590 Organic Nutrient Manageme

SOLIDS APPLICATION: (cont) Permit #: WQ0004842000

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 bayland 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 bicnnial 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 lndex 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 K₂O 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.

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EFFLUENT APPLICATION: (cont)

Permit #:

WQ0004842000

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 offsite.

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 he 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.

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EFFLUENT APPLICATION: (cont) Permit #: WO0004842000

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, ctc.) 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.

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MORTALITY MANAGEMENT: (cont)

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.

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EFFLUENT AND SOLIDS STORAGE & TESTING:

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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 cFOTG

Type: 590 in the Scarch 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.

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RECORD KEEPING: Permit #: WQ0004842000

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.

d of waste lea	aving the farm or us	sed as feed.	Estimated Annual Excess
Date	Amount	Hauler or R	ecipient
			_
		-	
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Excess Remaining

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May be continued on additional sheets

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OPERATION AND MAINTENANCE:

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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: 8/22/2025

Plan Approved by: Date: S/22/25

Producer Signature: Discussed with Produces

Date: S/22/25

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.

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Table 1 - Estimated Effluent and Solids Quantities Produced

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Avg. Number of Animals
Type of Waste

10,000
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* 3,831

Estimated Tons Solids to be Land Applied Annually (on or off site)* 145,918.9

*I/rom engineering design.

Estimated	Nutrient Availab	ilty		Estimated Nutrient Availabilty				
Effluent					Solids		·	
	pounds/yr	Pounds / 1000 gal	Pounds / Acre Inch			pounds / yr	pounds / ton	
N	114,604	1.10	29.9	**	N	658,246	4.5	**
P2O5	59,646	0.57	15.6		P2O5	373,879	2.6	
K2O	364,648	3.51	95.2		K2O	647,621	4.4	
**	* Effluent Values	Based on An	alysis		** Solids V	alues Based	on Analysis	S
date	d;	June 18, 2025	5		dated:	June 1	8, 2025	

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

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

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

P – Index Rating	P – Index Rating Maximum TMDL Annual P Application Rate 51		Maximum Biennial Application Rate	
Very Low, Low	Annual Nitrogen (N) Requirement	Annual N itrogen (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	
Hìgh 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 1/2 is:

- equal to or greater than 200 ppm in non-arid areas 21 or
- equal to or greater than 350 ppm in arid areas ^{2l} with a named stream greater than one mile or
- equal to or greater than 200 ppm in arid areas ²ⁱ 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.</p>
- 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.

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Table 3 - Crop Removal Rates (For Information Only)

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Table 5 -	Crop R	Removal Rates (For Information Only)				Permit #:	WQ
LMU or			TCEQ Plan	Actual Crop Analysis or Default	Total Est.	Total Est.	Total Est. K ₂ O
Field No.	Acres	Crop and P Index Level	Type	Actual C Analysis Default	Removal lbs/Ac/Yr	Removal lbs/Ac/Yr	Removal lbs/Ac/Yr
1	102.0	Silage - Corn16-20T;SG GreenChop-6-7T M	NUP	Default	341	132	214
1A	36.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
2A	60.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
2B	105.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
2C	73.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
3A	104.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
3B	142.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
3C	38.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
4	56.0	Coastal graze 1 AU/1 ac, SG mod graze M	NMP	Default	300	90	267
5	37.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T H	NMP	Default	503	155	320
6	65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	NMP	Default	503	155	320
7	65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	NMP	Default	503	155	320
8	84.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	NMP	Default	503	155	320
9	20.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	NMP	Default	503	155	320
10	120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	NMP	Default	337	112	171
11	22.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	NMP	Default	330	104	190
13	90.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	NMP	Default	330	104	190
14	77.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	NMP	Default	330	104	190
15	47.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	NMP	Default	330	104	190
16	85.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	NMP	Default	337	112	171
17	85.0	Silage - Corn16-20T;SG GreenChop-6-7T M	NMP	Default	341	132	214
18	113.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	NMP	Default	337	112	171
20	120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	NMP	Default	337	112	171
21	24.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	NMP	Default	337	112	171
23	90.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	NMP	Default	337	112	171
Mayhugh 1	70.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	NUP	Default	337	112	171
Mayhugh 🕻	92.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	NUP	Default	337	112	171
Watson 1	125.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	NUP	Default	337	112	171
Watson 2	168.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	NUP	Default	337	112	171
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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

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Table 4 - Maximum Solids Application per Field

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						_		
Est. Solids				Current	Max	nia!	Maximum	Maximum
Produced	LMU or			Soil Test	Annual	Bien	Solids	Allowable Application
Annually	Field			P Level	P2O5	Annual/Biennial	Allowable	Per field
(wet tons)	No.	Acres	Crop Management and PI runoff potential	(ppm)	lbs/acre	Anr	Tons/Acre	(Tons)
145,919	1							
	1A	36.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	41	227	Α	88.7	3192
	2A	60.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	118	227	Α	88.7	5320
	2B							
	2C							
	3 A	104.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	83	227	A	88.7	9222
	3B							
	3C							
	4	56.0	Coastal graze 1 AU/1 ac, SG mod graze M	133	227	A	88.7	4966
	5	37.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T H	125	341	A	133.0	4921
	6	65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	166	341	A	133.0	8645
	7	65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	194	341	A	133.0	8645
	8	84.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	113	341	A	133.0	11173
	9	20.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	102	341	A	133.0	2660
	10	120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	149	227	A	88.7	10641
	11	22.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	40	227	A	88.7	1951
	13	90.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	123	227	A	88.7	7980
	14	77.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	114	227		88.7	
	15	47.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H			A		6828
	16	47.0	Coastar GC (30%DM) 9-111; SG GC 6-71 H	71	227	Α	88.7	4168
	17							
	18	113.0	Eller Francis of Comput		227		00.7	10050
T-4-1 F-11 I			Silage - Sorg-11-15 T;SG GreenChop-6-7T H	111	227	A	88.7	10020
Total Solids	20	120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	118	227	A	88.7	10641
Application	21 23	24.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	31	227	A	88.7	2128
Acres 1595		70.0	03. 0 11.15.77.07.77 01 4.57.14	700	1.60	١. ا		4500
	/layhugh		Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	168	A	65.7	4598
	1ayhugh		Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	168	A	65.7	6044
-	Watson 1		Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	168	A	65.7	8211
F E	Watson 2	168.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	168	Α	65.7	11036
Allowable	i			J				
on-site								
(tons)						J		
142989.6								
Not								
Adequate								
		1						
Solids to be								
used off								
site (tons)								
2,929.3								

Table 5 - Nutrients Applied/Needs at Maximum Solids Rates

Permit #:

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		plied When Ap Maximum Rate		Supplementa	al Nutrients Nec Maximu		plication is at
LMU / Field #	N Lb/ac	P ₂ O ₅ Lb/ac	K ₂ O Lb/ac	N Lb/ac	P ₂ O ₅ Lb/ac	K ₂ O Lb/ac	Lime T/Ac
1		İ			1		
1A	400	227	394	0	0	0	0
2A	400	227	394	0	0	0	0
2B							·
2C							
3A	400	227	394	0	0	0	0
3B			1				
3C							
4	400	227	394	0	0	0	0
5	600	341	590	0	0	0	0
6	600	341	590	0	0	0	0
7	600	341	590	0	0	0	0
8	600	341	590	0	0	0	0
9	600	341	590	0	0	0	0
10	400	227	394	0	0	0	0
11	400	227	394	0	0	0	0
13	400	227	394	0	0	0	0
14	400	227	394	0	0	0	0
15	400	227	394	0	0	0	0
16							
17							
18	400	227	394	0	0	0	0
20	400	227	394	0	0	0	0
21	400	227	394	0	0	0	0
23		[
Mayhugh 1	296	168	292	0	0	0	0
Mayhugh 2	296	168	292	0	0	0	0
Watson 1	296	168	292	0	0	0	0
Watson 2	296	168	292	0	0	0	0
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Table 6 - Planned Solids Application Rates Vaste Utilization and Nutrient Management Plan Permit #: W00004842000										
			Solids Application Rates				Permit #:	WQ0004	4842000	
	le crop			Current Soil Test P ppm	ıal / nial	Max	% of	Planned	Planned Solids per	
LMU or Field No.	ğ	Acres	Crop Management and PI runoff potential	P nnm	Annı 3ien	Rate tons/ac	Maximum to apply	Solids tons/ac	field (tons)	
1				, pp.m	7	10115/20	плиругу	10/10/100	((CHS)	
1A		36.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	41	A	88.7	50	44.3	1596,1	
2A		60.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	118	A	88.7	50	44.3	2660,1	
2B								2	2000	
2C				}						
3A	١	l 104.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	83	A	88.7	50	44.3	4610.9	
3B				"	'	00.7	30	44,5	1010.5	
3C										
4		56.0	Coastal graze 1 AU/1 ac, SG mod graze M	133	A	88.7	50	44.3	2482.8	
5		37.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T H	125	A	133.0	50	66.5	2460.6	
6		65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	166	A	133,0	50	66.5	4322.7	
7		65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	194	A	133.0	50	66.5	4322.7	
8		84.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	113	A	133.0	50	66.5	5586.3	
9		20.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	102	A	133.0	50	66.5	1330.1	
10		120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	149	Α	88.7	50	44.3	5320.3	
11		22.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	40	Α	88.7	50	44.3	975.4	
13		90.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	123	Α	88.7	50	44.3	3990.2	
14		77.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	114	Α	88.7	50	44.3	3413.8	
15		47.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	71	Α	88.7	50	44.3	2083.8	
16										
17										
18		113.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	111	Α	88.7	50	44.3	5009.9	
20		120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	118	A	88.7	50	44.3	5320.3	
21		24.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	31	A	88.7	50	44.3	1064.1	
23										
Mayhugh 1			Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	A	65.7	50	32.8	2299.2	
Mayhugh 2			Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	A	65.7	50	32.8	3021.8	
Watson 1			Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	A	65.7	50	32.8	4105.7	
Watson 2		168.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	A	65,7	50	32.8	5518.0	
						ļ				
						I				
							' l			
Acres		1595.0		VACULAN-					71494,8	
14591	10		Tons of wet solids produced Annually	will the			ıcre applic he Solids?	ation rates		
1433	. 0		Total of wet solids produced Amidally		uot	an or u	ne oonus !		NO	

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Tons to be used off-site at Max. rates

0

74424

Tons to be used off-site at planned rates

Table 7 - Nutrients Applied/Needed at Planned Solids Rates

Permit #:

WQ0004842000

Red cells? Proceed to adjustment page and fix.

		Applied at Plan	ned Rates	Supplemental Nutrients Needed at Planned Rates				
LMU / Field #	N Lb/ac	P ₂ O ₅ Lb/ac	K₂O Lb/ac	N Lb/ac	P ₂ O ₅ Lb/ac	K ₂ O Lb/ac	Lime T/Ac	
1								
1A	200	114	197	155	20	0	0	
2A	200	114	197	175	0	0	0	
2B								
2C								
3A	200	114	197	145	0	0	0	
3B						ı		
3C								
4	200	114	197	125	0	0	0	
5	300	170	295	270	0	0	0	
6	300	170	295	255	0	0	0	
7	300	170	295	265	0	0	0	
8	300	170	295	260	0	0	0	
9	300	170	295	270	0	0	0	
10	200	114	197	140	0	0	0	
11	200	114	197	175	20	0	0	
13	200	114	197	175	0	0	0	
14	200	114	197	165	0	0	0	
15	200	114	197	165	0	0	0	
16								
17							l í	
18	200	114	197	140	0	0	0	
20	200	114	197	105	0	0	0	
21	200	114	197	135	0	0	0	
23								
Mayhugh 1	148	84	146	50	0	0	0	
Mayhugh 2	148	84	146	50	0	0	0	
Watson 1	148	84	146	50	0	0	0	
Watson 2	148	84	146	50	0	0	0	
		}						
				1				
]		<u> </u>	

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Table 8 - Maximum Effluent Application Per Field

Permit #:

WQ0004842000

r)	ı	_						
							nial		Maximum
Est. Available			log		Current Soil Test	Max	3ien	Maximum Effluent	Effluent
Effluent	LMU or		pie		P Level	Annual P_2O_5	aal/E	Allowable	Allowable / Field
(ac inches)	Field No.	Acres	lo Do	Crop Management and PI runoff potential	(ppm)	(lbs/acre)	Annual/Biennial	(ac in/ac)	(ac in)
3831	I	102.0	Γ	Silage - Corn16-20T;SG GreenChop-6-7T M	239	132	À	8.5	866
Source:	1A		}	•					
	2A	1	l						
	2B	105.0	l	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	126	208	A	13.4	1407
Dairy Lagoon	2C	73.0	l	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	126	208	A	13.4	978
Duny Lugoon	3A	,5.0	l	Coustai GC (5071D141) 5-111, 5G GC 0-71 141	120	200	ľ	13.4	376
	3B	142.0	l	Constal GC (200/DMA) 0 LTD SC CC 4 TT M	78	208	٨	12.4	1002
	3C	38.0	l	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	1		A	13.4	1903
1	l	36.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	78	208	A	13,4	509
	4								
	5								
	6								
	7								
	8								
	9								
	10								
	11								
	13		l		}				
	14								
	15								
	16	85.0		Silage - Sorg-11-15 T;SG GreenChop-6-7T H	91	208	A	13.4	1139
	17	85.0		Silage - Corn16-20T;SG GreenChop-6-7T M	116	229	A	14.7	1250
Total	18			,					1223
Effluent	20						П		
Application	21								
Acres	23	90.0		Silage - Sorg-11-15 T;SG GreenChop-6-7T M	171	208	A	13.4	1206
	/ayhugh		ا	Single long it is 1,50 creationspary in	'''	200		15.1	1200
-	'		۱						
	Mayhugh Watson I								
1	Watson 2		li						
Application	watson 2		Ш						
Allowable									
On-Site							Ιl		
(ac in)									
9258									
Adequate									
Effluent to be									
used Off-Site									
(ac in)							$ \ $		
0									
u			Ш				Ш		

Table 9 - Nutrients Applied/Needed at Maximum Effluent Rates

Permit #:

WQ0004842000

	Nutrients Ap	oplied When Ap Maximum Rate	plication is at	Maximum Rates					
LMU / Field #	N Lb/ac	P ₂ O ₅ Lb/ac	K ₂ O Lb/ac	N Lb/ac	P ₂ O ₅ Lb/ac	K ₂ O Lb/ac	Lime T/Ac		
1	254	132	809	125	0	0	0		
1A					1				
2A					<u> </u>				
2B	401	209	1275	0	0	0	0		
2C	401	209	1275	0	0	0	0		
3A	i								
3B	4 0 1	209	1275	0	0	0	0		
3C	401	209	1275	0	0	0	0		
4									
5									
6									
7									
8									
9			l l				j		
10									
11									
13									
14									
15					_	_	_		
16	401	209	1275	0	0	0	0		
17	440	229	1399	15	0	0	0		
18									
20									
21 23	401	209	1275	0	0	0	0		
Mayhugh 1	401	209	1273	l v	0	U	"		
Mayhugh 2									
Watson I									
Watson 2									
17 363611 2									

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Table	Table 10 - Planned Effluent Application Rates Permit #: WQ0004842000										
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	Planned Effluent / field		
1	102.0		Silage - Corn16-20T;SG GreenChop-6-7T M	239	A	8.5	42.0	(ac in/ac) 3.6	(Ac. In) 364		
1A	102.0		Single County 201,000 Globilonop C 71 in	257	11	0.3	42.0	5.0	307		
2Λ											
2B	105.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	126	A	13.4	42.0	5.6	591		
2C	73.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	126	A	13.4	41.0	5.5	401		
3A		{					1 9 6 6				
3В	142.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	78	A	13.4	41.0	5.5	780		
3C	38.0		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	78	Α	13.4	41.0	5.5	209		
4											
5											
6											
7											
8											
9											
10											
11											
13											
15											
16	85.0		Silage - Sorg-11-15 T;SG GreenChop-6-7T H	91	Α	13,4	42.0	5.6	470		
17	85.0		Silage - Corn16-20T;SG GreenChop-6-7T M	116	A	14.7	42.0	6.2	479 524		
18	05.0		mage - comro-zor,oc circulop-o-71 W	110	^	17.7	42.0	0.2	324		
20											
21											
23	90.0		Silage - Sorg-11-15 T;SG GreenChop-6-7T M	171	Α	13.4	42.0	5.6	507		
1ayhugh											
1ayhugh											
Watson 1											
Watson 2											
						!	ľ				
]											
Acres	720.0	٢	 -	-	Will	he planne	d applicati	ion rates	3854		
Acres 720.0 Will the planned application rates								VE0			

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use all of the Effluent?

YES

Table 11 - Nutrients Applied/Needed at the Planned Effluent Rates

Permit #

WQ0004842000

Red cells? Proceed to adjustment page and fix.

[Applied at Pla		Supplemen	Supplemental Nutrients Needed at Planned Rates				
LMU / Field #	N Lb/ac	P ₂ O ₅ Lb/ac	K ₂ O Lb/ac	N Lb/ac	P ₂ O ₅ Lb/ac	K ₂ O Lb/ac	Lime T/Ac		
1	107	56	340	270	0	0	0		
1A									
2A									
2В	168	87	535	190	0	0	0		
2C	164	85	522	195	0	0	0		
3A				[
3B	164	85	522	200	0	0	0		
3C	164	85	522	200	0	0	0		
4									
5									
6									
7									
8									
9									
10									
11									
13									
14									
15									
16	168	87	535	175	0	0	0		
17	185	96	588	270	0	0	0		
18				}					
20				}					
21									
23	168	87	535	180	0	0	0		
Mayhugh 1					}				
Mayhugh 2									
Watson 1									
Watson 2									
				<u></u>					

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

WQ0004842000

LMU / Field #	AWC (inches)	Restrictive Texture	LMU / Field #	AWC (inches)	Restrictive Texture
1	2.34	Gravelly Clay Loam			
lA					
2Λ		J			
2В	2.34	Gravelly Clay Loam			
2C	2.34	Gravelly Clay Loam			
3A					
3B	2.34	Gravelly Clay Loam			
3C	2.34	Gravelly Clay Loam			
4	l				
5					
6					
7					
8					
9					
10					
11			1		
13					
14					
15					
16	2.125	glesby Gravelly Cla			
17	2.34	idcoke Gravelly Cla			
18					
20					
21					
23	3.36	Slidell Clay			
Mayhugh 1			}		
Mayhugh 2					
Watson 1					
Watson 2					
				1	
		1			

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Table 13 - Non Application Areas by Field

Permit #:

WQ0004842000

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

				1	<u> </u>	0 / 1 10.00				· 	I I
LMU /	FS	FB	RFB	OLEA	Total	LMU /	FS	FB	RFB	OLEA	Total
Field#	Acres	Acres	Acres	Acres	Excluded	Field #	Acres	Acres	Acres	Acres	Excluded
1	0.0	0.0		_							
1A	0.0	0.0									
2A	0.0	0.0									
2B	0.0	0.0									
2C	0.0	0.0									
3A	0.0	0.0									
3В	0.0	0.0									
3C	0.0	0.0									
4	0.0	0.0									
5	0.0	0.0									
6	0.0	0.0									
7	0.0	0.0									
8	0.0	0.0									
9	0.0	0.0									
10	0.0	0.0									
11	0.0	0.0									
13	0.0	0.0									
14	0.0	0.0									
15	0.0	0.0									
16	0.0	0.0									
] 17	0.0	0.0									J
18	0.0	0.0									
20	0.0	0.0									
21	0.0	0.0									
23	0.0	0.0									
layhugh	0.0	0.0									
1ayhugh	0.0	0.0				l					
Watson t	0.0	0.0									
Watson 2	0,0	0.0									
1											
1											
See Appl	lication I	Map for l	ocation of	buffers		Totals	0.0	0.0	0.0	0.0	0.0
7TS - 4	-1 500 623	12 4		2215.0			T	0. 633 125-1		22150	

See Application Map for location of buffers Total 590-633 application acres: 2315.0

Printed on: 8/22/25 3:42 PM

Total 590-633 Field Acres:

0.0 2315.0

Waste Utilization and Nutrient Management Data Entries

General Data

Date: 8/22/2025 Farmer Name: Horizon 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 #: WQ0004842000

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: 10000 Approximate Weight: 1325

Days per year in confinement: 365
Hours per day confined: 24

ACRE FEET of effluent to be irrigated*: 319.24

Estimated annual gallons of effluent to be

irrigated/applied annually: 104023715.5

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)*: 32394

Is this the first Year of the AFO-CAFO Operation?

No

Analysis Information

Effluent Information

Date of Analysis: 6/18/2025
Manure Source: Dairy Lagoon
Nitrogen % From Analysis: 0.0165
Phosphorus % From Analysis: 0.003
Potassium % From Analysis: 0.035
Moisture % From Analysis: 99.8

Manure / Solids Information

Date of Analysis: 6/18/2025
Manure Source: Other Solids

Manure Source: Other Solids Explain Other: From Analysis: 1.27 Slurry

Nitrogen % From Analysis: 1.27
Phosphorus % From Analysis: 0.252
Potassium % From Analysis: 0.833
Moisture % From Analysis: 77.8

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
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Field and Buffer Entries

Permit #:

WQ0004842000

Printed on: 8/22/25 3:42 PM

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.

	THE TELL THE	border (15)	, is expres	Joen III ACI	CES OF COL	s spicausii	cci, but as Lif	TEAR FEET OF the CFG.
Field	Total LMU or Field	FC	7.0	DED	01.5.	Total Buffer	Actual Application	
No.	Acres	FS	FB	RFB	OLEA	Acres	Acres	This Column Intentionally Left Blank
1	102					0.0	102.0	
1A	36					0.0	36,0	
2A	60					0.0	60.0	
2B	105		- a-			0.0	105.0	
2C	73					0.0	73.0	
3A	104					0.0	104.0	
3B	142					0.0	142.0	
3C	38					0.0	38.0	
4	56					0.0	56.0	
5	37					0.0	37.0	
6	65					0.0	65.0	
7	65					0.0	65.0	
8	84					0.0	84.0	
9	20					0.0	20.0	
10	120					0.0	120.0	
11	22					0.0	22.0	
13	90					0.0	90,0	
14	77	-				0.0	77.0	
15	47					0.0	47.0	
16	85					0.0	85.0	
17	85					0.0	85.0	
18	113					0.0	113.0	
20	120					0.0	120.0	=
21	24					0.0	24.0	
23	90					0.0	90.0	
Tayhugh	70					0,0	70.0	
Taybugh	92					0.0	92.0	-
Watson 1	125					0.0	125.0	
Watson 2						0.0	168.0	
							10010	
								-
	-							
		0.2						

Soil Test, Crop Information and Plant Analysis Data Entries

	Soil Test	Analysis		71.1-					ङ	l	-		tional) Use is Required
N (ppm)	P (ppm)	K (ppm)	Lime (enter amt or leave blank)	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)	% Ni	% P	% K	Yield Air Dry Production (lbs/ac/yr)
61.626	239	2168			1	102.0	Silage - Com16-20T;SG GreenChop-6-7T M	E	N			-	
21.561	40.5	342			1A	36.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	S	N				
11.978	118	322			2A	60.0	Coastal GC (30%DM) 9-11T; SG GC 6-7f M	S	N				
21.097	126	949			2B	105.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	E	N				
21.097	126	949			2C	73.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	E	N				
27.942	82.5	370			3A	104.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	S	N				
18.989	78.4	559			3B	142,0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	E	N				
18.989	78.4	559			3C	38.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	Е	N				
37.451	133	431			4	56.0	Coastal graze 1 AU/1 ac, SG mod graze M	S	N				
14.353	125	404			5	37.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T H	S	N				
22.252	166	384			6	65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	S	N				
17.364	194	326			7	65.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	S	N				
19.758	113	327			8	84.0	Coastal GC (30%DM) 21-23T; SQ GC 6-7T M	S	N				
15.687	102	289			9	20.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	S	N				
30.2	149	398			10	120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	S	N				
12.123	40	325			11	22.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	S	N				
13.687	123	327			13	90.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	S	N	-			
18.538	114	286		- 7	14	77.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	S	N				
16.354	70.6	340			15	47.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	S	N				
28.268	91	361			16	85.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	E	N		-		
23.653	116	411			17	85.0	Silage - Corn16-20T:SG GreenChop-6-7T M	E	N				
30.846	111	483			18	113.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	S	N				
47.918	118	451			20	120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	S	N				
33.211	31.4	243			21	24.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	S	N				
27.029	171	382			23	90.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	E	N				
100	200	100		N.	/layhugh	70.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	S	N				
100	200	100			/layhugh:	92.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	S	N				1

Soil Test, Crop Information and Plant Analysis Data Entries

F	Printed on:	8/22/25 3	:42 PM	Plan is	based on:	590 Organ	ic Nutrient Management Plan V 5.0			Permit #:		/Q000484 Yield (opt
	Soil Test	Analysis			k - 1/4				္ထ	Only W	hen Crop	Removal is
N (ppm)	P (ppm)	K (ppm)	Lime (enter amt or leave blank)	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 Analys (Y / N)	% N	% P	% K
100	200	100			Watson 1	125.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	S	N			
100	200	100			Watson 2	168.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	S	N	_		
												
									\sqcup			<u> </u>
								\perp	\sqcup			
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Solids Application Rate Entries

	is - 19	"Wet tons" of solids produced Annually	1		811 4la a - F	and anter	
1400	15	wet tons for solids produced Annually	-	V	/ill the plant		
LMU or Field			Current Soil Test	Crop P ₂ O ₅	Annual or Biennial Application	Maximum Solids Allowable	Enter % o Maximum Planned to
No.	Acres	Crop Management and PI runoff potential	P ppm	Req.	Cycle	Tons/Ac	Apply
1							
JA		Coastal GC (30%DM) 9-11T; SG GC 6-7T M	41	205	Annual	88.7	50.0
2A	60.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	118	205	Annual	88.7	50.0
2B 2C							
	104.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	92	205	Annual	00.7	50.0
3B	104.0	Coasial GC (30%DM) 9-111; 3G GC 0-71 M	83	205	Annual	88.7	50.0
3C							
4	56.0	Coastal graze 1 AU/1 ac, SG mod graze M	133	175	Annual	88.7	50.0
5		Coastal GC (30%DM) 21-23T; SG GC 6-7T H	125	250	Annual	133.0	50.0
6		Coastal GC (30%DM) 21-23T; SG GC 6-7T M	166	250	Annual	133.0	50.0
7		Coastal GC (30%DM) 21-23T; SG GC 6-7T M	194	250	Annual	133.0	50.0
8	84.0	Coastal GC (30%DM) 21-23T; SG GC 6-7T M	113	250	Annual	133.0	50.0
9	20.0	Constal GC (30%DM) 21-23T; SG GC 6-7T M	102	250	Annual	133.0	50.0
10	120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	149	155	Annual	88,7	50.0
11	22.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	40	205	Annual	88.7	50.0
13	90.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	123	205	Annual	88.7	50.0
14	77.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T H	114	205	Annual	88.7	50.0
15	47.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T II	71	205	Annual	88.7	50.0
16							
17						1	
18	113.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T II	111	155	Annual	88.7	50.0
20	120.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	118	155	Annual	88.7	50.0
100	24.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T H	31	155	Annual	88.7	50.0
23							
,		Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	155	Annual	65.7	50.0
~ ~		Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	155	Annual	65.7	50.0
		Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	155	Annual	65.7	50.0
atson	168.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	200	155	Annual	65.7	50.0

Printed on: 8/22/25 3:42 PM Plan is based on: 590 Organi

Effluent Application Rate Entries

Effluent - Set the Planned Application Rates

Printed on: 8/22/25 3:42 PM

Permit #:	WQ0004842000

104	023716				Will the p	lanned rate	es use all of	the effluent?	Yes
	3831	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 (ne in/ac)	Enter % of Maximum Planned to Apply	Planned Effluent (ac in/ac)	Planned Effluent per field (acre inches)
1	102,0	Silage - Corn16-20T;SG GreenChop-6-7T M	239	180	Annual	8,5	42.0	3.57	364
1A				1					
2Λ									
2B	105.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	126	205	Annual	13.4	42.0	5.63	591
2C	73.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	126	205	Annual	13,4	41.0	5.49	401
3A									
3B	142.0	Constal GC (30%DM) 9-11T; SG GC 6-7T M	78	205	Annual	13.4	41.0	5.49	780
3C	38.0	Coastal GC (30%DM) 9-11T; SG GC 6-7T M	78	205	Annual	13.4	41.0	5.49	209
4									
5									
6									
7									
8									
9									
10				0					
11									
13									
14									
15 16	85.0	Chan Can II to Test Chan Chan Car II	01	155	Annual	12.4	42.0	5.63	470
17		Silage - Sorg-11-15 T;SG GreenChop-6-7T II Silage - Corn16-20T;SG GreenChop-6-7T M	91 116	155 180	Annual Annual	13.4	42.0	5.63	479
18	03.0	Shage - Cornio-20135G GreenChop-6-71 M	110	100	Annuai	14.7	42.0	6.17	524
20									
21									
23	90.0	Silage - Sorg-11-15 T;SG GreenChop-6-7T M	171	155	Annual	13.4	42.0	5.63	507
yhugh	,,,,			14/4/	Annua	15.4	42.0	2100	307
yhugh			1.0	7					
atson									
atson									
- 1									
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Plan is based on: 590 Organic Nutrient Management Plan *

Available Water Capacity Entries

	Printed on:	8/22/2	25 3:42	2 PM		Plan	is bas					Manager	nent Pla	Pe	rmit #:	V	/Q000	4842000
			-					EX	AMPLE	ENTR	IES							Availab
	Texture of the soil layer within the upper 24	0	3	0.12	0.2	_3	14 E n	0.16 ter Da	0.21 ta for 1	14 he to	18 24" o	0.08 only	0.12	18	24	0	0	Water Holding Capacit (AWC) o
LMU or Fields receiving Effluent	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)		the upp 24 inche of the se profile (Inches
1	Gravelly Clay Loan	0	11	0.11	0.15	11	18	0.11	0.15	18	24	0	0	24				2.34
2B	Gravelly Clay Loan	0	11	0.11	0.15	11	18	0.11	0.15	18	24	0	0	24				2.34
	Gravelly Clay Loan	0	11	0.11	0.15	11	18	0.11	0.15	18	24	0	0	24				2.34
3B	Gravelly Clay Loan	0	11	0.11	0.15	11	18	0.11	0.15	18	24	0	0	24				2.34
3C	Gravelly Clay Loan	0	11	0.11	0.15	11	18	0.11	0.15	18	24	0	0	24				2.34
																_		
											*							
16	glesby Gravelly Cl	0	17	0.1	0.15	17	35	0	0	35				0				2.13
	dcoke Gravelly Cl	0	11	0.11	0.15	11	18	0.11	0.15	18	80	0	0	80				2.34
23	Slidell Clay	0	19	0.1	0.18	19	32	0.1	0.18	32				0				3.36

Available Water Capacity Entries

so t ii	exture of the oil layer within the upper 24 inches of the oil profile that	0	3	0.12				EX	AMPLE	ENTR	IES			<u> </u>				Available
so t ii	oil layer within the upper 24 inches of the	0	3	0 12								1					l	
so t ii	oil layer within the upper 24 inches of the	0	3	0 12					1									Water
so t ii	oil layer within the upper 24 inches of the	0	3	0 12	I .]						Holding
t t	the upper 24 inches of the		_ ·		0.2	3	14	0.16	0.21	14	18		0.12	18	24	0	0	Capacity
iı	inches of the			0.12	0.2	J			ta for 1				0.12	_ 10				(AWC) of
	oil profile that			Г			LII	lei Da	la IOI	ine top	724 (illy						the upper
			th of		C of		th of		C of		th of		C of		th of	AW	C of	24 inches
1 1	as the lowest		rst	I	rst	Sec		1	ond	1	ird	Th		l	urth	Fou	ırth	of the soil
	permeability		уег		yer		yer		yer		yer		yer		уег		yer	profile
Effluent (D	Don't Abbreviate)	(incl	hes)	in (in	/in)	(incl	hes)	(in	/in)	(inc	hes)	(in	(in)	(incl	hes)	(in	/in)	(Inches)
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A. Sample collection

1) Samples w	ere collected for the land managem	ent unit (LMU) identified below.
	ete this form and Tables 1 and 2 be soil monitoring report form.	low. Attach a copy of the laboratory analyses
$\square_{ m No,\ provid}$	e the facility information for the Ll	MU below with the exception of the tables.
2) Reporting	Year: 2024	Sample Collection Date: 11/21/2024

B. Facility Information

1) Permit Number: WQ0004842000

Site Name: Horizon 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: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	61.626	34.535
Phosphorus (extractable), ppm	239	25.6
Potassium (extractable), ppm	2168	921
Sodium (extractable), ppm	324	431
Magnesium (extractable), ppm	926	531
Calcium (extractable), ppm	15878	31431
Electrical Conductivity/Soluble Salts, dS/m	0.837	0.708
pH, SU	8.06	8.12

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.

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: David DeJong / Owner

Signature: July Malli to-

Date: 3/3/25

Telephone Number: (254) 918-3156

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

A. Sample collection

1)	Samples were collected for the land managem	cnt unit (LMU) identified below.
✓	Yes, complete this form and Tables 1 and 2 be to this soil monitoring report form.	ow. Attach a copy of the laboratory analyses
	No, provide the facility information for the LM	fU below with the exception of the tables.
	Reporting Year: 2024	Sample Collection Date: 11/21/2024

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon Dairy
- 3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 1A
- 4) Name of Owner/Operator: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	_	<u>-</u>	
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	21.561	8,912
Phosphorus (extractable), ppm	40.5	7.78
Potassium (extractable), ppm	342	278
Sodium (extractable), ppm	98.0	133
Magnesium (extractable), ppm	361	228
Calcium (extractable), ppm	19518	32158
Electrical Conductivity/Soluble Salts, dS/m	0.407	0.453
pH, SU	7.74	7.88

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

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: David DeJong / Owner

Signature: John Mulhi hu->

Date: 3/3/25

Telephone Number: (254) 918-3156

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A. Sample collection

1) Samples were collected for the land	l management unit (LMU) identified below.
Yes, complete this form and Tables to this soil monitoring repo	1 and 2 below. Attach a copy of the laboratory analyses
No, provide the facility information	for the LMU below with the exception of the tables.
2) Reporting Year: 2024	Sample Collection Date: 11/14/2024

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon 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: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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			<u> </u>

Table 2. Spil 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	21.097	4,042
Phosphorus (extractable), ppm	126	8.79
Potassium (extractable), ppm	949	441
Sodium (extractable), ppm	117	256
Magnesium (extractable), ppm	678	408
Calcium (extractable), ppm	16100	36379
Electrical Conductivity/Soluble Salts, dS/m	0.545	0.549
pH, SU	7.85	8,06

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.

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 suhmitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name and Title of Responsible Official or Authorized Agent: David DeJong / Owner

Signature: July Mally forms
Date: 3/3/25

Telephone Number: (254) 918-3156

D. How to Submit

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A. Sample collection

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⋠	Yes, complete this form and Tables 1 and 2 be to this soil monitoring report form.	low. Attach a copy of the laboratory analyses
	No, provide the facility information for the LM	IU below with the exception of the tables.
2)	Reporting Year: 2024	Sample Collection Date: 11/14/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 2A

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, Hico, TX 76457

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

Soil Sample Parameter Nitrate-Nitrogen (NO ₃ -N), ppm	0-2 inches soil depth	2-6 inches soil depth	6-24 inches soil depth
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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	11.978	4.939
Phosphorus (extractable), ppm	118	10.6
Potassium (extractable), ppm	322	322
Sodium (extractable), ppm	22.2	73.8
Magnesium (extractable), ppm	368	304
Calcium (extractable), ppm	12451	29082
Electrical Conductivity/Soluble Salts, dS/m	0.449	0.508
pH, SU	7.56	7.78

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.

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: David DeJong / Owner

Signature: July Malli for

Telephone Number: (254) 918-3156

D. How to Submit

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

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 labora to this soil monitoring report form.	atory analyses
No, provide the facility information for the LMU below with the exception of the	tables.
2) Reporting Year: 2024 Sample Collection Date: 11/13/20	024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon 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: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	18.989	3.136
Phosphorus (extractable), ppm	78.4	9.64
Potassium (extractable), ppm	559	312
Sodium (extractable), ppm	78.0	242
Magnesium (extractable), ppm	465	264
Calcium (extractable), ppm	14584	27793
Electrical Conductivity/Soluble Salts, dS/m	0.582	0.548
pH, SU	7.66	7.91

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.

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: David DeJong / Owner

Signature: Only Malli ho

Date: 3/3/25

Telephone Number: (254) 918-3156

D. How to Submit

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

A. Sample collection

1)	Samples were collected for the land managem	ent unit (LMU) identified below.
✓	Yes, complete this form and Tables 1 and 2 be to this soil monitoring report form.	low. Attach a copy of the laboratory analyses
	No, provide the facility information for the LN	MU below with the exception of the tables.
2)	Reporting Year: 2024	Sample Collection Date: 11/13/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP); 3A

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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		<u> </u>	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
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	27.942	12.688
Phosphorus (extractable), ppm	82.5	15.9
Potassium (extractable), ppm	370	333
Sodium (extractable), ppm	39.9	93.5
Magnesium (extractable), ppm	376	233
Calcium (extractable), ppm	16860	29485
Electrical Conductivity/Soluble Salts, dS/m	0.594	0.628
pH, SU	7.54	7.78

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.

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: David DeJong / Owner

Signature: July Male 4-3

Date: 3/3/25

Telephone Number: (254) 918-3156

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

A. Sample collection

1)	Samples were collected for the land management	ent unit (LMU) identified below.
V	Yes, complete this form and Tables 1 and 2 bel to this soil monitoring report form.	ow. Attach a copy of the laboratory analyses
	No, provide the facility information for the LM	IU below with the exception of the tables.
2)	Reporting Year: 2024	Sample Collection Date: 11/13/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon 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: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	37.451	10.688
Phosphorus (extractable), ppm	133	23,7
Potassium (extractable), ppm	431	361
Sodium (extractable), ppm	32.6	50.2
Magnesium (extractable), ppm	423	274
Calcium (extractable), ppm	16797	26833
Electrical Conductivity/Soluble Salts, dS/m	0.697	0.736
pH, SU	7.43	7.52

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.

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: David DeJong / Owner

Telephone Number: (254) 918-3156

D. How to Submit

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A. Sample collection

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✓ Yes,	complete this form and Tables 1 and 2 be to this soil monitoring report form.	low. Attach a copy of the laboratory analyses
\square_{No}	provide the facility information for the LM	IU below with the exception of the tables.
 Rep 	orting Year: 2024	Sample Collection Date: 11/13/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon 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: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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		<u> </u>	
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	14.353	1.732
Phosphorus (extractable), ppm	125	13.0
Potassium (extractable), ppm	404	296
Sodium (extractable), ppm	58.0	87.4
Magnesium (extractable), ppm	432	248
Calcium (extractable), ppm	14716	40168
Electrical Conductivity/Soluble Salts, dS/m	0.811	0.848
pH, SU	7.33	7.64

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

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: David DeJong / Owner

Signature: Jh Mali & ->
Date: 3/3/25

Telephone Number: (254) 918-3156

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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A. Sample collection

1)	Samples were collected for the land managem	ent unit (LMU) identified below.
✓	Yes, complete this form and Tables 1 and 2 be to this soil monitoring report form.	low. Attach a copy of the laboratory analyses
	$^{ m J}$ No, provide the facility information for the LM	MU below with the exception of the tables.
	Reporting Year: 2024	Sample Collection Date: 11/14/2024

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon 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: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	22,252	2,912
Phosphorus (extractable), ppm	166	13.4
Potassium (extractable), ppm	384	276
Sodium (extractable), ppm	61.2	145
Magnesium (extractable), ppm	438	258
Calcium (extractable), ppm	16828	37976
Electrical Conductivity/Soluble Salts, dS/m	1.12	0.75
pH, SU	7.13	7.78

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.

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: David DeJong / Owner

Signature: Jula Malli hr ->
Date: 3/3/25

Telephone Number: (254) 918-3156

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 aud soil analyses requirements, contact:

A. Sample collection

1) Samples were collected for the land	d management unit (LMU) identified below.
Yes, complete this form and Tables	s 1 and 2 below. Attach a copy of the laboratory analyses
to this soil monitoring rep	ort torm.
No, provide the facility information	n for the LMU below with the exception of the tables.
2) Reporting Year: 2024	Sample Collection Date: 11/14/2024

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon Dairy
- 3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 7
- 4) Name of Owner/Operator: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	_	<u>-</u>	<u></u> -
Phosphorus (extractable), ppm			
Potassium (extractable), ppm			
Sodium (extractable), ppm			
Magnesium (extractable), ppm		<u> </u>	
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	17.364	3.855
Phosphorus (extractable), ppm	194	15.3
Potassium (extractable), ppm	326	280
Sodium (extractable), ppm	54.7	203
Magnesium (extractable), ppm	468	285
Calcium (extractable), ppm	16124	38766
Electrical Conductivity/Soluble Salts, dS/m	0.679	0.869
pH, SU	7.23	7.69

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: David DeJong / Owner

Signature: July Mill for-

Date: 2/3/23

Telephone Number: (254) 918-3156

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:

A. Sample collection

1) Samples were collected for the land manager	ment unit (LMU) identified below.
Yes, complete this form and Tables 1 and 2 b to this soil monitoring report form	elow. Attach a copy of the laboratory analyses
No, provide the facility information for the L	MU below with the exception of the tables.
2) Reporting Year: 2024	Sample Collection Date: 11/14/2024

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon Dairy
- 3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 8
- 4) Name of Owner/Operator: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	19.758	3.794
Phosphorus (extractable), ppm	113	13.5
Potassium (extractable), ppm	327	247
Sodium (extractable), ppm	34.8	60.8
Magnesium (extractable), ppm	389	221
Calcium (extractable), ppm	13908	33904
Electrical Conductivity/Soluble Salts, dS/m	0.455	0.409
pH, SU	7.55	7.8

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: David DeJong / Owner

Signature: Jeh Mulh W-5

Date: 3/3/25

Telephone Number: (254) 918-3156

D. How to Submit

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

A. Sample collection

1) Samples were collected for the lan	nd management unit (LMU) identified below.
Yes, complete this form and Table to this soil monitoring rep	es 1 and 2 below. Attach a copy of the laboratory analyses port form,
No, provide the facility information	on for the LMU below with the exception of the tables.
2) Reporting Year: 2024	Sample Collection Date: 11/21/2024

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon Dairy
- 3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 9
- 4) Name of Owner/Operator: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	15.687	1.527
Phosphorus (extractable), ppm	102	6.73
Potassium (extractable), ppm	289	260
Sodium (extractable), ppm	14.9	57.5
Magnesium (extractable), ppm	315	212
Calcium (extractable), ppm	14579	33720
Electrical Conductivity/Soluble Salts, dS/m	0.377	0.343
pH, SU	7.48	7.79

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: David DeJong / Owner

Signature: The Male w-

Date: 3/5/25

Telephone Number: (254) 918-3156

D. How to Submit

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A. Sample collection

1) Samples were collected for the land manage	ement unit (LMU) identified below.
Yes, complete this form and Tables 1 and 2 to this soil monitoring report form	below. Attach a copy of the laboratory analyses n.
No, provide the facility information for the	LMU below with the exception of the tables.
2) Reporting Year: 2024	Sample Collection Date: 11/21/2024

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon Dairy
- 3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 10
- 4) Name of Owner/Operator: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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), ppin			
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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	30.2	16.28
Phosphorus (extractable), ppm	149	12.1
Potassium (extractable), ppm	398	222
Sodium (extractable), ppm	31.1	37.2
Magnesium (extractable), ppm	348	243
Calcium (extractable), ppm	16231	40367
Electrical Conductivity/Soluble Salts, dS/m	0.469	0.395
pH, SU	7.55	7.79

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: David DeJong / Owner

Signature: John Malli for

Date: 3/1/25

Telephone Number: (254) 918-3156

D. How to Submit

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Yes, complete this form and Tables to this soil monitoring repo	1 and 2 below. Attach a copy of the laboratory analyses rt form.
No, provide the facility information	for the LMU below with the exception of the tables.
2) Reporting Year: 2024	Sample Collection Date: 11/21/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 11

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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		<u> </u>	
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	12.123	0.842
Phosphorus (extractable), ppm	40.0	3.90
Potassium (extractable), ppm	325	297
Sodium (extractable), ppm	68.8	159
Magnesium (extractable), ppm	372	220
Calcium (extractable), ppm	23514	36776
Electrical Conductivity/Soluble Salts, dS/m	0.482	0.667
pH, SU	7.68	7.84

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: David DeJong / Owner

Signature: Zuk A

Date: 3/3/25

Telephone Number: (254) 918-3156

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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√	Yes, complete this form and Tables 1 and 2 be to this soil monitoring report form.	low. Attach a copy of the laboratory analyses		
	No, provide the facility information for the LMU below with the exception of the tables.			
	Reporting Year: 2024	Sample Collection Date: 11/13/2024		

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 13

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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			<u>-</u>
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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	13.687	3.014
Phosphorus (extractable), ppm	123	9.35
Potassium (extractable), ppm	327	288
Sodium (extractable), ppm	41,2	71.1
Magnesium (extractable), ppm	382	261
Calcium (extractable), ppm	19399	35100
Electrical Conductivity/Soluble Salts, dS/m	0.464	0.374
pH, SU	7.69	7.91

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: David DeJong / Owner

Signature:

Date: 3/3/25

Telephone Number: (254) 918-3156

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:

A. Sample collection

1)	Samples were collected for the land managem	ent unit (LMU) identified below.
√	Yes, complete this form and Tables 1 and 2 be to this soil monitoring report form.	low. Attach a copy of the laboratory analyses
	No, provide the facility information for the LI	MU below with the exception of the tables.
2)	Reporting Year: 2024	Sample Collection Date: 11/13/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 14

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	18,538	4.811
Phosphorus (extractable), ppm	114	14.9
Potassium (extractable), ppm	286	268
Sodium (extractable), ppm	43.3	73.0
Magnesium (extractable), ppm	388	223
Calcium (extractable), ppm	16808	29438
Electrical Conductivity/Soluble Salts, dS/m	0.43	0.441
pH, SU	7.65	7.92

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: David DeJong / Owner La Blow for -

Signature:

3/3/25 Date:

Telephone Number: (254) 918-3156

D. How to Submit

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A. Sample collection

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✓ Yes, comp to the	plete this form and Tables 1 and 2 b is soil monitoring report form	elow. Attach a copy of the laboratory analyses
No, provi	de the facility information for the I	.MU below with the exception of the tables.
2) Reporting		Sample Collection Date: 11/21/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 15

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	16.354	4.034
Phosphorus (extractable), ppm	70.6	5.16
Potassium (extractable), ppm	340	360
Sodium (extractable), ppm	57.4	78.9
Magnesium (extractable), ppm	364	224
Calcium (extractable), ppm	15899	27076
Electrical Conductivity/Soluble Salts, dS/m	0.343	0.486
pH, SU	7.68	7.85

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: David DeJong / Owner

Signature: Likt for _____

Date: 3/3/25

Telephone Number: (254) 918-3156

D. How to Submit

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

A. Sample collection

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		low. Attach a copy of the laboratory analyses
to this so	il monitoring report form.	·
No, provide th	e facility information for the LM	IU below with the exception of the tables.
2) Reporting Yea	ır: 2024	Sample Collection Date: 11/14/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 16

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	28.268	28.268
Phosphorus (extractable), ppm	91.0	7.82
Potassium (extractable), ppm	361	226
Sodium (extractable), ppm	89.5	96.1
Magnesium (extractable), ppm	406	204
Calcium (extractable), ppm	16066	34351
Electrical Conductivity/Soluble Salts, dS/m	0.599	0.485
pH, SU	7.68	7.87

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: David DeJong / Owner

Signature: Liketo for ______

Date: 3/3/25

Telephone Number: (254) 918-3156

D. How to Submit

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

A. Sample collection

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.
 Reporting Year: 2024 Sample Collection Date: 11/14/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 17

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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			· <u>-</u> - · - · - · · · · · · · · · · · · · ·
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	23.653	21.279
Phosphorus (extractable), ppm	116	4.63
Potassium (extractable), ppm	411	198
Sodium (extractable), ppm	105	111
Magnesium (extractable), ppm	451	202
Calcium (extractable), ppm	16927	36271
Electrical Conductivity/Soluble Salts, dS/m	0.591	0.559
pH, SU	7.9	7.78

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: David DeJong / Owner

Signature: LRA C

Date: 3/3/25

Telephone Number: (254) 918-3156

D. How to Submit

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A. Sample collection

1)	Samples were collected for the land managem	ent unit (LMU) identified below.
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	No, provide the facility information for the LM	IU below with the exception of the tables.
	Reporting Year: 2024	Sample Collection Date: 11/14/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 18

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	30.846	30.09
Phosphorus (extractable), ppm	111	9.69
Potassium (extractable), ppm	483	258
Sodium (extractable), ppm	50.6	66.3
Magnesium (extractable), ppm	386	207
Calcium (extractable), ppm	15031	31133
Electrical Conductivity/Soluble Salts, dS/m	0.55	0.59
pH, SU	7.69	7.83

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: David DeJong / Owner

Signature: A R for

Date: 3/3/25

Telephone Number: (254) 918-3156

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└──INo, provide the facility information for the LMU below with the exception of the tables.

2) Reporting Year: 2024

Sample Collection Date: 11/14/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 20

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	<u> </u>		
Phosphorus (extractable), ppm			
Potassium (extractable), ppm			
Sodium (extractable), ppm			
Magnesium (extractable), ppm		<u> </u>	
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	47.918	12.095
Phosphorus (extractable), ppm	118	12.7
Potassium (extractable), ppm	451	273
Sodium (extractable), ppm	84.7	227
Magnesium (extractable), ppm	416	306
Calcium (extractable), ppm	18265	34005
Electrical Conductivity/Soluble Salts, dS/m	0.621	1.57
pH, SU	7.73	7.75

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: David DeJong / Owner

Signature:

Date: 3/3/25

Telephone Number: (254) 918-3156

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No, provide the facility information for the LN	MU below with the exception of the tables,
Reporting Year: 2024	Sample Collection Date: 11/14/2024
	Yes, complete this form and Tables 1 and 2 be to this soil monitoring report form.

B. Facility Information

- 1) Permit Number: WQ0004842000
- 2) Site Name: Horizon Dairy
- 3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 21
- 4) Name of Owner/Operator: David DeJong
- 5) Mailing Address for Owner/Operator: 4483 East FM 219, 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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	33.211	12.528
Phosphorus (extractable), ppm	31,4	5.95
Potassium (extractable), ppm	243	177
Sodium (extractable), ppm	30.3	39.1
Magnesium (extractable), ppm	251	220
Calcium (extractable), ppm	24451	44769
Electrical Conductivity/Soluble Salts, dS/m	0.307	0.312
pH, SU	7.91	8.01

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 penaltics for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name and Title of Responsible Official or Authorized Agent; David DeJong / Owner

Signature: A A A A A A

Date: 3/3/25

Telephone Number: (254) 918-3156

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No, provide the facility information	n for the LMU below with the exception of the tables.
2) Reporting Year: 2024	Sample Collection Date: 11/14/2024

B. Facility Information

1) Permit Number: WQ0004842000

2) Site Name: Horizon Dairy

3) Name of LMU (LMU Name should correspond to field designation located on the Map included in the PPP): 23

4) Name of Owner/Operator: David DeJong

5) Mailing Address for Owner/Operator: 4483 East FM 219, 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 (NO3-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	o-6 inches soil depth	6-24 inches soil depth
Nitrate-Nitrogen (NO ₃ -N), ppm	27.029	19.769
Phosphorus (extractable), ppm	171	15.2
Potassium (extractable), ppm	382	278
Sodium (extractable), ppm	63.4	198
Magnesium (extractable), ppm	468	354
Calcium (extractable), ppm	18881	33468
Electrical Conductivity/Soluble Salts, dS/m	0.569	0.64
pH, SU	7.79	8

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Print Name and Title of Responsible Official or Authorized Agent: David DeJong / Owner Signature:

Date: 3/3/25

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TEXAS COMMISS ENVIRON QUALITY	IMENTAL					Cust					55831		
Location:	405120	(Do not file	ry icahis shade	d area i	if the fac	ility inform	ation	must b	e confid	lential)	Permit #: 442		
Region:	Organization	#:	PCA Code) :		Program	1.	าน		Sampler telephone number: (254) 552-190	_		
E-Mail (D:			(signature)		Lar	Qn				Sampler: (please print clearly) Valessa Gardner			
Lab ID Number	Sample ID	Date	Time	# of	Grab/ Comp.	Matrix L,S,M,O,T	CL2	рН	Cand	Analyses Requested	REMARKS		
N506	-01	11-21-24	9:47							SURFA	LMUI D-6		
14507	-02		9:47								LMUI 6-2		
14508	-03		9:30								LMUIA O-6		
14509	-04	-	9:30								LMU 1A 6-2		
14510	-05	11-14-24	13 40								LMUZ O-6		
14511	-06	11-14-24	13:40								LMU 2 6-2		
14512	-07	11-14-24	13 20								LMURA D-6		
14513	-08	11-14-24	13:20								LMUDA 6-2		
14514	-09	11 - 14	1030								LM43 0-6		
14515	79		1930								LMU3 6-2		
Relinguished		Date	Time	Receiv	ed by:	Kn 1	2-,	7-2	24	For Laboratory Use:	\wedge		
Relinquished by		Dafe	Time	Recei	d by:	-				Received on ice: Y	N deg. C		
Relinquished by	y:	Date	Time	Receiv	ed by:					Preservatives: Y	N		
Relinquished by	y:	Date	Time	Receiv	ed by:					COC Seal: Y	N		
Shipper name: FLC E CEQ-10065 (11/02		Shipper N White (Orig	18 D	481		7i7	7		7 % –	Seals Intact: Y k-Contract Lab Manager	N/ Solidenrod-Collector Copy		

Report ID: 055831a-45700 Report for Samples analyzed Under Contract Number: 582-10-99518

Print Date: 12-Feb-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: Horizon Dairy Client address: not provided

Standard Sample Report TCEQ COC# 055831

Laboratory ID:	TCEO/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.
14506	55831-01	0-6	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14507	55831-02	6-24	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14508	55831-03	0-6	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14509	55831-04	6-24	11/21/2024	Vanessa Gardner	4	12/17/2024	ទេថា	12/17/2024	12/31/2024	TLP
14510	55831-05	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14511	55831-06	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	lioz	12/17/2024	12/31/2024	TLP
14512	55831-07	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soíl	12/17/2024	12/31/2024	TLP
14513	55831-08	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soit	12/17/2024	12/31/2024	TLP
14514	55831-09	0-6	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14515	55831-10	6-24	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TL P

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

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

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

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 KCI 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.

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

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

Print Date: 12-Feb-25 TCEQ COC# 055831

Standard Sample Report

Laboratory ID: TCEQ/client Mehlich III Mehlich III Mehlich III Mehlich III Mehlich III Mehlich III Mehlich III Mehlich III Mehlich III Mehlich III Mehlich III Mehlich III Sample ID: Picono. P units K conc. K unils Calcone. Ca units Mg cond. Mg units Siconc. S units Na conc. Na units 14506 55831-01 239 2168 15878 926 ppm ppm 147 ppm ppm 324 ppm ppm 14507 55831-02 25.6 921 31431 ppm 531 ppm ppm ppm 233 431 ppm ppm 14508 55831-03 40.5 342 ppm ppm 19518 361 145 98.0 ppm ppm ppm ppm 14509 55831-04 7.78 278 32158 228 ppm ppm 210 ppm ppm ppm 133 ppm 14510 55831-05 126 949 ppm 16100 674 131 ppm ppm ppm ppm 117 ppm 14511 55831-06 8.79 441 36379 ppm 408 229 ppm ppm ppm ppm 256 ppm 14512 55831-07 118 322 ppm 12451 368 101 22.2 ppm ppm ppm ppm ppm 14513 55831-08 10.6 322 29082 ppm 304 ppm ppm ppm 184 73.8 ppm ppm 14514 55831-09 78.4 559 ppm 14584 465 ppm ppm ppm 111 78.0 ppm ppm 14515 55831-10 9.64 312 27793 ppm 264 ppm ppm ppm 187 242 ppm ppm

Laboratory iD:	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich (Mehlich III	Mehlich III	Mehlich III	Mehlich (II	Mehlich III	Mehlich III
	P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	Siconc.	S units	Na conc.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	ppm	<u> </u>	ppm	1_	ppm	1	ppm	1	ppm

Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III
Laboratory 10.				MEURICHTII	MEGICATII
	Sample fD:	Extract Date	Extract Tech	Anal.Date	Anal. Tech
14506	55831-01	1/26/2025	FMR	1/27/2025	JLP
14507	55831-02	1/26/2025	FMR	1/27/2025	JLP
14508	55831-03	1/26/2025	FMR	1/27/2025	JLP
14509	55831-04	1/26/2025	FMR	1/27/2025	JLP
14510	55831-05	1/26/2025	FMR	1/27/2025	JLP
14511	55831-06	1/26/2025	FMR	1/27/2025	JLP
14512	55831-07	1/26/2025	FMR	1/27/2025	JLP
14513	55831-08	1/26/2025	FMR	1/27/2025	JLP
14514	55831-09	1/26/2025	FMR	1/27/2025	JLP
14515	55831-10	1/25/2025	FMR	1/27/2025	JLP

Print Date: 12-Feb-25

Standard Sample Report

TCEQ COC# 055831

	mpro recport		1000	··· 000001			
Laboratory ID:	TCEQ/client	рН	рН	Conductivity	Conductivity	Nitrate-N	Nitrate-N
	Sample ID:		units		units		units
14506	55831-01	8.06	NA NA	0.837	d\$/M	61.626	ppm
14507	55831-02	8.12	NA	0.708	dS/M	34.535	ppm
14508	55831-03	7.74	NA	0.407	dS/M	21.561	ppm
14509	55831-04	7.88	NA	0.453	dS/M	8.912	ррпп
14510	55831-05	7.85	NA	0.545	dS/M	21.097	ррт
14511	55831-06	8.06	NA	0.549	dS/M	4.042	ppm
14512	55831-07	7.56	NA	0.449	dS/M	11.978	mag
14513	55831-08	7.78	NA	0.508	dS/M	4.939	ppm
14514	55831-09	7.66	NA	0.582	dS/M	18.989	mag
14515	55831-10	7.91	NA	0.548	dS/M	3.136	ppm

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

Laboratory ID:	TCEQ/client	pH/Conduct	ivity prep	pH Ana	pH Analysis C		tivity	Nitate-N	Extract	Nitrate-N Analysis	
	Sample ID:	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
14506	55831-01	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14507	55831-02	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14508	55831-03	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14509	55831-04	1/26/2025	TLP	1/27/2025	πLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14510	55831-05	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14511	55831-06	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14512	55831-07	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14513	55831-08	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14514	55831-09	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14515	55831-10	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW

Print Date: 12-Feb-25

Quality Control Report

TCEQ COC# 055831

Laboratory ID:		Mehlich III	Mehlich III	Mehlich III	Mehlich II!	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich [I]	Mehlich III	Mehlich (I)	Mehlich III
		P canc.	P units	K cone,	K units	Calcone.	Ca units	Mg conc.	Mg conc.	Siconc.	S units	Na conc.	Na units
14519	IC1049	54.3	ppm	326	ррт	2599	ррпп	373	ppm	40.2	ppm	49.0	ррпп
14520	IC1050	55.7	ppm	339	ppm	2635	ppm	385	ppm	40.4	ppm	50.1	ppm
	Mean IC	0	ppm	0	ррт	0	рргп	0	ppm	0	ppm	0	ppm
	IC Lower	49.8	ppm	268.0	ppm	2047.0	ppm	318.0	ppm	30.0	ppm	33.0	ррп
	IC Upper	55.7	ppm	375.0	ppm	2701.0	ppm	388.0	ppm	48.0	ppm	49.0	ppm
	blk226	<0.007280	ppm	<0.142	ppm	<2.49	ppm	< 0.341	ppm	< 0.0100	ppm	<0.1000	ppm

Laboratory ID:	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehfich III	Mehlich III					
	P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conc.	Na units
Detection Limit	0.0129	ppm	0,1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	ppm	1	ppm	1	ppm	1	ррт	1	ppm

Laboratory ID:	Mehlich (f)	Mehlich III	Mehlich III	Mehlich III
	Extract Date	Extract Tech	Anal.Date	Anal, Tech
IC1049	1/26/2025	FMR	1/27/2025	JLP
IC1050	1/26/2025	FMR	1/27/2025	JLP
blk226	1/26/2025	FMR	1/27/2025	JLP

Print Date: 12-Feb-25

Quality Control Report

TCEQ COC# 055831

Laboratory ID:		pН	pН	Conducitity	Conducitity	Nitrate-N	Nitrate-N	Nitrate-N
			units	conc.	units	conc.	units	% гесочегу
14519	IC1049	6.2	na	0.135	dS/M	5.548	ppm	
14520	IC1050	6.1	na	0.128	dS/M	5.026	ppm	
	Mean IC	6.13	na	0.1315	dS/M	5.287	ppm	
14520spike	Spiked sample	-	-	_	-	4.0	ppm	80.9
	IC lower	6.010	па	0.113	dS/M	3.7	ppm	
	IC Upper	6.200	na	0.161	dS/M	5.7	ppm	
	blk226	-	па	0	dS/M	0.001	ppm	

Laboratory ID:	pН	pН	Conducitity	Conducitity	Nitrate-N	Nitrate-N	
		units	conc.	units_	conc.	units	
Detection Limit	0.01	па	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		Conduc	tivity	Nitate-N	Extract	Nitrate-N Analysis	
	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
IC1049	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
IC1050	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
blk226	1/28/2025	TĽP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW

TEXAS COMMIS ENVIRON QUALITY	STON ON NMENTAL		Ch	ain	of	Cust	od	y F	Rec	ord	5 5 8	32	
Location:	(Do not fill in this shaded area if the facility information must be confidential)												
Region:	Organization	#:	PCA Code	: :		Program:				Sampler telephone number: (254)567-1900	Permit # 42		
E-Mail ID:			(signature) Airessa Har			\cap				Sampler: (please print clearly)	dner		
Lab ID Number	Sample ID	Date	Time	# of Bottles		Matrix L,S,M,O,T	CL2	pН	Cond	Analyses Requested	REMAR	KS	
14516	-01	Y.3/24	0945	100	5					See RTA	LMU3A	0-6	
14517	-02	13/24	**************************************	رم							LMU3A	6-24	
14518	-03	1/3/24	0945								LMUY	0-6	
14521	-04	Y.3/24	० ९५ 5								LMU4	6-24	
14522	-05	1/13/24	1055								LMUS	0-6	
1523	-06	13/24	1055								LMUS	b-24	
14024	-07	14/24	11 20								LMUL	0-6	
7525	-08	1/11/24) Y				Lmu6	6-20	
14526	-09	11/14/24	11350			B					LMUT	0-6	
Herinquished b	-10	17.4/24	1155	Descri	1						LMUT	6-24	
Relinquished b		Date Date	Time	Receiv Receiv	116	112-	17	24		For Laboratory Use:			
Relinquished b				0						Received on ice: Y	M	deg. C	
Relinquished b				Receive						Preservatives: Y	N		
			Time	Receive	;a by:					COC Seal: Y	N		
Shipper name:	OF EX	Shipper Nu White (Orig	1107	<u> </u>	JUR	602	70		Fol	Seals Intact: Y k-Contract Lab Manager	N Stidenrod-Collector Co		

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

Report ID: 055832a-45700

Print Date:

12-Feb-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: Client address:

Horizon Dairy not provided

Standard Sample Report

TCEQ COC# 055832

Laboratory ID:	TCEQ/client Sample (D	Sample Depth (inches)	Sample Coll. Date:	Collector Name:	TCEQ Region#	Date Received	Sample Type:	Sample opened Date	Sample Ground Date	Process Tech.
14 518	55832-01	0-6	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14517	55832-02	6-24	11/13/2024	Vanessa Gardner	4	12/17/2024	scîl	12/17/2024	12/31/2024	TLP
14518	55832-03	0 -6	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	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 O.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

Print Date: 12-Feb-25 TCEQ COC# 055832

Standard Sample Report

													
Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich I(I	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample ID:	Piconc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg units	S conc.	S units	Na conc.	Na units
14516	55832-01	82.5	ppm	370	ррт	16860	ppm	376	pom	131	DDM	39.9	
14517	55832-02	15.9	ppm	333	ppm	29485	ppm	233	ppm	198	ppm	93.5	ppm ppm
14518	55832-03	133	ppm	431	ppm	16797		423	• • • • • • • • • • • • • • • • • • • •	145	• • •		ppm
			pp	401	ppm	10131	þþm	723	ppm	145	ppm	32.6	bbw

Laboratory (D:	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehtich III	Mehlich III				
Ĺ	P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S cone.	S units	Na cone.	Na units
Detection Limit	0.0129	ррл	0.1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	ррт	1	ррm	1	ppm	1	ppm	1	ppm

Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample ID:	Extract Date	Extract Tech	Anal.Date	Anal. Tech
14516	55832-01	1/26/2025	FMR	1/27/2025	JLP
14517	55832-02	1/26/2025	FMR	1/27/2025	JLP
14518	55832-03	1/26/2025	FMR	1/27/2025	JLP

Print Date: 12-Feb-25

Standard Sample Report

Laboratory ID:	TCEQ/client	рН	pΗ	Conductivity	Conductivity	Nitrate-N	Nitrate-N
	Sample ID:	_	units		units		units
14516	55832-01	7.54	NA	0.594	dS/M	27.942	ppm
14517	55832-02	7.78	NA	0.628	dS/M	12.688	ppm
14518	55832-03	7.43	NA	0.697	dS/M	37.451	ppm

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

Laboratory ID:	TCEQ/client	pH/Conduct	ivity prep	рН Ала	lysis	Conduc	tīvity	Nitate-N	Extract	Nitrate-N A	\nal y sis
	Sample ID	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
14516	55832-01	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14517	55832-02	1/26/2025	TLP	1/27/2025	TŁP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14518	55832-03	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW

Print Date: 12-Feb-25

TCEQ COC# 055832

Quality Control Report

Laboratory ID:		Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehiich III	Mehlich III	Mehlich Itl	Mehlich III
		P cone.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	Sicond.	S units	Na conc.	Na units
14519	IC1049	54.3	ppm	326	ppm	2599	ppm	373	ppm	40.2	pprn	49.0	ppm
1 4520	IC1050	55.7	ppm	339	ppm	2635	ppm	385	ppm	40.4	ppm	50.1	ppm
	Mean IC	0	ppm	0	ppm	٥	ppm	0	ppm	0	ppm	0	ppm
	IC Lower	49.8	ppm	268,0	ppm	2047.0	ppm	318.0	ppm	30.0	ppm	33.0	ppm
	IC Upper	55.7	ppm	375.0	ppm	27 0 1.0	ppm	388.0	ppm	48.0	ppm	49.0	ppm
	b/k226	<0.007280	ppm	<0.142	ppm	<2.49	ppm	< 0.341	ppm	< 0.0100	ppm	< 0.1000	mag

Laboratory ID:	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	P conc.	P units	K conc.	K units	Calcone.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conc.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	11	ppm	1	ppm	1	ppm	1	ppm	1	ppm

Laboratory ID:	Mehlich III	Mehlich ())	Mehlich III	Mehlich III
	Extract Date	Extract Tech	Anal.Date	Anal, Tech
IC1049	1/26/2025	FMR	1/27/2025	JLP
IC1050	1/26/2025	FMR	1/27/2025	JLP
blk226	1/26/2025	FMR	1/27/2025	JLP

Print Date: 12-Feb-25

Quality Control Report

Laboratory iO:		рН	pН	Conductifity	Conducitity	Nitrate-N	Nitrate-N	Nitrate-N
			units	conc.	units	conc.	units	% гесоvегу
14519	IC1049	6.2	na	0.135	dS/M	5.548	ppm	
14520	IC1050	6.1	na	0.128	dS/M	5.026	ppm	
	Mean IC	6.13	na	0.1315	dS/M	5.287	ppm	
14520spike	Spiked sample	-	-	_	-	4.0	ppm	80.9
	IC lower	6.010	na	0.113	dS/M	3.7	ppm	
	IC Upper	6.200	па	0.181	dS/M	5.7	ppm	
	blk226	-	næ	0	dS/M	0.001	ppm	

Laboratory ID:	ρН	рН	Conducitity	Conducitity	Nitrate-N	Nîtrate-N
		units	conc.	units	conc.	unils
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/Conduct	pH/Conductivity prep		pH Analysis		Conductivity		Extract	Nitrate-N Analysis	
	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
IC1049	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
IC1050	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
blk226	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	WL

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

Report ID: 055832b-45700

Print Date:

12-Feb-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:

Horizon Dairy

Client address:

not provided

Standard Sample Report

TCEQ COC# 055832

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.
14521	55832-04	6-24	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14522	55832-05	0-6	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14523	55832-06	6-24	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14524	55832-07	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	πp
14525	55832-08	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	πp
14526	55832-09	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	πp
14527	55832-10	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	πP

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 Dl 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 - SWFTL0079R1SOP/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: 055832b-45700 Standard Sample Report

Print Date: 12-Feb-25

Laboratory 1D:	TCEQ/dient	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample ID:	Р солс.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg units	S conq.	S units	Na conc.	Na units
14521	55832-04	23.7	ppm	361	ppm	26833	ppm	274	ppm	180	ppm	50.2	ррга
14522	55832-05	125	ppm	404	ppm	14716	ppm	432	ppm	141	ppm	58.0	ppm
14523	55832-06	13.0	ppm	296	ppm	40168	ppm	248	ppm	277	ppm	87.4	рріп
14524	55832-07	166	ppm	384	ppm	16828	ppm	438	ppm	181	ppm	61.2	ppm
14525	55832-08	13.4	ppm	276	ppm	37976	ppm	258	ррт	253	ppm	145	рргп
14526	55832-09	194	ppm	326	ppm	16124	ppm	468	ppm	165	ppm	54.7	ppm
14527	55832-10	15.3	ppm	280	ppm	38766	ppm	285	ppm	275	ppm	203	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	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm

Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III
Ĺ	Sample ID:	Extract Date	Extract Tech	Anal.Date	Anal. Tech
14521	55832-04	1/26/2025	FMR	1/27/2025	JLP
14522	55832-05	1/26/2025	FMR	1/27/2025	JLP
14523	55832-06	1/26/2025	FMR	1/27/2025	JLP
14524	55832-07	1/26/2025	FMR	1/27/2025	JLP
14525	55832-08	1/26/2025	FMR	1/27/2025	JLP
14526	55832-09	1/26/2025	FMR	1/27/2025	JLP
14527	55832-10	1/26/2025	FMR	1/27/2025	JLP

Report ID: 055832b-45700 Standard Sample Report

Print Date: 12-Feb-25

TCFO COC# 055832

Statitualu Sa	mbie izeboir		101200	# 00000 <u>2</u>			
Laboratory ID:	TCEQ/dient	pΗ	pΗ	Conductivity	Conductivity	Nitrate-N	Nitrate-N
	Sample ID:		units		units		units
14521	55832-04	7.52	NA	0.736	dS/M	10.688	ppm
14522	55832-05	7,33	NA	0.811	dS/M	14.353	ppm
14523	55832-06	7.64	NA	0.848	dS/M	1.732	рргп
14524	55832-07	7.13	NA	1.12	dS/M	22,252	ppm
14525	55832-08	7.78	NA	0.75	dS/M	2.912	ppm
14526	55832-09	7.23	NA	0.679	dS/M	17.364	ppm
14527	55832-10	7.69	NA	0.869	dS/M	3.855	ppm

Laboratory ID:	pН	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	па	0.001	dS/M	1	ppm

Laboratory ID:	TCEQ/client	pH/Conduct	ivity prep	pH Ans	lysis	Conduc	tivity	Nitate-N I	Extract	Nitrate-N A	nalysis
	Sample ID:	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
14521	55832-04	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14522	55832-05	1/26/2025	πP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	WL
14523	55832-06	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14524	55832-07	1/26/2025	TLP	1/27/2025	π.P	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14525	55832-08	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14526	55832-09	1/26/2025	TLP	1/27/2025	ΉLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14527	55832-10	1/26/2025	TL₽	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	WL

Print Date: 12-Feb-25

Quality Control Report

Laboratory ID:		Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich Iti	Mehlich III	Mehlich III	Mehlich III	Mehlich III
		P conc.	P units	K conc.	Kunits	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conc.	Na units
14539	IC1051	51.4	рргп	321	ррп	2604	ррп	3 6 B	ррпп	37.4	ppm	47.8	ppm
14540	IC1052	54.1	ppm	324	ppm	2647	ppm	376	ppm	38.8	ppm	48.5	ppm
	Mean IC	0	ppm	0	ppm	0	ppm	0	ppm	0	ppm	0	ppm
	IC Lower	49.8	ppm	268.0	ppm	2047.0	ppm	318.0	ppm	30.0	ppm	33.0	ppm
	IC Upper	55.7	ppm	375.0	ppm	2701.0	ppm	388,0	ppm	48.0	ppm	49.0	ppm
	blk226	<0.007280	ppm	<0.142	mqq	<2.49	ppm	< 0.341	рргп	<0.0100	ppm	<0.1000	ppm

Laboratory ID:	Mehlich [1]	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	Sunits	Na conc.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ррт	0,0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	ppm	1	ppm	1	ppm	1	р¢т	1	pþm

Laboratory ID:	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Extract Date	Extract Tech	Anal.Date	Anal. Tech
IC1051	1/26/2025	FMR	1/27/2025	JLP
IC1052	1/26/2025	FMR	1/27/2025	JLP
blk226	1/25/2025	FMR	1/27/2025	JLP

Print Date: 12-Feb-25

Quality Control Report

Laboratory ID:		рН	ρН	Conducitity	Conducitity	Nitrate-N	Nitrate-N	Nitrate-N
			units	conc.	units	conc.	units	% recovery
14539	IC1051	6.1	na	0.143	dS/M	5.622	ppm	-
14540	IC1052	6.2	na	0.14	dS/M	4.893	ppm	
	Mean IC	6.135	na	0.1415	dS/M	5.2575	ррт	
14540spike	Spiked sample	-	-	-	-	4.0	ррпп	80.9
	IC lower	5.010	na	0.113	dS/M	3.7	ррп	
	IC Upper	6.200	na	0.161	dS/M	5.7	ppm	
	b/k226		na	0	dS/M	0.001	ррпп	

Leboratory ID:	pН	pH	Conducitity	Conductity	Nitrate-N	Nitrate-N
	<u> </u>	units	conc.	units	conc.	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/Conduct	ivity prep	рН Апа	ılysis	Conduc	tivity	Nitate-N	Extract	Nitrate-N	Analysis
	Date	Tech	Date	Tech	Date	Tech	Dale	Tech	Date	Tech
IC1051	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
IC1052	1/26/2025	TLP	1/27/2025	ΉL₽	1/27/2025	πp	1/26/2025	FMR	1/27/2025	JW
blk226	1/26/2025	TLP	1/27/2025	π.p	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW

TEXAS COMMIS ENVIROR QUALITY	SION ON NMENTAL		Ch	ain of	Cust	tody	Rec	ord	55833
Location:	Hori 2	On Do	aily in this shade	ed area if the	facility inform	nation mus	st be confid	Jential)	Permit #: 4942
Region:	Organization		PCA Code		Program			Sampler telephone number:	roo
E-Mail ID:			(signature)	V F	r Qu	_		Sampler: (please print clearly)	erdner
Lab ID Number	Sample ID	Date	Time	# of Grat Bottles Com	/ Matrix	CL2 pl	Gond.	Analyses Requested	REMARKS
14457	-01	11-21-24	11:20					SURFA	LMU8 0-6
14458	-02		11:20					1	LMU8 6-24
14461	-03		11:45						LM49 0-6
14462	-04		11:48						LMU9 6-24
14463	-05		10:10						LMU10 0-6
14469	-06		10:10						LMU10 6-2
14465	-07		10:40						LMUII D-6
14466	-08	7	10:40						LMUII 6-24
14467	-09	1/3/24	1215						LMU13 D-6
14468	-10	1/13/2		10	Δ				LMU13 6-24
Relinquished	Yalla.	13/4/24	1200	Received b	X1 12	17-	24	For Laboratory Use:	
Relinquished	by:	Date	Time	Received to	y. (Received on ice: Y	N deg. C
Relinquished	by:	Date	Time	Received to	y:	-		Preservatives: Y	N
Relinquished	by:	Date	Time	Received b	y:			COC Seal: Y	N
Shipper name	ed Ex	Shipper 1	Number: O	468 5	167			Seals Intact: Y	

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

Report ID: 055833a-45700

Print Date:

12-Feb-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: Client address: Horizon Dairy not provided

Standard Sample Report

TCEQ COC# 055833

Laboratory ID:	TCEQ/client Sample (D:	Sample Depth (inches)	Sample Coll, Date:	Collector Name:	TCEQ Region #	Date Received	Sample Type:	Sample opened Date	Sample Ground Date	Process Tech.
14457	55833-01	0-6	11/21/2024	Vanessa Gardner	4	12/17/2024	lios	12/17/2024	12/31/2024	TLP
14458	55833-02	6-24	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	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 oH 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 - SWFTL00B1R2.SOP

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

Print Date: 12-Feb-25

Standard Sample Report TCEQ COC# 055833

	DELIGIO DAM	nie Webour		01.0 <u>2</u> 00011	000000									
[Laboratory ID:	TCEQ/dient	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III
		Sample ID:	Piconc.	P_units	K conc.	K units	Са сопс.	Ca units	Mg conc.	Mg units	S conc.	Sunits	Na conc.	Na units
•	14457	55833-01	113	ррпі	327	ppm	13908	ppm	389	ppm	108	ppm	34.8	ppm
	14458	55833-02	13.5	ppm	247	ppm	33904	ppm	221	ppm	221	ppm	60.8	ppm

Laboratory ID:	Mehlich (f)	Mehfich (II	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehfich III	Mehlich III				
	P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conc.	Na units
Delection Limit	0.0129	ppm	0.1073	pprn	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ррт
Reporting Limit	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm	1	ppm

Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehfich III	Mehlich III
	Sample ID:	Extract Date	Extract Tech	Anal.Date	Anal, Tech
14457	55833-01	1/26/2025	FMR	1/27/2025	JLP
14458	55833-02	1/26/2025	FMR	1/27/2025	JLP

Print Date: 12-Feb-25

Standard Sample Report

Laboratory (D:	TCEQ/dient	ρН	pН	Conductivity	Conductivity	Nitrate-N	Nitrate-N	_
	Sample ID:		units		units		units	
14457	55833-01	7.55	NA	0.455	dS/M	19.758	ррт	_
14458	55833-02	7.8	NA	0.409	dS/M	3.794	ppm	

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

Laboratory ID:	TCEQ/dient	pH/Conduct	tivity prep	pH Ana	lyais	Conduc	živity	Nitate-N	Nitate-N Extract		\nalysis
<u></u>	Sample ID:	Dante	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
14457	55833-01	1/26/2025	TLP	1/27/2025	π.p	1/27/2025	ΊLΡ	1/26/2025	FMR	1/27/2025	JW
14458	55833-02	1/26/2025	TLP	1/27/2025	TL₽	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW

Report ID: 055833a-45700 Ouality Control Report

Print Date: 12-Feb-25

Laboratory ID:		Mehlich III	Mehlich (II)	Mehlich (II	Mehlich III								
		P cone,	P units	K conc.	K units	Ca conc.	Ca units	Mg cone,	Mg conc.	S conc.	S units	Na conc.	Na units
14459	IC1043	54.4	ppm	330	ppm	2626	ррш	376	ppm	39.8	ррт	49.0	ppm
14460	IC1044	53,1	þþm	326	ppm	2744	ppm	376	ppm	39.9	ppm	46.2	ppm
	Mean IC	0	ppm	0	ppm	O	ppm	0	ppm	0	ррт	0	ppm
	IC Lower	49.8	ppm	268.0	ppm	2047.0	ppm	318.0	ppm	30.0	ppm	33.0	ppm
	IC Upper	55.7	ppm	375.0	ppm	2701.0	ppm	388.0	ppm	48.0	ppm	49.0	ppm
	blk225	<0.007280	ppm	<0.142	ppm	<2.49	ррт	< 0.341	ppm	< 0.0100	pþm	<0.1000	ppm ppm

Laboratory ID:	Meblich III P conc.	Mehlich (I) P units	Mehlich III K conc.	Mehlich (I) K units	Mehlich III Ca conc.	Mehlich III Ca units	Mehlich III Mg conc.	Mehlich till Mg conc.	Mehlich III S conc.	Mehlich I/I S units	Mehlich III Na conc.	Mehlich III Na units
Detection Limit	0.0129	ppm	0.1073	ррт	D.1073	ppm	0.0577	ppm	0.0001	ppm	0,1575	ppm
Reporting Limit	1	ррт	1	ррп	1	ppm	1	ppm	1	ppm	1	ppm

Laboratory ID:	Mehlich III	Mehlich III	Mehlich III	Mehlich III
<u> </u>	Extract Date	Extract Tech	Anal,Date	Anal, Tech
IC1043	1/26/2025	FMR	1/27/2025	JLP
IC1044	1/26/2025	FMR	1/27/2025	JLP
blk225	1/26/2025	FMR	1/27/2025	JLP

Print Date: 12-Feb-25

Quality Control Report

Laboratory ID:		pН	pН	Conducitity	Conductity	Nitrate-N	Nitrate-N	Nitrate-N
	_		units	conc.	units	conc.	units	% recovery
14459	IC1043	6.1	na	0.135	dS/M	4.919	ppm	
14460	IC1044	6.1	па	0.145	dS/M	4.912	ppm	
	Mean IC	6.075	па	0.14	dS/M	4.9155	ppm	
14460spike	Spiked sample	-	-	-	-	4.0	ppm	79.5
	IC lower	6.010	na	0.113	dS/M	3.7	ppm	
	fC Upper	6.200	na	0,161	dS/M	5.7	ppm	
	blk225		na	0	dS/M	0.029	роп	

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

Laboratory ID:	pH/Conductivity prep		рН Апа	alysis	Conduc	tivity	Nitate-N	Extract	Nitrate-N Analysis	
	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
IC1043	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	ΊιΡ	1/26/2025	FMR	1/27/2025	JW
IC1044	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
blk225	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	WL

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

Report ID: 055833a-45700

Print Date:

12-Feb-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: Client address: Horizon Dairy not provided

Standard Sample Report

TCEQ COC# 055833

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.
		дери (пилез)			Regiona		1996.			
14461	55833 -03	0-6	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
1 44 62	55833-04	6-24	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14463	55833-05	0-6	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14464	55833-06	6-24	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14465	55833-07	0-6	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14466	55833-08	6-24	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14467	55833-09	0-6	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14468	55833-10	6-24	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP

Methods and Sample Preparation:

Receiving of samples

Processing - SWFTL0097R0.SOP

Upon opening of sample chasts, 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 - SWFTL0015RLSOP

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: 055833a-45700 Standard Sample Report

Print Date: 12-Feb-25

Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	MeNich III	Mehlich III							
	Sample ID:	Piconc.	P units	K conc.	K units	Calcond.	Ca_units	Mg conc.	Mg units	S conc.	S units	Na conc.	Na units
14461	55833-03	102	ppm	289	ppm	14579	ppm	315	ppm	108	ppm	14.9	ppm
14462	55833-04	6.73	ppm	260	ppm	33720	ppm	212	ppm	212	рргп	57.5	ppm
14463	55833-05	149	ppm	398	ppm	16231	ppm	348	ppm	128	ppm	31.1	ppm
1 44 64	55833-06	12.1	ppm	222	ppm	40367	ppm	243	ppm	265	ppm	37.2	ppm
14465	55833-07	40.0	ppm	325	ppm	23514	ppm	372	ppm	167	ppm	68.8	ppm
14466	55833-08	3.90	ppm	297	ppm	36776	ppm	220	ppm	270	ppm	159	ppm
14467	55833-09	123	ppm	327	ppm	19399	ppm	382	ppm	150	ppm	41.2	ppm
14468	55833-10	9.35	ppm	288	ppm	35100	ppm	261	ppm	235	ppm	71.1	ppm

Laboratory ID:	Mehlich (II)	Mehlich III	Mehfich I(I	Mehlich III	Mehlich III	Mehlich III	Mehlich (II	Mehlich III	Mehlich III	Mehlich ill	Mehlich III	Mehlich III
	P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conc.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	ppm	1	ppm	1	ppm	11	ppm	1	ppm

Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample ID.	Extract Date	Extract Tech	Anal.Date	Anal, Tech
14461	55833-03	1/26/2025	FMR	1/27/2025	JLP
14462	55833-04	1/26/2025	FMR	1/27/2025	JLP
14463	55833-05	1/26/2025	FMR	1/27/2025	JLP
14464	55833-06	1/26/2025	FMR	1/27/2025	JLP
14465	55833-07	1/26/2025	FMR	1/27/2025	JLP
14466	55833-08	1/26/2025	FMR	1/27/2025	JLP
14467	55833-09	1/26/2025	FMR	1/27/2025	JLP
14468	55833-10	1/26/2025	FMR	1/27/2025	JLP

Report ID: 055833a-45700 Standard Sample Report Print Date: 12-Feb-25 TCEQ COC# 055833

OIDHGDIA CO	mpic repair		1000	00000			
Laboratory ID:	TCEQ/client Sample ID:	рН	pH units	Conductivity	Conductivity units	Nitrate-N	Nitrate-N units
144 61	55833-03	7.48	NA	0.377	dS/M	15.687	ppm
14462	55833-04	7.79	NA	0.343	dS/M	1.527	ppm
14463	55833-05	7.55	NA	0.469	dS/M	30.2	ppm
14464	55833-06	7.79	NA	0.395	dS/M	16.28	ppm
14455	55833-07	7.68	NA	0.482	dS/M	12,123	ppm
14466	55833-08	7.84	NA	0.667	dS/M	0.842	ppm
14467	55833-09	7.69	NA	0.464	dS/M	13.687	ppm
14468	55833-10	7.91	NA	0.374	dS/M	3.014	ppm

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

Laboratory (D;	TCEQ/dient	pH/Conduct	ivity prep	pH Ana	lysis	Conduc	tivity	Nitate-N I	Extract	Nitrate-N A	Analysis
	Sample ID:	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
14461	55833-03	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14462	55833-04	1/26/2025	ΠLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14453	55833-05	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14464	55833-06	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14465	55833-07	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14466	55833-08	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	WL
14467	55833-09	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	J₩
14468	55833-10	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JV∀

Report ID: 055833a-45700 Quality Control Report

Print Date: 12-Feb-25

Laboratory ID:		Mehlich III	Mehlich IfI	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehtich (II	Mehlich III	Mehlich III	Mehlich III
		Picone.	P units	K conc,	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conc.	Na units
11479	IC1045	51.0	ppm	312	ppm	2308	ppm	331	ppm	38.6	ppm	42.0	ppm
11480	IC1046	49.9	ppm	308	ppm	2149	ppm	325	ppm	37.2	ppm	40.1	ppm
	Mean IC	0	ppm	0	ppm	D	ppm	0	ρ p m	D	ppm	0	ppm
	IC Lower	49.8	ppm	268.0	ppm	2047.0	ppm	318.0	ppm	30.0	ppm	33.0	ppm
	IC Upper	55.7	ppm	375.0	ppm	2701.0	p prn	0.886	ppm	48.0	ppm	49.0	ppm
	blk225	< 0.007280	ppm	<0.142	ppm	<2.49	ррт	< 0.341	ppm	< 0.0100	ppm	< 0.1000	ppm

Laboratory ID:	Mehlich III	Mehtich III	Mehlich /II	Mehlich III								
	P canc.	P units	K conc.	K units	Calcond.	Ca units	Mg conc.	Mg conc.	Siconc.	S units	Na conc.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	ppm	_ 1	ppm	1	ppm	1	ppm	1	ppm

Laboratory ID:	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Extract Date	Extract Tech	Anal.Date	Anal. Tech
IC1045	1/26/2025	FMR	1/27/2025	JLP
IC1046	1/26/2025	FMR	1/27/2025	JLP
blk225	1/26/2025	FMR	1/27/2025	JLP

Print Date; 12-Feb-25

Quality Control Report

Laboratory ID:	<u> </u>	pН	ρН	Conducitity	Conducitity	Nitrate-N	Nitrate-N	Nitrate-N
			units	conc.	units	conc.	units	% recovery
11479	IC1045	6.1	na	0.155	dS/M	5.361	ppm	
11480	IC1046	6.2	na	0.137	dS/M	5.081	ppm	
	Mean (C	6.15	па	0.146	dS/M	5.221	ppm	
11480spike	Spiked sample	-	-	-	-	4.0	ppm	79.5
	IC lower	6.010	па	0.113	dS/M	3.7	ppm	
	IC Upper	6.200	na	0.161	dS/M	5.7	ppm	
	blk225	_	na	0	d\$/M	0.029	ppm	

Laboratory ID:	рΗ	рН	Conducitity	Conductitity	Nitrate-N	Nitrate-N
		units	cone,	unils	сопс.	units
Detection Limit	0.01	na	0.001	dS/M	0.01	ppm
Reporting Limit	0.1	na	0.001	d\$/M	1	ppm

Laboratory ID:	pH/Conductivity prep		pH Analysis		Conduc	ctivity	Nitate-N	Extract	Nitrate-N Analysis	
	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
IC1045	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
IC1046	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
blk225	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW

TEXAS COMMISS ENVIRON QUALITY			Ch	ain	of	Cust	tod	y F	Rec	ord	55834
Location:	ori za	1 Dail	in this shade	ed area i	f the fac	ility inform	nation	must b	ne confid	rential)	Permit #: 4842
Region;	Organization		PCA Code			Progran	n.	10		Sampler telephone number:	COD
E-Mail ID:			(signature)		fail	2-	_			Sampler: (please print clearly) Vanessa Gar	dner
Lab ID Number	Sample ID	Date	Time	# of	Grab/ Comp.	Matrix L,S,M,O,	CL2	рH	Cond.	Analyses Requested	REMARKS
14469	-01		1135							See RFA	LM414 0-6
14470	-02	13/24	1135								LMU14 6-24
14471	-03	17-21-24	12:20								LMUB 0-6
14472	-04	11-21-24	12:20								LMU 15 6-24
14473	-05	11-14-24	10.34								LMU 16 0-6
14474	-06	11-14-24	10:34								MW16 6-30
14475	-07	11-14-24	10:15								LMU17 0-6
14476	-0B	11-14-24	10:18								LMU17 6-24
14477	-09	11-14-24	10:55								LMU 18 0-6
14478	-10	(1-(4-24	10:55		10	1					LMU18 6-24
	Jer Quen	12/14/24	1200	1	D DY	1 Fa	21/	7-2	4	For Laboratory Use:	_
Relinquished b		Date	Time	Recei	ed 6 y:					Received on ice; Y	deg. C
Relinquished b		Date	Time	Receiv	red by:					Preservatives: Y	N
Relinquished t		Date	Time		ved by:					COC Seal: Y	N
Shipper name	FED EX	Shipper N	lumber:	100	51	9				Seals Intact: Y	1N

Yellow-Lab

Pink-Contract Lab Manager

Goldenrod-Collector Copy

TCEQ-10065 (11/02)

White (Original) -Lab

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

Report ID: 055834a-45700 Print Date: 12-Feb-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: Horizon Dairy
Client address: not provided

Standard Sample Report TCEQ COC# 055834

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.
14469	55834-01	0-6	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14470	55834-02	6-24	11/13/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14471	55834-03	0-6	11/21/2024	Vanessa Gardner	4	12/17/2024	lioz	12/17/2024	12/31/2024	TLP
14472	55834-04	6-24	11/21/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14473	55834-05	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soīl	12/17/2024	12/31/2024	TLP
14474	55834-06	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14475	55834-07	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14476	55834-08	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14477	55834-09	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14478	55834-10	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	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

Stalidard Sail	ibie izeboir	'	<u> </u>	000001									
Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample ID:	P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg units	S conc.	S units	Na conc.	Na units
14469	55834-01	114	ppm	286	ppm	16808	ppm	388	фрлп	138	ppm	43.3	ppm
14470	55834-02	14.9	ppm	268	ppm	29438	ppm	223	ppm	210	ppm	73.0	ppm
14471	55834-03	70.6	ppm	340	ррт	15899	ppm	364	ppm	132	ppm	57.4	ppm
14472	55834-04	5.16	ppm	360	ppm	27076	ppm	224	ppm	206	ppm	78.9	ppm
14473	55834-05	91.0	ppm	361	ppm	16066	ppm	406	ppm	137	ppm	89.5	ppm
14474	55834-06	7.82	ppm	226	ppm	34351	ppm	204	ррm	254	ppm	96.1	ppm
14475	55834-07	116	ppm	411	ppm	16927	ppm	451	ppm	151	ppm	105	p pm
14476	55834-08	4.63	ppm	198	ppm	36271	ppm	202	ррт	277	ppm	111	ppm
14477	55834-09	111	ppm	483	ppm	15031	ppm	386	ppm	132	ppm	50.6	ppm
14478	55834-10	9.69	ppm	258	ppm	31133	ppm	207	ppm	236	ppm	66.3	ppm

Laboratory ID:	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehtich III	Mehlich III	Mehlich (II	Mehlich III	Mehlich III
	Piconc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conc.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	mgq	1_	ppm	1_	ppm	1	ppm	1	ppm	1	ррп

Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample ID:	Extract Date	Extract Tech	Anal.Date	Anal. Tech
14469	55834-01	1/26/2025	FMR	1/27/2025	JLP
1 44 70	55834-02	1/26/2025	FMR	1/27/2025	JLP
14471	55834-03	1/26/2025	FMR	1/27/2025	JLP
14472	55834-04	1/26/2025	FMR	1/27/2025	JLP
1 44 73	55834-05	1/26/2025	FMR	1/27/2025	JLP
1 44 74	55834-06	1/28/2025	FMR	1/27/2025	JLP
1 44 75	55834-07	1/26/2025	FMR	1/27/2025	JLP
14476	55834-08	1/26/2025	FMR	1/27/2025	JLP
14477	55834-09	1/26/2025	FMR	1/27/2025	JLP
14478	55834-10	1/26/2025	FMR	1/27/2025	JLP

Print Date: 12-Feb-25

	_		_
Standard	Sample	Report	Τ

Laboratory ID:	TCEQ/client	p∺	pН	Conductivity	Conductivity	Nitrate-N	Nitrate-N
	Sample ID		units		units		units
14469	55834-01	7.65	NA	0.43	dS/M	18.538	ppm
14470	55834-02	7.92	NA	0.441	dS/M	4.811	ppm
14471	55834-03	7.68	NA	0.343	dS/M	16.354	ppm
14472	56834-04	7.85	NA	0.486	dS/M	4.034	ppm
14473	55834-05	7,68	NA	0.599	dS/M	28.268	ppm
14474	55834-06	7.87	NA	0.485	dS/M	12.808	ppm
14475	55834-07	7.9	NA	0.591	dS/M	23.653	ppm
14476	55834-08	7.78	NA	0.559	dS/M	21.279	ppm
14477	55834-09	7.69	NA	0.55	dS/M	30.846	ppm
14478	55834-10	7.83	NΑ	0.59	dS/M	30.09	ppm

Laboratory ID:	pН	pH Conductivi		Conductivity	Nitrate-N	Nitrate-N
		units		units		<u>uni</u> ts
Detection Limit	0.01	na	0.001	d\$/M	0.01	ppm
Reporting Limit	0.1	па	0.001	dS/M	11	ppm

Laboratory ID:	TCEQ/dient	pH/Conducti	ivily prep	pH Ana	lysis	Conduc	tivity	Nitate-N I	Extract	Nitrate-N A	Analysis
	Sample ID	Date	Tech	Date	Tech	Date	Tech	Oate	Tech	Date	Tech
14469	55834-01	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14470	55834-02	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
1 4471	55834-03	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14472	55834-04	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14473	55834-05	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14474	55834-06	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14475	55834-07	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14476	55834-08	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14477	55834-09	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	J₩
14478	55834-10	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW

Report ID: 055834a-45700 Quality Control Report

Print Date: 12-Feb-25

Laboratory ID:		Mehlich III	Mehlich III	Mehlich (II	Mehlich III								
		P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	5 conc.	Siunits	Na conc.	Na units
11479	IC1045	51.0	ppm	312	ppm	2308	ppm	331	ppm	38.6	ppm	42.0	ppm
11480	IC1046	49.9	ppm	308	ppm	2149	ppm	325	ppm	37.2	ррт	40.1	ppm
	Mean IC	0	ppm	0	ppm	0	ppm	0	ррт	0	ppm	0	ppm
	IC Lower	49.8	ppm	268.0	ppm	2047.0	ppm	318.0	ppm	30.0	ррп	33.0	ppm
	IC Upper	55.7	ρpm	375.0	ppm	2701.0	ppm	388.0	ppm	48.0	ppm	49.0	ppm
	bik225	<0.007280	ppm	< 0.142	ppm	<2.49	ppm	< 0.341	ppm	< 0.0100	ppm	<0.1000	ppm

Laboratory ID:	Mehlich III Picono.	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	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	1	ppm	1	ppm	1	ppm	1	ppm	1	ррт	1	ppm

Laboratory ID:	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Extract Date	Extract Tech	Anal.Date	Anal, Tech
IC1045	1/26/2025	FMR	1/27/2025	JŁP
IC1046	1/26/2025	FMR	1/27/2025	JLP
blk225	1/26/2025	FMR	1/27/2025	JLP

Print Date: 12-Feb-25

Quality Control Report

Laboratory ID:		pН	pH units	Conducitity conc.	Conducitity units	Nitrate-N conc.	Nitrate-N units	Nitrate-N % recovery
11479	IC1045	6.1	na	0.155	dS/M	5.361	ppm	70 1000001
							• •	
11480	IC1046	6.2	na	0.137	dS/M	5.081	ppm	
	Mean IC	6.15	na	0.146	dS/M	5.221	ppm	
11480spike	Spiked sample	-	-	-	-	4.0	рргп	79.5
	IC lower	6.010	na	0.113	dS/M	3.7	ppm	
	IC Upper	6.200	na	0.161	dS/M	5.7	ppm	
	blk225		na	0	dS/M	0.029	ppm	

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

Laboratory ID:	pH/Conduct	ivity prep	pH Analysis		Conduc	tivity	Nitate-N	Extract	Nitrate-N	Nitrate-N Analysis	
	Date	Tech	Date:	Date Tech		Tech	Date	Tech	Date	Tech	
IC1045	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TL P	1/26/2025	FMR	1/27/2025	JW	
IC1046	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW	
blk225	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW	

TEXAS COMMS ENVIRO QUALITY	NMENTAL		Ch	ain	of	Cust	od	y F	Reco	ord		558	35												
Location:	forizon		in this shade	d area if	f the fac	ality inform	ation	must i	e confid	ential)		Permit #: 484	/2												
Region:	Organizatio		PCA Code	-		Progran	n:	Uĺ	1	Sampler telephor	e number: 19	OD .													
E-Mail ID:		75. 8	(signature)	_	Jan	Que	_			Sampler: (please	print clearly)	a brardne	5												
Lab ID Number	Sample ID	Date	Time	# of Bottles	Grab/ Cornp.	Matrix L,S,M,O,T	CL2	рН	Cond.		Requested	REMAR	KS												
14528	-01	11-14-24	11:25							See 8	FA	LMUAD	0-6												
14529	-02		11:25	11:25	11:25	11:25	11:25	11:25	11:25	11:25	11:25	11:25	11:25	11:25	11:25									LMU 20	6-24
14520	-03		12:20									LM4 21	0-6												
14531	-04		12:20									LMURI	6-24												
14532	-05		12:40									LMK 23	0-6												
1453	-06	T	12:40							_		LM4 23	6-24												
	-07																								

Reinquished by	Data	Time	Received by 11/1/2	, U = 1 1 1 1 1 1 1			
NW 1cm	12/16	9	11/1/12/12/16	For Laboratory Use:			
Relinquished by:	Date	Time	Received by:	Received on ice:	Υ	N	deg. C
Relinquished by:	Date	Time	Received by:	Preservatives:	Υ	N	
Relinquished by:	Date	Time	Received by:	COC Seal:	Y	N	
Shipper name: Fld	Shippe	708 (7450 2707	Seals Intact:	Υ,	N	
CEQ-10065 (11/02)		Original) -Lal	Yellow-Lab	Pink-Contract Lab Manager		Goldenrod-Co	Hector Copy

-08

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

Report ID: 055835a-45700

Print Date:

12-Feb-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: Client address: Horizon Dairy not provided

Standard Sample Report

TCEQ COC# 055835

Laboratory ID:	TCEQ/client Sample ID	Sample Depth (inches)	Sample Coll. Date:	Collector Name:	TCEO Region #	Date Received	Sample Type:	Sample opened Date	Sample Ground Date	Process Tech.
14528	55835-01	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14529	55835-02	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14530	55835-03	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14531	55835-04	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14532	55835-05	0-6	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	TLP
14533	55835-06	6-24	11/14/2024	Vanessa Gardner	4	12/17/2024	soil	12/17/2024	12/31/2024	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 supment. 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 thring oven and pulverized with an Agrise soil pulzarized 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 ANO 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 DJ 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. KC, Extractable with Cd-Reduction Analyses

NO3-N EXTRACTION - SWFTL0014R5.SOP/NO3-N ANALYSIS - SWFTL0089R1.SOP

Keeney, D.R. and D.W. Nelson. 1962. 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

Print Date: 12-Feb-25 TCEQ COC# 055835

Standard Sample Report

Obdition Objiti	Pic recport		<u> </u>	000000									
Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample ID:	Piconc.	P units	K conc.	K units	Ca conc.	Ca units	Мд сопс.	Mg units	S conc.	S units	Na солс.	Na units
14528	55835-01	118	ppm	451	ррпп	18265	ppm	416	ppm	135	ppm	84.7	ppm
14529	55835-02	12,7	ppm	273	ppm	34005	ppm	306	φрπ	441	ppm	227	ppm
14530	55835-03	31.4	ррпп	243	ppm	24451	ppm	251	ppm	162	ppm	30.3	ppm
14531	55835-04	5.95	ppm	177	ppm	44769	ppm	220	ppm	259	ppm	39.1	ppm
14532	55835-05	171	ppm	382	ppm	18881	ppm	468	рргп	137	ppm	63.4	ppm
14533	55835-06	15.2	øpm	278	mad	33468	mag	354	DDM	232	ppm	198	ppm

Laboratory ID:	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich (II	Mehlich III					
	P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	Siconc.	S units	Na conc.	Na units
Detection Limit	0.0129	ngq	0.1073	ppm	0.1073	ррт	0.0577	ppm	0.0001	ppm	0.1575	ppm
Reporting Limit	11	ppm	1	ppm								

Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample ID:	Extract Date	Extract Tech	Anal.Date	Anal. Tech
14528	55835-01	1/26/2025	FMR	1/27/2025	JLP
14529	55835-02	1/26/2025	FMR	1/27/2025	JLP
14530	55835-03	1/26/2025	FMR	1/27/2025	JLP
14531	55835-04	1/26/2025	FMR	1/27/2025	JLP
14532	55835-05	1/26/2025	FMR	1/27/2025	JLP
14533	55835-06	1/26/2025	FMR	1/27/2025	JLP

Print Date: 12-Feb-25

Standard Sample Report

		_					
Laboratory 1D:	TCEQ/client	pН	pН	Conductivity	Conductivity	Nitrate-N	Nitrate-N
	Sample ID:		units		units	units	
14528	55835-01	7.73	NA	0.621	dS/M	47.918	ppm
14529	55835-02	7.75	NA	1.57	dS/M	12.095	ppm
14530	55835-03	7.91	NA	0.307	dS/M	33.211	ppm
14531	55835-04	8.01	NA	0.312	dS/M	12.528	ppm
14532	55835-05	7.79	NA	0.569	dS/M	27.029	ρpm
14533	55835-06	8	NA	0.64	dS/M	19.769	ppm

Laboratory ID:	рΗ	pН	Conductivity	Conductivity	Nitrate-N	Nitrate-N
		alinu		units		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/Conduct	ivity prep	рН Analysis		Conduc	tivity	Nitate-N I	Extract	Nitrate-N Analysis	
	Sample ID	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
14528	55835-01	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14529	55835-02	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	ŤĿ₽	1/26/2025	FMR	1/27/2025	JW
14530	55835-03	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14531	55835-04	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
14532	55835-05	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	EMR	1/27/2025	JW
14533	55835-06	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW

Print Date: 12-Feb-25

Quality Control Report

Laboratory ID:		Mehlich III	Mehiich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III
		Picono.	P units	K canc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conc.	Na units
14539	IC1051	51.4	ррт	321	ppm	2 604	ppm	368	ppm	37.4	ppm	47.8	ppm
14540	IC1052	54.1	ppm	324	ppm	2647	ppm	376	ppm	38.8	ppm	48.5	ppm
	Mean IC	0	ppm	0	ppm	0	ppm	0	ppm	0	ppm	0	ppm
	IC Lower	49.8	ppm	268.0	ppm	2047.0	ppm	318.0	ppm	30.0	ppm	33.0	ppm
	IC Upper	55.7	ppm	375.0	ppm	2701.0	рргп	388.0	ppm	48.0	ppm	49.0	ppm
	blk226	< 0.007280	ppm	< 0.142	ppm	<2.49	ppm	< 0.341	ppm	< 0.0100	ppm	< 0.1000	ρρπ

Laboratory D:	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Piconc.	P units	К сопс.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conç.	Na units
Detection Limit	0.0129	ppm	0.1073	ppm	0.1073	ppm	0.0577	bbw	0.0001	ppm	0,1575	ppm
Reporting Limit	1	ppm	1_	ppm	1	ppm	1	mąą	1	ppm	1	ppm

Laboratory ID:	Mehlich III	Mehlich III	Mehlich (II	Mehlich III
	Extract Date	Extract Tech	Anai.Date	Anal, Tech
JC1051	1/26/2025	FMR	1/27/2025	JLP
IC1052	1/26/2025	FMR	1/27/2025	JLP
bik226	1/26/2025	FMR	1/27/2025	JLP

Print Date: 12-Feb-25

Quality Control Report

Laboratory ID:		рН	pH units	Conducitity cone.	Conducitity units	Nitrate-N conc.	Nitrate-N units	Nitrate-N % recovery
14539	(C1051	6.1	na	0.143	dS/M	5.622	ppm	
14540	IC1052	6.2	na	0.14	dS/M	4.893	ppm	
	Mean IC	6.135	ла	0.1415	dS/M	5.2575	ppm	
14540spike	Spiked sample	-	-		-	4.0	ppm	80.9
	IC lower	6.010	na	0.113	dS/M	3.7	ppm	
	iC Upper	6.200	na	0.161	dS/M	5.7	ppm	
	blk226		na	0	dS/M	0.001	mag	

Laboratory ID:	pН	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	mqq

Laboratory ID;	pH/Conduct	ivity prep	pH Analysis		Conduc	Conductivity		Extract	Nitrate-N Analysis	
	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
IC1051	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
IC1052	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW
blk226	1/26/2025	TLP	1/27/2025	TLP	1/27/2025	TLP	1/26/2025	FMR	1/27/2025	JW

Phone: 806.677.0093

800.557.7509

Fax: 806.677.0329

Lab No.: 4298	LABC	RATORY A	NALYSIS	REPORT	Repor	t Date: 06	/30/2025	05:03 pm	
Send To: 6224	ENVIRO-AG 3404 AIRWA AMARILLO,		INC			amyMeier			
					ļ	Am Data Revie	y Meier w Coordi	nator	
Results For: Sample ID: Location	HORIZON D SLURRY HAMILTON			Receiver Sampler Invoice No P.O. i	1: 06/18/2 5: 428535	2025	:GE		
					Total	content		l available year*	
			Analysis (dry basis)	Analysis (as rec'd)	lbs per Acre-In	lbs per 1000 gal	lbs per Acre-In	lbs per 1000 gal	
NUTRIENTS									
Nitrogen									
Total Nitrog	•	%	1.27	0.282	2879.7		_		
Organic Nit		%	0.928	0.206	2103.6	18.5			
Ammonium Nitrate+Nitr	i Nitrogen ite Nitrogen	% %	0.3415 <0.0045	0.07582 <0.0010	774.3 0	6.8 <0.1			
Major and Sec	ondary Nutrient	s							
Phosphorus	S .	%	0.252	0.056					
Phosphoru:	s as P2O5	%	0.577	0.128	1307.1	11.5	261	.2 10.4	
Potassium		%	0.833	0.185					
Potassium	as K2O	%	1.00	0.222	2267.0	20.0	503	.3 20.0	
OTHER PROPERT	TES								
Moisture		%		77.8					
Total Solids		%		22.2	226700	1998			
_	nic Matter	%	34.7	7.7	78630	693			
Ash		%		14.5		1305	j		
C:N Ratio		ratio		15.8					
Density		lbs/gal	42.3	9.4					

ENVIRO-AG ENGINEERING, INC.

Enviro-Ag Engineering, Inc. 9855 FM 847, Dublin, TX 76446 Tel. 254-965-3500 Fax 254-965-8000

MANURE CHAIN OF CUSTODY RECORD

Producer/Facility: Horizon Dairy

County: Hamilton

Date Sampled: 6/18/2025

Date Shipped: 6/19/2025

Project Manager: Richard George

Sample Type Sample ID	Number of Containers	Test Package	Proper Preservation	Matrix
Slurry 4298 Slurry	1	EAE TX CO KS SLURRY	Y Dealtas a	SL
	178 II 123 3	911 E 1010	A SERVE	574
THE PARTY NAMED IN COLUMN	27	(Art I	-	
MATERIAL PROPERTY.		(properties and properties and prope	E-I-RM N	0.20
(TES (150)		And the second s		
THE TOWN			F 10 130 1	DISE.
N. Driver	11113	GNA I	1000	3-86
100 St. 198	1 1 1 1		10000	10.00 V
The state of the s	1 1 1 3		A Bunda o	

Relinquished By: Re	ef. Internal COC	Relinquished By:	Lisa Postmus	Relinquished By:	
Company:	EAE	Company:	EAE	Company:	ServiTech Lab
		Date/Time:	1919, 12	000	

Received By:

servitech

6921 S. Bell • Amarillo, TX 79109

www.servitech.com

Phone: 806,677.0093

800,557.7509 Fax: 806.677.0329

Lab No: 4260	LABORATORY ANALYSI	S REPORT	Report Date: 06/30/2025 04:38 pm	
Send To: 6224	ENVIRO-AG ENGINEERING INC 3404 AIRWAY BLVD AMARILLO, TX 79118		Amy Meier Data Review Coordinator	
Client Name: Sample ID: Location	HORIZON DAIRY RCS 2A HAMILTON COUNTY	Received: Sampled: Invoice No: P.O. #:	06/19/2025 06/18/2025 428535 RICHARD GEORGE	
Analysis results lbs/sere in most/				

	Analysis results		lbs/acre-in	meq/L	
NUTRIENTS					
Nitrogen		_			
Total Nitrogen	165	ppm	37	11.8	
Organic Nitrogen	49	ppm	11	3.5	
Ammonium Nitrogen	116.1	ppm	26	8.3	
Nitrate+Nitrite Nitrogen	<0.20	ppm	0	0	
Major and Secondary Nutrients			_		
Phosphorus	30	ppm			
Phosphorus as P2O5	70	ppm	16		
Potassium	350	ppm		9.0	
Potassium as K2O	420	ppm	95		
OTHER PROPERTIES					
Moisture	99.8	%			
Total Solids	0.2	%	453		
Organic Matter	0.1	%	227		
Ash	< 0.10	%			
C:N Ratio	3.5	ratio			

AMARILLO . STEPHENVILLE - ARTESIA Enviro-Ag Engineering, Inc.

Enviro-Ag Engineering, Inc. 9855 FM 847, Dublin, TX 76446 Tel. 254-965-3500 Fax 254-965-8000

WASTEWATER CHAIN OF CUSTODY RECORD

Producer/Facility: Horizon Dairy

County: Hamilton

Date Sampled: 6/18/2025

Date Shipped: 6/19/2025

Project Manager: Richard George

Sample Type Sam	CONTRACTOR OF THE PARTY OF THE	lumber of ontainers	Test Package	Proper Preservation	Matrix
Wastewater A 2 C O RC	S #2A	2	EAE TX CO KS LAGOON	Y	OT
Wastewater 4261 RC	S #2B	2	EAE TX CO KS LAGOON	Υ	OT
Wastewater 4261 RC	CS #3	2	EAE TX CO KS LAGOON	Υ	OT
	2				345
		1			- 1
		1		4	
Lancing Co.		1			

Relinquished By: Ref.	Internal COC	Relinquished By: Lisa Postmus	_Relinquished By:	
Company	EAE	Company: EAE	Company:	ServiTech Lab
		Date/Time:	200	
		Received By: WHI	-	

5.0 RECHARGE FEATURE CERTIFICATION

CERTIFICATION

Locatify 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, P.E.

Enviro-Ag Engineering, Inc.

Firm #F-2507

5.1 General

This recharge feature certification report was authorized by Mr. David DeJong representing 4P Pastures, LLC. 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

4P Pastures, LLC is applying for a major amendment of current TPDES WQ0004842000 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 3,307 acres in Hamilton County, Texas.

5.4 Definition of Waste Production

The sources of process-generated wastewater is wash water from the milking parlor operations and the water generated from the production of biogas. The flow of the process-generated wastewater can be found on Figures 2.1A-B. The freestall barns are vacuumed for manure removal.

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 and into an RCS.

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 averall 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 <u>significant</u> 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

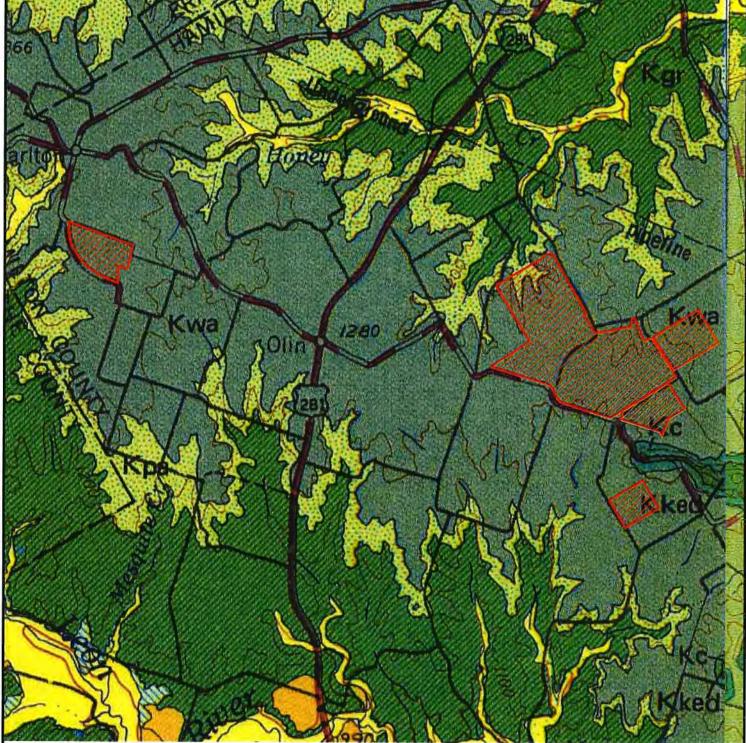
5.6 Geomorphologic/Geologic Features

The clay loam soils in this area of Hamilton County are immediately underlain primarily by the Paluxy and Glen Rose Formations and by recently deposited Alluvium in the area of the North Bosque River, as shown in Figure 5.1, Geologic Atlas. Alluvium 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 breaking 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 Formatian 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 from 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).



Legend:
Denotes Horizon Dairy
KwA — Cretaceous Walnut Formation
KpA — Cretoceous Paluxy Formation

No Scale

 $\underline{Source} :$ Geologic Atlas of Texas, Brownwood Sheet (1976),

Horizon Dairy, LLC Hico, Texas Hamilton County

Geologic Atlas of Texas Figure 5.1 Page 33



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5.6.1 Outcrops/Stream Interception

An inspection of the CAFO property and review of the USGS topographic map of the area shows intermittent streams of Dry Fork are located in LMUs 1A, 2A, 8, 10 and 11. These areas are protected from the application with the required buffers. Intermittent streams for Long Branch are located in LMUs 13, 14 and 15. These areas are protected from land application with the required buffers. Intermittent streams for Indian Creek are located in LMUs Mayhugh 1 and Mayhugh 2. These areas are protected form land application with the required buffers. Intermittent streams for Rocky Creek are located in LMUs Watson 1 and Watson 2. These areas are protected form application with the required buffers. The freshwater ponds located in LMUs 1A, 2A, 3A, 13, 18, 21, Watson 2, Mayhugh 1 and Mayhugh 2 are all protected from land application with the required buffers. The caliche pits located in LMU 20 and Mayhugh 2 are protected from land application with the required buffer. The caliche pit located in LMU 21 sits uphill; therefore, a buffer is not required in this LMU. The caliche pit that was located in LMU 8, the freshwater pond that was located in the northern portion of LMU 23 and the freshwater pond that was located in eastern portion of LMU 20 have been backfilled in with dirt and are no longer there. The grass waterway located in LMU 2 is maintained to meet NRCS specifications as indicated in Special Provision R in the current TPDES permit.

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 (2017). The buffer zones and LMU boundaries in Figures 6.1A1-2, B & C (Refer to Section 6) are submitted with this application for TCEQ approval.

5.6.5 Aquifer

The Trinity aquifer consists of early Cretaceous age formations of the Trinity Group where they occur in a band extending through the central part of the state in all or 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) 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 canfined above by the Walnut Formation in most af the area.

Recharge to the Trinity aquifer is generally as precipitation that falls on aquifer outcrop areas and as seepage from streams and ponds where the head gradient is downward. In the Hill Country, water might flow laterally into the Trinity aquifer from the adjacent Edwards-Trinity aquifer. The aquifer discharges by evapotranspiration, spring 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 complex (BxD), Pidcoke (PkB), Slidell (SsB) and Topsey (ToC) series. The RCSs has 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 Brackett-Maloterre (BxD), Cho (ChB), Brackett-Pidcoke (ByC), Krum (KrB), Nuff (NuC), Oglesby (OgB), Pidcoke (PkB), San Saba (SaB), 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.

Figures 5.2A-C 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)
BtC: Brackett	1-5	D	0-6	Gravelly Clay	0,6-2,0	0.08-0.12
			6-16	Loam	0,6-2,0	0.11-0.16
			16-80		0.06-2.0	
BxD: Brackett		С	0-4	Gravelly Clay	0.6-2.0	0.11-0.16
			4-14	Loam	0.6-2.0	0.08-0.16
		D	14-60	Gravelly Clay Loam	0.06-2.0	
Maloterre			0-5	LOGITI	0.6-2.0	0.11-0.13
			5-80		0.06-0.6	
ByC: Brackett	1-5	С	0-6	Gravelly Clay	0.6-2.0	0.11-0.16
			6-16	Loam	0.6-2.0	0.08-0.16
Pidcoke	1-5	D	16-60		0.06-2.0	
			0-11	Gravelly Clay Loam	0,6-2,0	0.11-0.15
			11-18	LOGITI	0.6-2.0	0.11-0.15
			18-80		0.06-0.6	
CHB: Cha	1-3	D	0-14	Gravelly Clay	0.6-2.0	0.07-0.12
			14-19	Laam	0.06-2,0	
			19-62		0.6-2.0	0.05-0.10
DnB: Denton	1-3	С	0-13	Silty Clay	0.06-0.20	0.10-0.18
DnB: Denton	1		13-19		0.06-0.6	0.10-0.18
			19-36		0.20-2.0	0.10-0.14
KrB: Krum	1-5	С	0-8	Silty Clay	0.06-0.20	0.13-0.20
			8-36		0.06-0.20	0.12-0.18
NuB: Nuff	1-3	С	0-5	Silty Clay	0.06-0.20	0.12-0.18
			5-13		0.06-0.20	0.12-0.18
			13-23		0.06-0.20	0.11-0.16
	1		23-33		0.06-0.20	0.11-0.16
NuC: Nuff	2-6	С	0-5	Silty Clay Loam	0.6-2.0	0.08-0.11
			5-13		0.20-0.6	0.07-0.11
			13-23		0.06-0.20	0.11-0.16
			23-33		0.06-0.20	0.11-0,16
OgB: Oglesby	1-3	D	0-17	Gravelly Silty	0.06-0.20	0.10-0,15
			17-35	Clay	0.06-2.0	

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Major Amendment

PkB: Pidcoke	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
			18-24		0.06-0.6	****
ReB: Real	1-3	D	0-5	Gravelly Clay	0.6-2.0	0.07-0.09
			5-12	Loam	0.6-2.0	0.01-0.06
			12-14		0.20-2.0	
			14-80		0.20-2.0	
SaB: San Saba	1-3	D	0-11	Clay	0.001-0.06	0.10-0.18
			11-30		0.001-0.06	0.10-0.18
SsB: Slidell	1-3	D	0-19	Clay	0.001-0,06	0.10-0.18
			19-32		0.001-0.06	0.10-0.18
ToC: Topsey	1-5	С	0-12	Clay Loam	0.6-2.0	0.12-0.20
			12-18		0.6-2.0	0.10-0.20
			18-32		0.20-2.0	0.10-0.20
ToD: Topsey	5-8	С	0-12	Clay Loam	0.6-2.0	0.12-0.17
			12-32		0.6-2.0	0.12-0.17
WSC: Wise	3-5	С	0-5	Clay Loam	0.6-2.0	0.15-0,20
			5-11		0.6-2.0	0.15-0.24
			11-26		0.6-2.0	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, 1A, 2B, 2C, 3B, 4, 8, 17, Mayhugh 2	Pidcoke (PkB)
2A, 3A, 10,	Brackett-Maloterre (BxD)
3C, 5, 11, 13, 14, 15, 20, 23, Mayhugh 1	Slidell (SsB)
6, 7,	Topsey (ToC)
9, 21	Nuff (NuC)
16, 18	Oglesby (OgB)
Watson 1, Watson 2	Cho (ChB)

Table 5.3: Potential Soil Limitations for Land Application

Soil Series	Potential Soil Limitations	Best Management Practices
BtC: Brackett ByC:	Droughty Depth to Bedrock	- Land application not to exceed agronomic rates and soil infiltration rates (refer to the nutrient management plan)
Brackett-		- Maintain cover crops in LMUs.
Pidcoke ReB: Real BxD:		-Manage irrigation events to maintain soil moisture levels within the range of the available water holding capacity of the LMU.
Brackett-		-No land application to inundated soils.
Maloterre PkB: Pidcoke		-All RCSs have been certified as meeting TCEQ liner requirements.
ChB: Cho ReB: Real	Depth to Cemented Pan Droughty	- Land application not to exceed agronomic rates and soil infiltration rates (refer to the nutrient management plan)
		- Maintain cover crops in LMUs.
		-Manage irrigation events to maintain soil moisture levels within the range of the available water holding capacity of the LMU.
		-No land application to inundated soils.
KrB: Krum NuB: Nuff SaB: San	Slow Water Movement	- Land application not to exceed agronomic rates and soil infiltration rates (refer to the nutrient management plan)
Saba		- Maintain cover crops in LMUs.
SsB; Slidell		-No land application to inundated soils.
DnB: Denton		-All RCSs have been certified as meeting TCEQ liner requirements.
NuC: Nuff	Large Stones on the Surface Slow Water Movement	- Land application not to exceed agronomic rates and soil infiltration rates (refer to the nutrient management plan)
		- Maintain cover crops in LMUs.
		-No land application to inundated soils.
OgB: Oglesby	Droughty Depth to Bedrock Slow Water Movement	 Land application not to exceed agronomic rates and soil infiltration rates (refer to the nutrient management plan) Maintain caver crops in LMUs.

Soil Series	Potential Soil Limitations	Best Management Practices						
		 -Manage irrigation events to maintain soil moisture levels within the range of the available water holding capacity of the LMU. -No land application to inundated soils. 						
ToC: Topsey ToD:	Depth to Soft Bedrock	- Land application not to exceed agronomic rates and soil infiltration rates (refer to the nutrient management plan)						
Topsey		- Maintain cover crops in LMUs.						
WsC: Wise		-Manage irrigation events to maintain soil moisture levels within the range of the available water holding capacity of the LMU.						
		-No land application to inundated soils.						
ToD: Topsey	Slope	- Land application not to exceed agronomic rates and soil infiltration rates (refer to the nutrient management plan)						
		- Maintain cover crops in LMUs.						
		-Manage irrigation events to maintain soil moisture levels within the range of the available water holding capacity of the LMU.						
		-No land application to inundated soils.						

5.7.3 Erosion

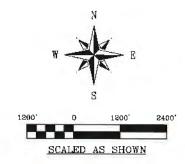
Figures 5.2A1-2, B & C shows the onsite soils classified by NRCS as Highly Erodible Land (HEL), including Cho (ChB), Oglesby (OgB), Pidcoke (PkB), Real (ReB), San Saba (SaB) and Topsey (ToD). LMUs will be protected with typical conservation farming practices within the standards of the NRCS. The following methods will be used to control/prevent erosion of exposed soils in the production area:

- Seeding/sprigging exposed oreas 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.



LEGEND:
Denotes Production Area

For specifics on soils, refer to Table 5.2.



Source: USDA-NRCS Soil Survey, Soil Survey Geographic Database for (Hamilton County, TX). Available at: http://websoilsurvey.nrcs.usda.gov. Accessed May 2025

• Refer to Figures 1.3 & 1.4 for overall facility maps.

Horizon Dairy, LLC Hico, Texas Hamilton County NRCS Soils Map Phase 1 Figure 5.2A Page 40



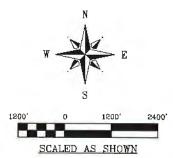
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3404 Airway Blod.
AMARILLO, LEXAS 78118
TEL (806) 353-6123 FAX (809) 352-4132



LEGEND:

Denotes Production Area

For specifics on soils, refer to Table 5.2.



Refer to Figures 1.3 & 1.4 for overall facility maps.

Source: USDA—NRCS Soil Survey, Soil Survey Geographic Database for (Hamilton County, TX). Available at:

http://websoilsurvey.nrcs.usda.gov. Accessed May 2025

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Enviro-Ag Engineering, Inc.

INGINPERING CONSULTANTS

3404 Airway Blvd.

AMARILLO, TEXAS 79118

TEL (806) 353-6123 FAX (806) 253-4152

Horizon Dairy, LLC Hico, Texas Hamilton County NRCS Soils Map - Phase 2 Figure 5.2A Page 41



For specifics on soils, refer to Table 5.2.

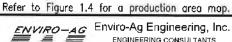


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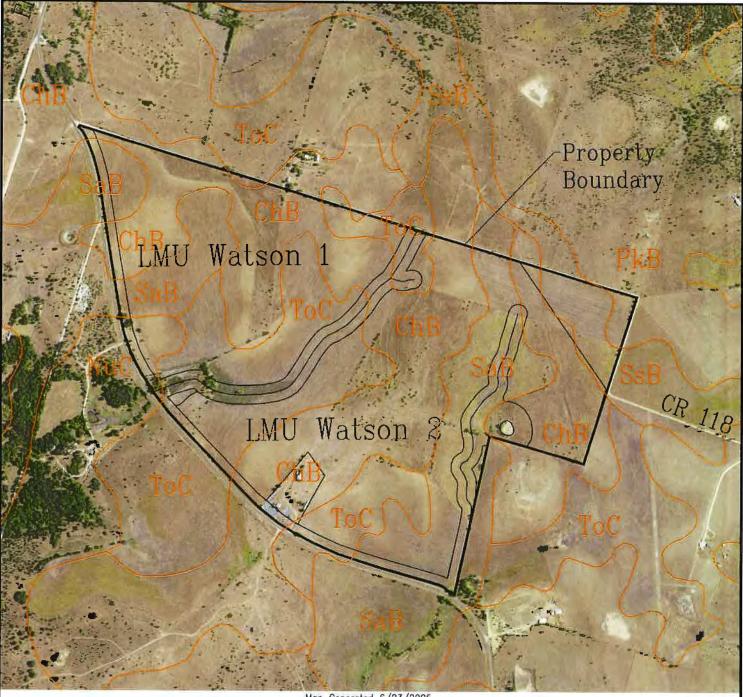
Source: USDA-NRCS Soil Survey, Soil Survey Geographic Database for (Hamilton County, TX). Available at:

http://websoilsurvey.nrcs.usdq.gov. Accessed May 2025

Horizon Dairy, LLC Hico, Texas Hamilton County NRCS Soils Map Figure 5.2B Page 42



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AMARILLO, TEXAS 79118
TEL (806) 353-6123 FAX (806) 353-4132



For specifics on soils, refer to Table 5.2.



SCALED AS SHOWN

Refer to Figure 1.4 for a production area map.

USDA-NRCS Soil Survey, Soil Survey Geographic Database Source:

for (Hamilton County, TX). Available at:

http://websoilsurvey.nrcs.usda.gov. Accessed May 2025

NRCS Soils Map Figure 5.2C

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ARTIFICIAL FEATURES

5.8 Railroad Commission Records

A search of the RRC database files was performed. 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 stock ponds, exist on the subject property and are shown to be buffered on Figures 5.3A1-2, B & C. These areas shall be buffered during land application events or backfilled prior to the first land application event. The location of the burial pit on the property meets the NRCS soil recommendations for large animal mortality burial. The silage storage area to the west of the burial pit will have a berm and the burial pit site is located upgradient from any land application.

5.14 Previous/Current Land Owner

Mr. David DeJong was contacted regarding then presence of any potential recharge features on the property. The DeJong family has owned the subject property for many years and is considered the most knowledgeable about specifics on the property. No previous landowner is available. Mr. DeJong confirmed the locations of the 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 shawn on Figures 5.3A1-2, B & C. 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 Figures 5.3A1-2, B & C, 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 Figures 5.3A1-2, B & C. 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

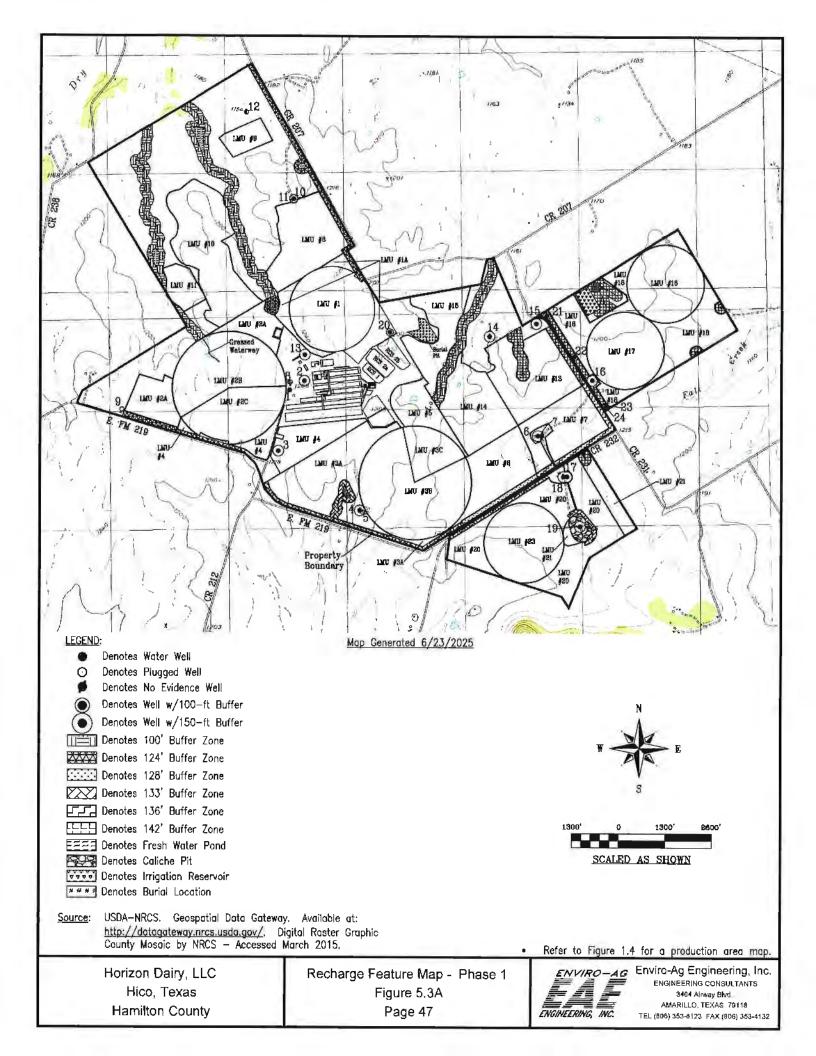
Map No.	Well ID	Best Management Practices
1	-	-See Attached Well Buffer Exception
2		-Maintain 150-ft Buffer
3	51340	- Maintain 150-ft Buffer
4	-	-Maintain 150-ft Buffer
5	52024	-See Attached Plugging Report
6		-Maintain 150-ft Buffer
7	-	-No Evidence of Well; See Attached due diligence letter from Associated Well Services.
8	**	-See Attached Plugging Report
9	52025	-See Attached Plugging Report
10	H	-Maintain 100-ft Buffer
11	51736	-See Attached Plugging Report
12	51735	- See Attached Plugging Report
13	347272	- Maintain 150-ft Buffer
14	-	- Maintain 150-ft Buffer
15	-	- Maintain 150-ft Buffer
16	623130	- Maintain 150-ft Buffer
17	-	- Mointain 150-ft Buffer
18	_	- Maintain 150-ft Buffer

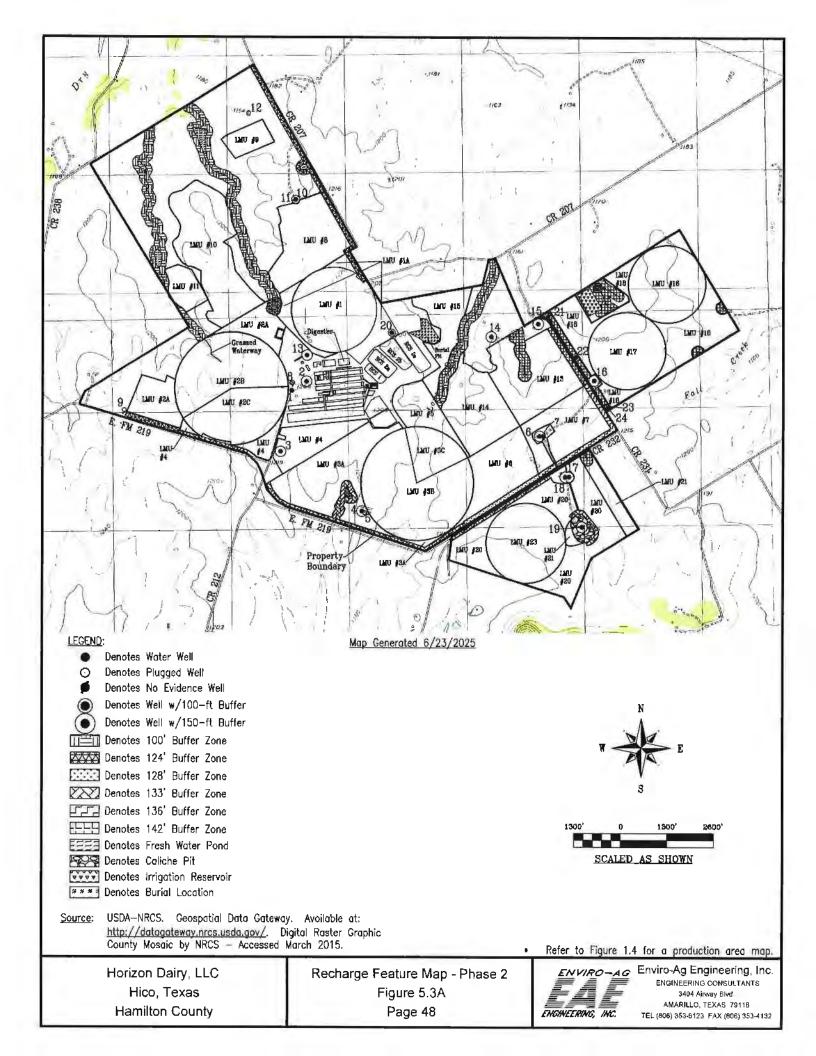
Мар Но.	Well ID	Best Management Practices
19	-	- Maintain 150-ft Buffer
20	608308	- Maintain 100-ft Buffer
21	622277	- Maintain 100-ft Buffer
22	-	- Maintain 100-ft Buffer
23	622766	- Maintain 100-ft Buffer
24	225180	-See Attached Plugging Report
M1	655732	- Maintain 150-ft Buffer
W1	<u> -</u>	- Maintain 150-ft Buffer

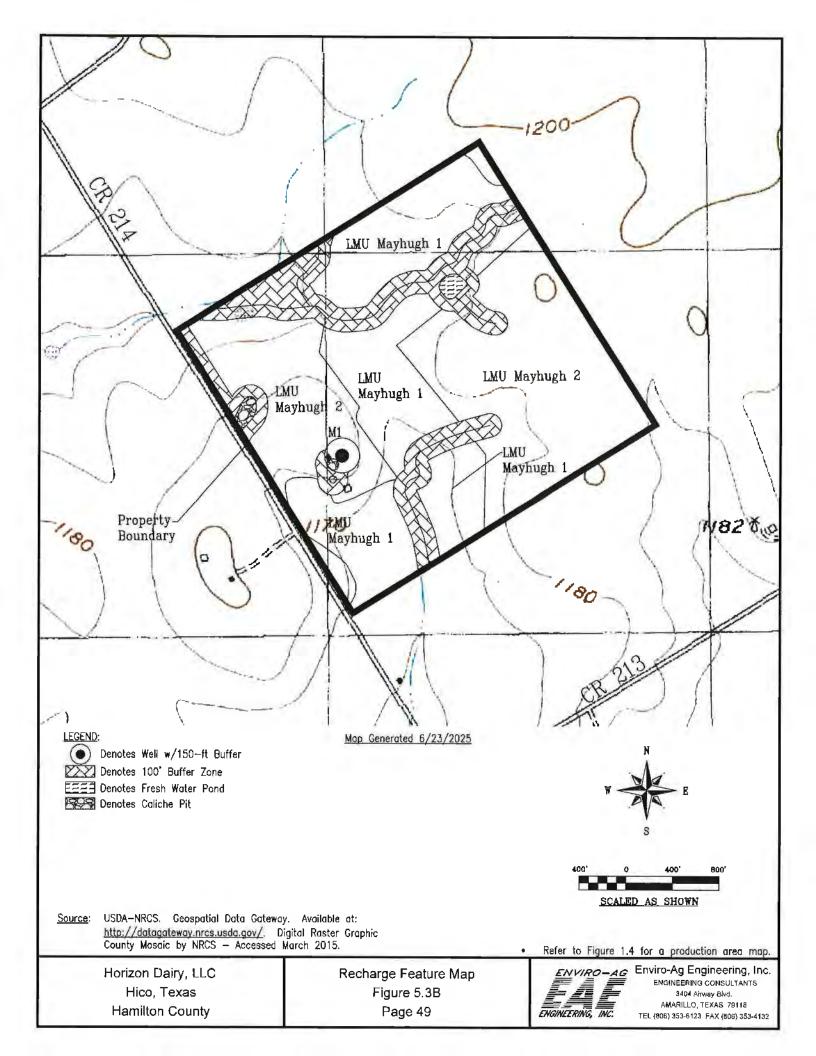
Note: A copy of the well logs for onsite wells are attached.

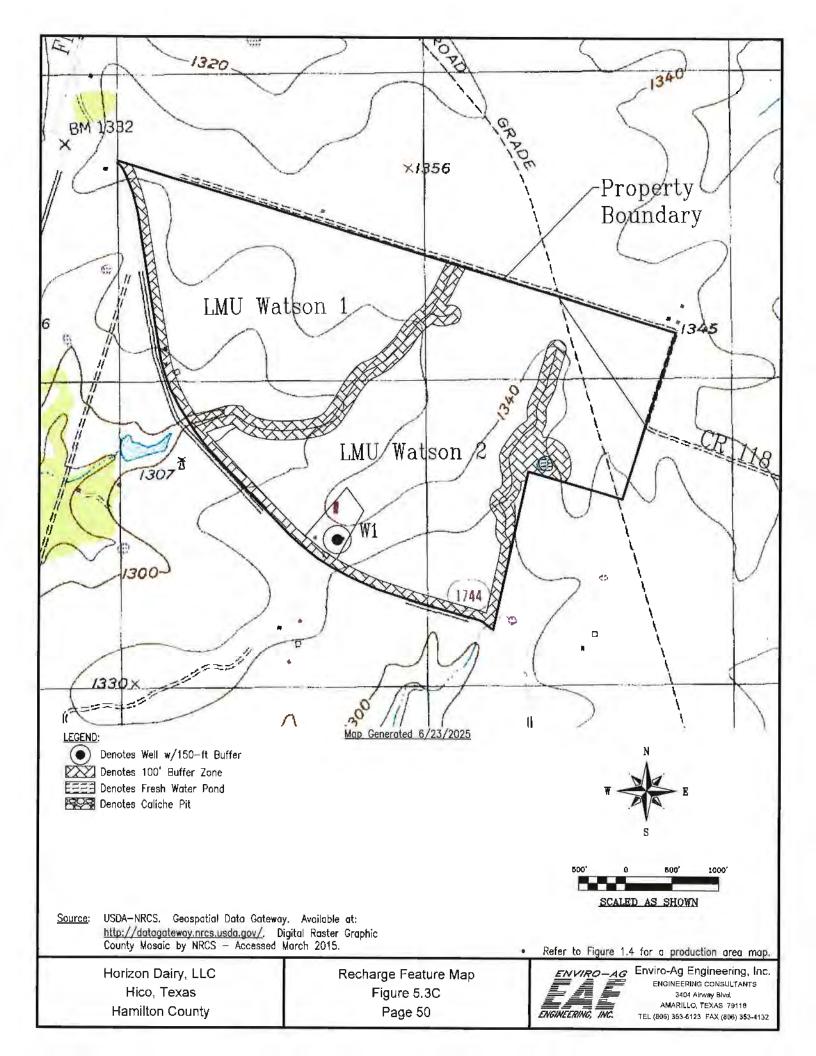
No public water supply wells are located within 500 feet of the property boundary. All offsite wells within the required buffer distances required by this authorization are shown (on the Site Map) with their appropriate buffers. Wells outside the required buffer distances are shown for reference only.

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.









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Supporting Documentation

USDA Soil Descriptions & Limitations
Texas Railroad Commission Map
Water District Well Location Map (if available)
Onsite Well Logs (if available)

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

					Physica	si Soil Propertie:	Hamilton Co	unty, Texas						
Map symbol and soil name	Depth	th Sand	Silt	Clay	Moist bulk	Saturated hydraulic conductivity	Available water capacity	extensibility	Organic matter	Erosion factors			Wind erodibility	
					density					Kw	Kf	Т	group	index
	in	Pct	Pct	Pct	g/cc	micro m/sec	ln/ln	Pct	Pct					
BtC—Brackett gravelly clay loam, 1 to 5 percent slopes														
Brackett	0-6	20-39-45	20-32-49	27-29- 35	1.00-1.50	4.00-14.00	0.08-0.12	1.3-4.7	1.0-3.5	.10	.20	2	5	56
	6-16	20-34- 50	15-40- 67	10-26-35	1.30-1.55	4.00-14.00	0.11-0.16	0.0-4.7	0.1-1.0	.32	.32	1		
	16-80	_	_	_	-	0.42-14.00	_	· 	_					
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	_	_						

					Physica	al Soil Properties	s-Hamilton Co	unty, Texas						
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk	Saturated hydraulic	Available water	Linear extensibility	Organic matter		rosio acto		Wind erodibility	Wind erodibility
					density	conductivity	capacity			Kw	Kf	T	g.onb	index
	In	Pct	Pct	Pct	g/cc	micro m/sec	in/In	Pct	Pct					
ByC—Brackett- Pidcoke gravelly clay loams, 1 to 5 percent slopes	T:													
Brackett	0-6	20-32-45	20-40- 53	27-28- 35	1.25-1.40	4.00-14.00	0.11-0.16	1.5-4.6	1.0-3.0	.15	.24	2	5	56
	6-16	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			
	16-60	-	-		4	0.42-14.00	-	#	_					
Pidcoke	0-11	22-34-44	22-37- 50	28-29- 35	1.28-1.39	4,00-14,00	0.11-0.15	2.5-5.1	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	1.7-4.3	0.5-1.0	.24	.32			
	18-80	-	_	_	_	0.42-4.00	_	-	-					
ChB—Cho gravelly clay loam, 1 to 3 percent slopes														
Cho	0-14	-34-	-37-	20-29- 35	1.30-1.50	4.00-14.00	0.07-0.12	0.0-2.9	1.0-2,0	.10	.24	1	5	56
	14-19	_	_	-	_	0.42-14.00	_	-	-					
	19-62	-38-	-36-	20-26- 35	1.40-1.60	4.00-14.00	0.05-0.10	0.0-2.9	0.1-1.0	.15	,32			
DnB—Denton silly clay, 1 to 3 percent slopes														
Denton	0-13	0- 6- 20	40-44- 60	40-50- 57	1.18-1.32	0.42-1.40	0.10-0.18	6.0-15.0	1.0-4.0	.20	.20	3	4	86
	13-19	0- 7- 20	40-43- 63	35-50- 55	1.28-1.50	0.42-4.00	0.10-0.18	6.0-12.0	1.0-3.0	.24	.24			
	19-36	5-15-30	40-60-75	20-25- 40	1.40-1.65	1.40-14.00	0.10-0.14	0.8-5.4	0.1-1.5	.43	.43	i		
	36-52	5-15-30	40-60-83	12-25- 40	1.40-1.65	1.40-14.00	0.08-0.12	0.1-5.1	0.1-1.0	.49	.49			
	52-80	_	_	_	_	0.42-14.00	_	_				1		

					Physica	al Soil Propertie	s-Hamilton Co	unty, Texas						
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk	Saturated hydraulic	Available water	Linear extensibility	Organic matter	Erosion factors			Wind erodibility	
					density	conductivity	capacity			Kw	Kf	Т	group	index
	In	Pct	Pct	Pct	g/cc	micro m/sec	In/In	Pct	Pct					
KrB—Krum silty clay, cool, 1 to 5 percent slopes														
Krum, cool	8-0	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- 83	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			
NuB—Nuff silty clay, 1 to 3 percent slopes														
Nuff	0-5	3- 8- 13	40-50- 57	40-42- 57	1.25-1.31	0.42-1.40	0.12-0.18	6.1-11.8	2.0-4.0	.24	.24	5	4	86
	5-13	2- 7- 12	40-49- 58	40-44- 58	1.36-1.39	0.42-1.40	0.12-0.18	5.2-11.4	1.5-2.5	.32	.32			
	13-23	1- 6- 11	40-48- 59	40-46- 59	1.41-1.47	0.42-1.40	0.11-0.16	4.7-10.3	0,5-1,0	.32	.32		1	
	23-33	1- 6- 11	40-48- 59	40-46- 59	1.41-1.47	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	1.31-1.44	0.42-1.40	0.12-0.18	5.3-10.2	0.3-0.8	.24	.24			
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	1		
	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			

					Physic	al Soil Properties	-Hamilton Co	ounty, Texas						
Map symbol and soil name	Depth	th Sand	Silit	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility	Wind erodibility
										Kw	Kf	Т	group	index
	In	Pct	Pol	Pct	g/cc	micro m/sec	In/In	Pct	Pct			1		
OgB—Oglesby gravelly silty clay, 1 to 3 percent slopes														
Oglesby	0-17	-7-	-4 8-	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	_	_						
ReB—Real gravelly clay loam, 1 to 3 percent slopes														
Real	0-5	22-35- 44	22-34- 48	28-31- 34	1.04-1.36	4.00-14.00	0.07-0.09	2.5-4.2	2.0-10.0	.10	.15	2	5	56
	5-12	22-36- 44	23-34- 50	22-30- 33	1.08-1,39	4.00-14.00	0.01-0.06	0.4-3.7	1.0-8.0	.05	.24			
	12-14	=	-	-	_	1.40-14.00	-	-	_					
	14-80	_		_	_	1.40-14.00		_						-

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	Wind erodibility
										Kw	Kf	Т	дгопр	index
	in	Pct	Pct	Pct	g/cc	micro m/sec	In/In	Pct	Pct					
SaB—San Saba clay, 1 to 3 percent slopes														
San saba	0-11	5-15-35	20-35- 40	45-50- 60	1.20-1.45	0.01-0.42	0.10-0.18	7.6-14.4	1.0-4.0	.24	.24	2	4	86
	11-30	5-15-35	20-35- 50	45-50-60	1.20-1.45	0.01-0.42	0.10-0.18	7.1-14.4	0.5-3.0	.28	.28			
	30-80	-	_	-		0.42-14.00	1-1	-						
SsB—Slidell clay, 1 to 3 percent slopes														
Slideli	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			

					Physica	al Soil Properties	s-Hamilton Co	ounty, Texas						
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility	Wind erodibility
					density					Kw	Kf	Т	group	index
	In	Pct	Pct	Pct	g/cc	micro m/sec	In/in	Pct	Pct					
ToD—Topsey clay loam, 5 to 8 percent slopes														
Topsey	0-12	21-34- 44	22-37- 51	28-29- 35	1.08-1.38	4.00-14.00	0.12-0.17	2.4-5.5	2.0-8.0	.17	.17	3	4L	86
	12-32	15-34- 44	21-37- 59	20-29- 35	1.26-1.48	4.00-14.00	0.12-0.17	0.0-4.8	1.0-2.0	.28	.28			
	32-80	15-17- 44	26-51- 55	: 30-32- 50	1.68-1.71	1.40-4.00	0.08-0.10	0.1-6.4	0.5-1.0	.37	.37			
V—Water														
Water	_	_	_	_	_	_	_	_	_					
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

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.

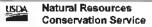
Reference:

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. (http://soils.usda.gov)

Report—Physical Soil Properties

					Physic	al Soil Propertie	s-Hamilton Co	ounty, Texas						
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk	Saturated hydraulic	Available water	Linear extensibility	Organic matter		rosio acto		Wind erodibility	Wind erodibility
					density	conductivity	capacity			Kw	Kf	т	group	index
	In	Pct	Pct	Pct	g/cc	micro m/sec	In/In	Pct	Pct		Ī			
ChB—Cho gravelly clay loam, 1 to 3 percent slopes														
Cho	0-14	-34-	-37-	20-29- 35	1.30-1.50	4.00-14.00	0.07-0.12	0.0-2.9	1.0-2.0	.10	.24	1	5	56
	14-19	-	-	_	_	0.42-14.00	_	-	-					
	19-62	-38-	-36-	20-26- 35	1.40-1.60	4.00-14.00	0.05-0.10	0.0-2.9	0.1-1.0	.15	.32			
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			
PkB—Pidcoke gravelly day loam, 1 to 3 percent slopes														
Pídcoke	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	4	_	_	_	0.42-4.00	_	-	_					

					Physica	al Soil Propertie	s-Hamilton Co	unty, Texas						
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water	Linear extensibility	Organic matter		Erosio lactor	•	Wind erodibility	Wind erodibility
					gensity	Conductivity	capacity			Kw	Kf	Т	group	index
	In	Pct	Pct	Pct	g/cc	micro m/sec	in/in	Pct	Pct					
SaB—San Saba day, 1 to 3 percent slopes														
San saba	0-11	5-15- 35	20-35- 40	45-50-60	1.20-1.45	0.01-0.42	0.10-0.18	7.6-14.4	1.0-4.0	.24	.24	2	4	86
	11-30	5-15- 35	20-35- 50	45-50-60	1.20-1.45	0.01-0.42	0.10-0.18	7.1-14.4	0.5-3.0	.28	.28			
	30-80	-	-	_	_	0.42-14.00	i_	_	_					
SsB—Slidelt 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			-



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.

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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

					Physica	al Soil Properties	s-Hamilton Co	ounty, Texas						
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic	Available water	Linear extensibility	Organic matter	_	rosi facto		Wind erodibility	Wind erodibility
					density	conductivity	capacity			Kw	Kf	Т	group	index
	ln	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	i-	-	-	-	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			

					Physic	al Soil Properties	5-Hamilton Co	ounty, Texas						
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk	Saturated hydraulic	Available water	Linear extensibility	Organic matter	1	rosi acto		Wind erodibility	Wind erodibility
					density	conductivity	capacity			Kw	Kf	1	group	xebnî
	ln	Pct	Pct	Pct	g/cc	micro m/sec	in/In	Pct	Pat					
NuB—Nuff sifty clay, 1 to 3 percent slopes														
Nuff	0-5	3- 8- 13	40-50- 57	40-42- 57	1.25-1.31	0.42-1.40	0.12-0.18	6.1-11.8	2.0-4.0	.24	.24	:5	4	86
	5-13	2- 7- 12	40-49- 58	40-44- 58	1.36-1.39	0.42-1.40	0.12-0.18	5.2-11.4	1.5-2.5	.32	.32			
	13-23	1- 6- 11	40-48- 59	40-46- 59	1.41-1.47	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	1.41-1.47	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	1.31-1.44	0.42-1.40	0.12-0.18	5.3-10.2	0.3-0.8	.24	.24			
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	П		
	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	ř.		
	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	į.		
	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			
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	4		
	18-80					0.42-4.00								

					Physica	al Soil Properties	s-Hamilton Co	шлty, Texas						
Map symbol and soil name	Depth	Şand	Sift	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter		rosio actor		Wind erodibility	Wind erodibility index
					density	Conductivity	Сарасну			Kw	Kf	Т	group	IIIdex
	i 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			

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.

	RusL	E2 Relate	d Attributes–Hamilto	n County	, Texas			
Map symbol and soil name	Pct. of map unit	Slope	Hydrologic group	Kf	T factor	Repres	sentative	value
	map unit	(ft)				% Sand	% Silt	% Clay
BtC—Brackett gravelly clay loam, 1 to 5 percent slopes								
Brackett	81	197	D	.20	2	38.6	32.4	29.0
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
ByC—Brackett-Pidcoke gravelly clay loams, 1 to 5 percent slopes								
Brackett	45	180	D	.24	2	32.0	40.0	28.0
Pidcoke	40	298	D	.24	1	34.0	37.0	29.0
ChB—Cho gravelly clay loam, 1 to 3 percent slopes								
Cho	100	200	D	.24	1	34.0	37.0	29.0
DnB—Denton silty clay, 1 to 3 percent slopes								
Denton	85	298	С	.20	3	6.0	44.0	50.0
KrB—Krum silty clay, cool, 1 to 5 percent slopes								
Krum, cool	85	200	С	.28	5	7.0	48.0	45.0
NuB—Nuff silty clay, 1 to 3 percent slopes								
Nuff	85	200	C	.24	5	8.0	50.0	42.0

	TOOL	result	d Attributes–Hamilto	County	, IGAGS			
Map symbol and soil name	Pct. of map unit	Slope length	Hydrologic group	Kf	T factor	Repre	sentative	value
	map and	(ft)				% Sand	% Silt	% Clay
NuCNuff very stony silty clay loam, 2 to 6 percent slopes								
Nuff	85	180	С	.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
ReB—Real gravelly clay loam, 1 to 3 percent slopes								
Real	80	200	D	.15	2	35.0	34.0	31.0
SaB—San Saba clay, 1 to 3 percent slopes								
San Saba	90	200	D	.24	2	15.0	35.0	50,0
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	С	.15	3	30.0	40.0	30.0
ToD—Topse y clay loam, 5 to 8 percent slopes								
Topsey	80	141	С	.17	3	34,0	37.0	29.0
WsC—Wise clay loam, 3 to 5 percent slopes, moderately eroded								
Wise, moderately eroded	85	151	С	.32	3	29.0	43.0	28.0

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.

	RUSL	E2 Relate	d Attributes-Hamilto	n County	, Texas			
Map symbol and soll name	Pct. of	Slope	Hydrologic group	Kf	T factor	Repre	sentative	value
	map unit	length (ft)				% Sand	% Silt	% Clay
BxD—Brackett-Maloterre complex, 2 to 12 percent slopes								
Brackett	55	161	D	.24	2	32.0	40.0	28.
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	С	.28	5	7,0	48.0	45.6
NuB—Nuff silty clay, 1 to 3 percent slopes								
Nuff	85	200	C	.24	5	8.0	50.0	42.
NuC—Nuff very stony silty clay loam, 2 to 6 percent slopes								
Nuff	85	180	С	.28	5	17.0	49.0	34.0
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	50.6
ToC—Topsey clay loam, 1 to 5 percent slopes								
Topsey	85	200	С	.15	3	30.0	40.0	30,

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.

	RUSL	E2 Relate	d Attributes–Hamilto	n County	, Texas			
Map symbol and soil name	Pct. of	Slope	Hydrologic group	Kf	T factor	Repre	sentative	value
	map unit	length (ft)				% Sand	% Silt	% Clay
ChB—Cho gravelly clay loam, 1 to 3 percent slopes								
Cho	100	200	D	.24	1	34.0	37.0	29.
NuC—Nuff very stony silty clay loam, 2 to 6 percent slopes								
Nuff	85	180	С	.28	5	17.0	49.0	34
PkB—Pidcoke gravelly clay loam, 1 to 3 percent slopes								
Pidcoke	85	200	D	.24	1	34.0	37.0	29.
SaB—San Saba clay, 1 to 3 percent slopes								
San Saba	90	200	D	.24	2	15.0	35.0	50.6
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								0-18
Topsey	85	200	С	.15	3	30.0	40.0	30.0

Data Source Information

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.

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For a description of the particular interpretations and their criteria, use the "Selected Survey Area Interpretation Descriptions" report.

Report—Selected Soil Interpretations

		Selected Soil Inter	pretatio	ns-Hamilton County, Te	exas		
Map symbol and soil name	Pct. of map	AWM - Irrigation Disp Wastewater	osal of	AWM - Land Applica Municipal Sewage S		ENG - Sewage Lag	oons
	unit	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
BtC—Brackett gravelly clay loam, 1 to 5 percent slopes							
Brackett	81	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	Seepage	0,50
		Seepage, porous bedrock	0.50			Slope	0.08
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				

		Selected Soll Inter	pretatio	ns-Hamilton County, Te	EBXES		
Map symbol and soll name	Pct. of	AWM - Irrigation Disp Wastewater	osal of	AWM - Land Applica Municipal Sewage S		ENG - Sewage Lag	oons
	map unit	Rating class and Ilmiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ByC—Brackett- Pidcoke gravelly clay loams, 1 to 5 percent slopes							
Brackett	45	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to soft bedrock	MM206
		Droughty	1.00	Droughty	1:00	Seepage	0.50
		Seepage, porous bedrock	0,50			Slope	0.32
		Too steep for surface application	0.08				
Pidcoke	40	Very limited		Very limited		Very limited	
		Droughty	1.00	Droughly	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				
ChB—Cho gravelly clay loam, 1 to 3 percent slopes							
Cho	100	Very limited		Very limited		Very limited	
	1	Depth to camented pan	1.00	Depth to cemented pan	1.00	Depth to camented pan	1.00
		Droughty	1.00	Droughty	1,00	Seepage	0,50
		Seepage, porous bedrock	0.50				
DnB—Denton silty clay, 1 to 3 percent slopes							
Denton	85	Very limited		Very limited		Somewhat limited	
		Slow water movement	1.00	Slow water movement	器抗00	Seepage	0.50
		Seepage, porous bedrock	0.50			Depth to hard bedrock	0.26
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				

Map symbol and soil name	Pct. of	AWM - Irrigation Disp Wastewater	osal of	AWM - Land Applicat Municipal Sewage S	ion of ludge	ENG - Sewage Lag	oons
	map unit	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
NuB—Nuff silty clay, 1 to 3 percent slopes							
Nuff	85	Very limited		Very limited		Not limited	
		Slow water movement	1.00	Slow water movement	1.00	,	
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 Seepage, porous bedrock	0.68 0.50	Slow water movement	0.68		
ReB—Real gravelly clay loam, 1 to 3 percent slopes							
Real	80	Very limited		Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00	Depth to soft bedrock	1.00
		Droughty	1.00	Droughty	1.00	Depth to cemented pan	1.00
		Depth to bedrook	1.00	Depth to bedrock	1.00	Seepage	0.27
		Seepage, porous bedrock	0.50				

Map symbol and soll name	Pct. of	AWM - Irrigation Disp Wastewater	osal of	AWM - Land Applica Municipal Sewage S		ENG - Sewage Lag	oons
	map unit	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
SaB—San Saba clay, 1 to 3 percent slopes							
San saba	90	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Depth to hard bedrock	1.00
		Droughty	0.46	Droughty	0.46		
		Depth to bedrock	0.46	Depth to bedrock	0.46		
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		
ToD—Topsey clay loam, 5 to 8 percent slopes							
Topsey	80	Somewhat limited		Somewhat limited		Very limited	
		Too steep for surface application	0.92	Slow water movement	0.37	Depth to soft bedrock	1.00
		Slow water movement	0.37	Depth to bedrock	0.29	Slope	1,00
		Depth to bedrock	0.29	Droughty	0.29	Seepage	0.50
		Droughty	0.29	Shallow to densic materials	0.29		
		Too steep for sprinkler application	0.03				
W—Water							
Water	100	Not rated		Not rated		Not rated	

	Selected Soll Interpretation				exas		
Map symbol and soil name	Pct.	AWM - Irrigation Disp Wastewater	osal of	AWM - Land Applica Municipal Sewage S		ENG - Sewage Lag	oons
	map unit	Rating class and Ilmiting features	Value	Rating class and Ilmiting 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

Selected Soil Interpretations

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For a description of the particular interpretations and their criteria, use the "Selected Survey Area Interpretation Descriptions" report.

Report—Selected Soil Interpretations

		Selected Soll Inter	pretatio	ns-Hamilton County, Te	exas			
Map symbol and soil name	Pct. of map	of	AWM - Irrigation Disp Wastewater	osal of	AWM - Land Applicat Municipal Sewage S		ENG - Sewage Lage	oons
	unit	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	1.0	
		Oroughty	1.00	Droughty	1.00	Slope	0.6	
		Seepage, porous bedrock	0.50			Seepage	0.5	
		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	1.0	
		Droughty	1.00	Droughty	1.00	Slope	0,0	
		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	0.0	
		Seepage, porous bedrock	0.30					

				ns–Hamilton County, Te			
Map symbol and soil name	Pct. of	AWM - Irrigation Disp Wastewater					
	map unit	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
NuB—Nuff silty clay, 1 to 3 percent slopes							
Nuff	85	Very limited		Very limited		Not limited	
		Slow water movement	1.00	Slow water movement	1.00		
NuC—Nuff very stony silly 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				
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

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 Soll Inter	pretatio	ns-Hamilton County, Te	exas		
Map symbol and soil name	Pct. of	AWM - Irrigation Disposal o Wastewater		AWM - Land Application of Municipal Sewage Sludge		ENG - Sewage Lagoons	
	map unit	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ChB—Cho gravelly clay loam, 1 to 3 percent slopes							
Cho	100	Very limited		Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00	Depth to cemented pah	1.00
		Droughty	1.00	Droughty	1.00	Seepage	0.50
		Seepage, porous bedrock	0.50				
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				
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				

	Selected Soil Interpretatio				exas			
Map symbol and soil name	Pct. of				AWM - Land Application of Municipal Sewage Sludge		ENG - Sewage Lagoons	
	map unit	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
SaB—San Saba clay, 1 to 3 percent slopes								
San saba	90	Very limited		Very limited		Very limited		
		Slow water movement	1.00	Slow water movement	1.00	Depth to hard bedrock	1.00	
		Droughty	0.46	Droughty	0.46			
		Depth to bedrock	0.46	Depth to bedrock	0.46			
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			

STATE OF TEXAS WELL REPORT for Tracking #51340				
Owner:	DAVID DEJONG	Owner Well #:	No Date	
Address:	RT 4 BOX 32 HICO, TX 76457	Grid #:	41-16-2	
Well Location:	No Data	Latitude:	31" 51" 54" N	
FFOII EdGB@DIII	110 0412	Longitude:	098" 02" 44" W	
Well County:	Hamilton	Elevation:	No Date	
Type of Work:	New Well	Proposed Use:	Irrigation	

Drilling Start Date: 11/10/2004 Drilling End Date: 11/12/2004

Tap Depm (1) Diameter (in.) Hottom Depth (ft.) Borehole: 11 625 Orlling Method:

Air Rotury

Borehole Completion: Filler Packed

Top Dopth (1) Brittoni Deptii (ff.) Citier Mahiele Filler Pack Intervals: 540 825 Gravel top Depth (#) Bollom Cepin (H.) Anoular Scal Date: 35 31 510 530 3

Seel Melhod: CONVENTIONAL Soaled By: COMPANY

Distance to Property Line (N.): No Data Distance to Septic Field or other concentrated contamination (it.); No Data

Distance to Septle Tank (ft.): No Data

Method of Verification: No Data

Surface Complision: Alternative Procedure Used

540 ft, bolow land surface on 2004-11-12 Measurement Method: Unknown

No Date Type of Pump.

Well Tests: Estimated Yield 120 GPM with 5 ft. drawdown after 25 hours

6/0/2023 FF:48:36 AM

Well Report Tracking Number 51340 Submitted on: 1/11/2005

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Tillo 12, Chapter 1901 251, authorizes the owner (owner or the person for whom the well was defined) to keep information in Yell Reports confidential. The Department shell hold the contents of the well log confidential and not at marker of public recopord (if it rectives, by corflider that it, a writer 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 76711 (512) 534-5540

Santa Dispose (ft) Waler Type Water Quality: Но Олга No Data Chemical Analysis Made: Did the driller knowingly penetrate any strate which contained injurious constituents?: No The driller cortilled that the driller drilled this woll (or the well was drilled under the driller's direct supervision) and that each and all of the statements hardin are true and correct. The drifter understood that fallure to complete the required items will result in the report(a) being returned for completation and resubmittal. Certification Data;

Company information: BENNETT WATER WELL DRILLING, INC.

7900 W. HWY 317 TOLAR, TX 76476

JEFF BENNETT License Number: 4805 Driffer Name:

No Data Comments:

Lithology; OESCRIPTION & COLOR OF FORMATION MATERIAL

Casing: BLANK PIPF & WELL SCREEN DATA

Top (ft.) Bollum (ft.) 10 CLAY 10 21 LIME 21 40 SHALE 40 91 LIME 81 120 **BHALE** 120 190 LIME 190 260 SHALE 260 360 LIME SHALE 300 390 380 520 LIME 520 530 SAND 530 CLAY 540 565 **BAND TAN** 585 CLAY RED 525

8-979 NEW STEEL 0 - 626 8-5/8 NEW SCREEN 565 - 625

Om. (in) Now/Linux Type Sollow Francis (R.)

6/8/2023 11/48/35 AM

Wall Report Fracking Number 51340 Submitted on: 1/11/2005

Owner:

Horizon Dairy

Owner Well #:

No Data

Address:

4483 E FM 219 Hico, TX 76457 Grid #:

41-16-3

Well Location:

Latitude:

31° 51' 37" N

4483 E FM 219 Hico, TX 76457

Longitude:

098° 02' 14" W

Well County:

Hamilton

Elevation:

No Data

Well Type:

Withdrawal of Water

Drilling Information

Company: No Data

Date Drilled:

No Data

Driller:

No Data

License Number:

No Data

Borehole:

Diameter (in.) 4

Top Depth (ft.)

Bottom Depth (ft.)

500

Plugging Information

Date Plugged: 12/8/2008

Plugger: Joel Sanders/Assoc. Well Ser.

Plug Method:

Tremmie pipe bentonite from bottom to 2 feet from surface, cement top 2 feet

Casing Left in Well:

Plug(s) Placed in Well:

Dla (in.)	Top (ft.)	Bottom (ft.)
4	0	500

Top (ft.)	Bottom (ft.)	Description (number of sacks & material)
0	30	3
30	500	10

Certification Data:

The driller certified that the driller plugged this well (or the well was plugged 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 reports(s) being returned for completion and resubmittal.

Company Information:

Associated Well Services Inc.

PO Box 16

Stephenville, TX 76401

Driller Name:

Joel Sanders

License Number:

58216

Comments:

Jan 12 09 04:52p Colton Aardal 254-965-6969 p.1



To whom it may concern,

Associated Well Services, Inc. has plugged 4 wells at Horizon Dairy in December of 08' and we attempted to plug a 5th well that we were unable to locate. We went out to the location with a medal detector and scraped the surface of the ground around were the well should have been. Also, we called Dalton Drilling out of Hamilton to inquire about the wells since they drilled the replacement well a long time ago. He stated they moved over a few feet and drilled a new well, but he couldn't remember if it was open, closed or plugged. The location of the existing well in question is: N 31 51 56.11 W 98 01 15.94

Pardal 1/12/09

Sincerely,

Gary Aardal, Secretary

Water Weil Drilling & Pumps
Sales * Service * Installation * Repair
PO Box 16 -- 950 E. South Loop - Stephenville, TX 76401
866-965-5924 Phone 254-965-6969 Fax
www.nssociatedwellservices.com

Texas Department of License and Regulation

Water Well Drillor/Pump Installar Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616

This form must be completed and filed with the department within 30 days following the plugging of the well.

Email address: water.well@license.state.tx.us PLUGGING REPORT WEEL DENTIFICATION AND LOCATION DADAPA 7.0 EAST FM219 Hico 4483 Tey 3) Owner's Well No. Water De-Watering NT 4) Type of Well Injection Drill, Pump Installer, or Landowner performing the plugging operations must locate and identify the location of the well within a specific grid on in full scale gridded map available from Tuxas 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 HISTORICAL DATA ON WEDLITO BEBLUGSED HEAVIER 6) Driller License No. 7) Drilled 9) Total depth of well 8) Diameter of hole C OURRENT PLUGGIN 11) REMOVE ALL REMOVEABLE CASING 10) Date well plugged Please check box beside the method of plugging used 12) Name of Driller/Pump Installer or Well Owner performing the plugging DWNOK Tremmie pipe cement from bottom to top. icense No. I3) Casing and crimenting date was allow to the purifying the core nations Tremmie pipe bentonite from bottom to 2 feet from A CASING DISTRIBUTED AND A From surface, cement top 2 feet. Pour in 3/8 bentonite chips when standing water in 0 well is less than 100 feet depth, cement top 2 feet. Large diameter well filled with clay material from top to bottom. CEMENT/BENTONEE/BLUC(S) PEACUS IN WELL TROM (feet 0 36 D. VALIDATION OF INFORMATION INCLUDED INFORM 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 I through 13 will result in the report(s) being returned for completion and resubmitted. Company or individual's Name (type or print) Zip 76457 State (Suproduce) Ditte Licensed Diller Primp in

Owner:

Horizon Dairy

Owner Well #: No Data

Address:

4483 E FM 219

Grid #:

41-16-2

Hico, TX 76457

Latitude:

31° 52' 07" N

Well Location.

4483 E FM 219 Hico, TX 76457

Longitude:

098° 03' 31" W

Well County:

Hamilton

Elevation:

No Data

Well Type:

Withdrawal of Water

Drilling Information

Company: No Data

Date Drilled:

No Data

Driller:

No Data

License Number:

No Data

Borehole:

Diameter (in.)

Top Depth (ft.)

Bottom Depth (ft.)

4

200

Plugging Information

Date Plugged:

12/8/2008

Plugger: Joel Sanders/Assoc. Well Ser.

Plug Method:

Tremmie pipe bentonite from bottom to 2 feet from surface, cement top 2 feet

Casing Left in Well:

Plug(s) Placed in Well:

Dla (in.)	Top (ft.)	Bottom (ft.)
4	3	200

	Top (ft.)	Bottom (ft.)	Description (number of sacks & materia
	0	2	1
	2	200	3
J.			

Certification Data:

The driller certified that the driller plugged this well (or the well was plugged 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 reports(s) being returned for completion and resubmittal.

Company Information:

Associated Well Services Inc.

PO Box 16

Stephenville, TX 76401

Driller Name:

Joel Sanders

License Number: 58216

Comments:

Owner:

Horizon Dairy

Owner Well #: No Data

Address:

4483 E FM 219

Hico, TX 76457

4483 E FM 219

Hico, TX 76457

Latitude:

Grid #:

31° 53' 03" N

Longitude:

098° 02' 34" W

Well County:

Well Location:

Hamilton

Elevation:

No Data

41-08-8

Well Type:

Withdrawal of Water

Drilling Information

Company: No Data

Date Drilled:

No Data

Driller:

No Data

License Number:

No Data

Borehole:

Diameter (in.) 4

Top Depth (fl.)

Bottom Depth (ft.)

500

Plugging Information

Date Plugged:

12/8/2008

Plugger: Joel Sanders

Plug Method:

Tremmie pipe bentonite from bottom to 2 feet from surface, cement top 2 feet

Casing Left in Well:

Plug(s) Placed in Well:

Dla (in.)	Top (ft.)	Bottom (fl.)
4	2	500

Top (ft.)	Bottom (ft.)	Description (number of sacks & material)
0	20	2
20	500	10

Certification Data:

The driller certified that the driller plugged this well (or the well was plugged 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 reports(s) being returned for completion and resubmittal.

Company Information:

Associated Services

PO Box 16

Stephenville, TX 76401

Driller Name:

Joel Sanders

License Number:

58216

Comments:

Owner:

Horizon Dairy

Owner Well #: No Data

Address:

4483 E FM 219

Grid #:

41-08-8

Well Location:

Hico, TX 76457

Latitude:

31° 53' 28" N

4483 E FM 219 Hico, TX 76457

Longitude:

098° 02' 48" W

Well County:

Hamilton

Elevation:

No Data

Well Type:

Withdrawal of Water

Drilling Information

Company: No Data

Date Drilled:

No Data

Driller:

No Data

License Number:

No Data

Borehole:

Diameter (in.)

Top Depth (fl.)

Bottom Depth (ft.)

100

Plugging Information

Date Plugged: 12/9/2008

Plugger: Joel Sanders

Plug Method:

Tremmie pipe bentonite from bottom to 2 feet from surface, cement top 2 feet

Casing Left in Well:

Plug(s) Placed in Well:

Dla (in.)	Top (ft.)	Bottom (ft.)
4	2	100

Top (ft.)	Bottom (fl.)	Description (number of sacks & materia	
0	4	1 Cement	
4	100	2	

Certification Data:

The driller certified that the driller plugged this well (or the well was plugged 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 reports(s) being returned for completion and resubmittal.

Company Information:

Associated Services

PO Box 16

Stephenville, TX 76401

Driller Name:

Joel Sanders

License Number: 58216

Comments:

Dograph or ;	Horizon Dairy	Owner Well fit:	Well Log 3003
Address:	4483 East FM 219 Hico, TX 76457	Grid #	41-16-2
Well Location:	4463 E FM 219	Latitude	31" 52" 20" N
	Hico, TX 76457	Longitude:	086° 02' 30" W
Wall County:	Hamilton	Elevation:	No Date

Orllling Start Date: 9/9/2013 Drilling End Daje: 9/12/2013

Dismeter (in) Top Dopth (II) Bolfows Depth (ff.) Borehola: 14 0 5 12.25 620

Drilling Molhad: Mud (Hydraulic) Rolary

Borehole Completion: Filter Packed

Top Depth (R.) Bollow Depth (R.) Filter Malerial Filter Pack Intervals: 400 620 Gravel 12/20 Top Depth (if) Bottom Depth (II.) Charmyrifind (Himman of sents & malumi) Annular Seal Data ď 400 115 priland emt

Saal Method: Pumped Sealed By: Beald Energy Distance to Property Line (ft.): 100+

Distance to Septic Field or other concentrated contamination (it.), 150+

Distance to Septic Tank (ff.): No Date

Melhod of Verification: Customer Verified

Surface Completion: Surface Stab Installed Water Level: 460 ft. below land surface on 2013-09-12 Measurement Method: Unknown Packers: Type of Pump: Submeralble Pump Depth (it): 588 Yield: 160 GPM after 1 hours, no drawdown specified

6407022 11 45 24 AM

Wolf Report Tracking Number 347272 Submitted on: 11/21/2013

Paga 1 of 3

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 artificially to keep information in Well Reports confidential. The Department shall hold the contents of the well tog confidential and not a matter of public record if it receives, by curfified mail, is 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 76711 (512) 334-540

Strate Cepth M. Window Zypyth Water Quality: 342,599 Trinity Chemical Analysis Made: No. Did the driller knowingly penetrate any strata which contained injurious constituents?: 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 corned. The driller undesshort Athal fallers to complete the required items will result in the report(s) being returned for completion and resubmittal Certification Data:

Company Information: Associated Wall Services Inc-Russell Langford

PO Box 16 Stephenville, TX 76481

Driller Name Russell Langford

Lidense Number, 55062

5,625 Naw 0,020" Pipe Base 55 Screen 40 600 020

the (iii) New Used Type Enting From To (0.)

8.825 New Blank Steel 9 40 250

5.625 Now Blank Steel 600 620 .250

Comments ^LA

Lithology:; DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing: BLANK PIPE & WFLU SCREEN DATA

Bottom (ff.) Daycolption 7ap (8.) Topsoll 0 1 18 tan clay and shale groy clay, shale and limesione 18 101 grey sandy clay with streaks of sand and sandstone 101 148 groy clay, shale and ilmestone 148 330 grey and blue sandy clay with streaks of sand 330 342 sand with stronks of bise sandy clay 342 445 485 sand and gravel 485 red and blue clay blue sendy clay, send and 490 495 405 510 red and blue clay blue sandy clay, sand and 510 525 gravel 625 550 red clay blue sandy clay, sand and gravel

599 599 yellow clay and shale A/B/2023 11:45:24 AM

550

Well Report Tracking Number 347272 Submitted on: 11/21/2013

Owner:	Horizon Dairy	Owner Well #;	2
ddress:	4483 E FM 219 HICO, TX 76457	Grid #:	41-16-3
Vell Location:	CR 207	Latitude:	31° 52' 11.97" N
erai Lucasan,	HICO, TX 76457	Longitude;	098" 01' 00,13" W
Vall County:	Hamilton	Elevation:	No Dala
all County:	Hamilton	Elevation:	No Dala
e af Work:	New Wall	Proposud Uso:	Domestic

Drilling Start Oato: 10/7/2022 Drilling End Oate: 10/12/2022

	Eliameter (in)	Top Depin tha	Bullam Dopilly (ff.)
Borehole:	18	0	5
	13.5	5	625

Drilling Melhod: Air Rotary

Rorehoje Completion; Filter Packed

	Top Depth (ft.)	finifican Dopan (7)	Foliar Melaydd	Size
Fetor Pack Intervals	375	625	Sand	12/20
	Top Depth (ff.)	Bolloni Depth (ft.)	Desempton (number n	fancks & makeriol)
Annular Seal Dala:	0	375	Coment 157 E	Jaga/Sacks

Seal Method: Pumpad

Distance to Property Line (ft.): 10+

Sealed By: Driller

Distance to Septic Field or other concontrated contemination (II.) 150+ Distance to Septic Tank (it); 60+

Method of Verification, Customer

Surface Completion: Size Cased Surface Completion by Driller

Water Level: 483 ft. below land surface on 2022-10-12

Packers: No Data

Type of Pump: Submeralble Punip Depth (R.): 588

Well Tests:

Yield, 70 GPM with Unknown II. drawdown after 1 hours

Well Report Tracking Number 523130 Submitted on: 1 V //2022

Page 1 of 3

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY TEX OCC CODE Title 12, Chapter 1801.251, author/res the owner (owner or the person for whom the well was difficilled to keep information in Wolf Reports confidential. The Department shall had the contents of the well log confidential and not a matter of public record if it receives, by certified melt, 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) \$34-5540

Strong Dopth (#) Wellet Type Water Quality: 304 + 610 2nd Trinity

Chemical Analysis Made: No.

7ура

Did the driller knowingly penetrate any atrata which contained injurious constituents?:

This diffies corbline that the driffer driffed this well (or the well was triffed under the driffer's direct supervision) and that each and of of the statements become are forced. The driffer understood half align to complete the required items will result in the report(s) being returned for completion and resultantial. Company Information: Associated Well Services, Inc.

PO BOX 16 STEPHENVILLE, TX 76401

Orlier Name: Justin Moore License Number; 59346

No Data Comments:

Certification Date:

Lilhology: DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing: BLANK PIPE & WELL SCREEN DATA

Sch-diagn Tou (B.) Belloni

fus/û]	Hoffown (ff.)	Description	
0	1	Topsoll	
1	2	Brown lam clay	
2	12	Yellow sandy clay	
12	25	Yellow call the and Rock	
25	120	Gray Clay, Shale, Limestone	
120	155	Sand, Sendy Gray Clay	
165	349	Gray Clay, Shale, Limester	
349	391	Gray Sundy Shale	
391	445	Blue, Grey Sandy Clay	
445	505	Sand, Tiny Gravel, Blue Sandy Clay	
505	520	Red Clay	
520	530	Sandy Blue Clay	
530	550	Red Clay	
550	610	Sand, Gravel, Sandy Blue Gloy	
610	825	Yellow Clay	

250 New Steel 0.020 485 605 605 525 New Steel | .250

Мителат

68/2017 | 41 | 4 | MA

Well Report Tracking Number 623130 Submitted on 11/7/2022

hwner:	Horizon Dairy	Owner Wall #:	No Data
ddress	4493 East FM 219 Higo, TX 76457	Grid #L	41-16-3
Vell Location:	4483 Fast FM 219	Latiludo:	31" 52" 27.86" N
	Hico, TX 76457	Longitude:	098° 02' 02,83" W
Vell County:	Hamilton	Elevation:	No Data

Orilling Start Date: 6/7/2022 Orilling End Date: 5/13/2022

Top Depth (A.) Dismater (in.) Bottom (Sopth (R.) Borehale: 18 5 13.5 5 600

Orlling Method: Air Rotery

Borehole Completion: Filter Packed

Top /Janja (f() Rottoni Denih (ff.) FATHE A MERINA Filler Pack Intervals 390 600 Sand 12/20 Top Depth (#) Bollon: Cenib (f) I Description tutmber of sacks 4 materials Annular Saal Data: 0 395 Cement 160 Bage/Sacks

Seal Method: Positive Displacement

Distance to Property Line (ft.): 100+ Seeled By: Driller

Distance to Soptic Field or other concentrated contemination (it): 199+ Distance to Septic Tank (ft.): 100+

Melliod of Verification: Customer

Surface Completion: Steel Cased Surface Completion by Driller

Water Level: 438 ft. below land surface on 2022-96-13

Parkers: No Date

Type of Pump: Pump Dapih (fl.): 546

Yield: 150+ GPM with Unknown ft, drawdown after 5 hours Well Tests Jelted

ONZODE COZERNA

Well Report Tracking Number 608308 Submited on: 8/16/2022

Page Lof 3

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX OCC CODE Tille 12, Chepter 1901 251, authorizes the owner (owner or the present for whom the well was dialled) to knop 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 Liconsing and Regulation P.O. Box 12157
Austin, TX 78711
(512) 434-6540

Sirece Depth (F) Nater Pare Water Quality. 330 - 570 2nd Trinthy

Chemical Analysis Made: No

Did the drifer knowingly penetrate any strata which contained injurious constituents?: No

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 exerced. The driller understood that failure to complete the required items will result in the report(a) being returned for completion and resubmittal. Company information: Associated Wall Services, Inc.

PO Box 16 Stephenville, TX 76481

Curtis Sanders License Number, 69494

No Date

Certification Data:

Lithblogy.
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing: BLANK PIPE & WELL SCREEN DATA

250

250

0.020

New Steel

New Rod Base Stamless Stanl

New Steel

Sch (Sage Top (ft.)

0 459

459 579

572 600

7op (ft.)	Bollon (A.)	Description	Ola do.)	Г
0	2	Topsoil	8.525	В
2	15	Yallow Caliche	1000	-
15	65	Gray Clay, Shale, Limostone	8.525	S
85	115	White, Grey Sandy Clay, Sand, Streaks Of Sandetone	8.825	
115	312	Gray Clay, Sandy Shale, Limestone	M-023	H
312	338	Blue, Gray Sundy Clay, Sand, Streeks Of Sandstone		
336	425	Blue Sandy Clay, Sand, Streaks Of sandstone		
425	490	Blue Sandy Clay, Sand, Gravel, Streeks Of Sandstone		
490	508	Red, Blue Ctny		
500	613	Blue Sandy Clay, Sand, Gravel, Streaks Of Sandstone		
513	518	Red, Blue Clay		
518	562	Blue Sandy Cley, Sand, Gravel, Streaks Of Sandstone		
562	576	Sand, Sandstone, Gravel		
57E	800	Yellow, Purple Clay		

DR/2020 1:07:38 PM Well Report Tracking Number 608308 Sebawed on 6/19/2022

Owner:	David DaJong (Horizon Dairy)	Owner Wall #:	3
Address:	4463 E FM 219 Hico, TX 76457	Grid #:	41-06-9
Well Location:	4483 E FM 219	Latituda:	31" \$2" 30,16" N
	Hico, TX 76457	LongMudé;	096" 01" 13.11" W
Well County:	Hamilton	Elevation:	No Date

Orilling Start Date: 10/16/2022 Drilling End Date: 10/21/2022

	Dismeter (in.)	Top Depth (T)	Bollom Dapih (ft.)
Borehole:	16	0	5
	13,5	5	611

Orilling Molhod: Air Rotary

Borehole Completion: Filter Packed

	Top Depth (A.)	Cofforn Dopth (it.)	Filter Meterial	Size
Plor Pack Intervals:	305	B11	Sand	
	Top Depth (#)	Boltom Depth (A.)	Doscription (number of	sucks & molecini)
Annuler Seel Data:	0	300	Cement	136

Seal Method; Pumped Seeled By: Driller

Distance to Property Line (ft.): 50+ Distance to Septic Field or other concentrated contamination (ft.): 150+

Distance to Septic Tank (ft): 60+

Melhod of Vorification; Customer

Surface Completion:	Stool Cased	Surface Completion by Driller	
Water Level:	ilor Level: 435 fl. bolow land surface on 2022-10-20		
Packers:	No Data		
Type of Pump:	Submerelble	Pump Depth (մ.)։ 668	
Well Tests:	Juite d	Yield: 50 GPM with Unknown fl. drawdown after 1 hours	

500/2023 1/40*23 PM

Well Report Tracking Number 622277

Page 1 of 3

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 conflict 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 Auglin, TX 78711 (512) 334-5540

Strain (Supril rift) Water Type Water Quality: 375 - 690 2nd Trinity

Chemical Analysis Mado:

Coffum (ft.)

Paga 2 of 3

Sch /Gayw Top (/L)

0 433

493 513

593 611

250

,250

250

0.020 433 493

0.020 513 583

Did the driller knowingly penalizate any strata which contained injurious constituents?: No

The driller certified that the driller drilled this well (or the well was drillow) 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 liems will result in the report(s) being returned for completion and resubnititial.

Blank

Screen

Blank

Screen

New Steel

New Steel

New Steel

New Steel

New Steal

Company Information: Associated Wall Services, Inc.

PO BOX 16 STEPHENVILLE, TX 78401

Driller Name: Justin Moore License Number: 59346

Commenta No Deta

Certification Date:

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL Casing: BLANK PIPE & WELL SCREEN DATA

Fop (AL)	Hottem (if)	Description
0	1	Topspoll
1	2	Brown clay
2	10	Yellow clay
10	25	Yellow callche clay
25	120	Gray shale & Limestone
120	156	Sand & Sandy grey clay
156	320	Limestone shale & Grey clay
329	375	Sandy grey clay & Shale
375	415	Sandy blue clay
415	465	Sandy & Tiny grayel
455	450	Red & blue sandy clay
480	490	Sandy blue send
490	525	Red clay
525	590	Sand blue clay & Sand & Gravel & Sandstone
590	611	Vellow clay

6/8/2023 1.40:20 PM Well Report Tracking Number 622277 Submilled on: 10/20/2022

6/8/2093 F:40:91 PM

Well Report Tracking Number 522277 Submitted on: 10/28/2022

Page Jul 3

Owner:	David DeJong (Horizon Dairy)	Dwnar Well #:	No Date
Address:	4483 E FM 218 Hico, TX 76457	Grid #:	41-16-3
Well Location:	CR 207	Latitude;	31" 52' 03.88" N
	Hico, TX 76457	Congilude;	098* 00" \$4,5" W
Well County:	Hamilton	Elevation:	No Data

Drilling Start Oate: 9/23/2022 Drilling End Date: 10/4/2022

	Olsveeter (in)	Cop Dapth (it)	Boltom Dapth (ft.)
Borehole:	18	0	5
	13.5	5	620

Drilling Mathod: Air Rotary

Borehola Complation: Filter Packed

	Top Depth (ft.)	Daingen Dapile (ft)	Filter Maleyon	3/26
Filter Peck Intervals:	365	620	Gravel	12/20

Annular Soal Dala: No Date

> Soal Mathod: Pound Saaled Sy: Driller

Distance to Property Line (ft.):: 100+ Distance to Sepile Field or other consultrated decimaling (fl.): 100+

Distance to Septic Tank (ft.): 100+ Method of Verification: Customer

Surface Completion: Steel Cased Surface Completion by Driller

Water Level: 452 It below tend surface on 2022-10-04

No Data

Type of Pump Submeralble

Pump Depth (it): 588

Well Tests: Jellad

Yield: 50+ GPM with Unknown ft. drawdown after unspecified hours

6/28/2023 9:54:55 AM

Wolf Report Tracking Number 622766 Submitted on 11/3/2022

Page 1 of 2

Strain Depth (A) Weler Type Water Quality 310 - 680 2nd Trinity

Chemical Analysis Made. No.

Did the driller knowingly penatrate any strata which contained injurious considuents?:

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 stepment's herein are two and correct. The driller tundestood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: Associated Walf Sarvices, Inc.

PO Box 15 Stephenville, TX 76401

Driller Name: Hunter Corbell Liconse Number: 81098

No Data Comments:

Certification Data;

0/20/20/2 9:34:35 AM

Lilhology: DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing: BLANK PIPE & WELL SCREEN DATA

gottom (g.) Тупе Material Sch/Gwys Top (ft.) 10 Yellow callche clay Screen New Steel 0,020 480 600 10 Gray clay shald limestons 180 6 Blank New Stepl 250 800 620 180 200 Grey sandy clay 200 310 Grey clay shall limentone 310 450 Blue sendy clay send 480 490 Red clay 490 510 Sand blue sandy clay gravel 610 620 Yellow and purple

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Yille 12, Chapter 1901;251, authorizes the owner (exmer or the person for whom the well was artificial to keep intornation in Well Reports confidential. The Department shall note the contents of the well log confidential and that a matter of public expected if it receives, by certifial mail, a written required; 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 75711 (512) 334-5540

Well Heport Tracking Number 622766 Submilled on: 11/1/2022

Owner:

Horizon Dairy

Owner Well #: 1

Address:

4483 E FM 219 Hico, TX 76457 Grid #:

41-16-3

Well Location:

Latitude:

31° 52' 03.38" N

CR 207 Hico, TX 76457

Longitude:

098° 00' 54.22" W

Well County:

Hamilton

Elevation:

No Data

Well Type:

Irrigation

Drilling Information

Company: Associated Well Services, Inc.

Date Drilled:

9/23/2022

Driller:

Hunter Corbell

License Number:

61098

Well Report Tracking #623132

Borehole:

18

Top Depth (ft.) 0

Bottom Depth (ft.) 5

620

13.5

Diameter (in.)

5

Plugging Information

Date Plugged:

9/23/2022

Plugger; Hunter Corbell

Plug Method:

Tremmie pipe bentonite from bottom to 2 feet from surface, cement top 2 feet

Casing Left in Well:

Plug(s) Placed in Well:

ł.)	Bottom (ft.)	Top (fl.)	Dla (in.)
	620	0	4
	620	0	4

Top (ft.)	Bottom (ft.)	Description (number of sacks & material)
0	20	Cement 10
20	620	Bentonite 47

Certification Data:

The driller certified that the driller plugged this well (or the well was plugged 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 reports(s) being returned for completion and resubmittal.

Company Information:

Associated Well Services, Inc.

PO Box 16

Stephenville, TX 76401

License Number: 61098

Driller Name:

Hunter Corbell

Comments:

No Data

Owner:	Brian Ulfolman	Owner Well #;	No Date
Address.	10527 Pebble Xing Katy, TX, 77494	Grid #:	41-15-3
Well Localion;	52S4 Honey Creek Pass Hico, TX 78457	Latitude:	31° 50° 10.01" N
		Longitude:	098" D1" 21,42" W
Wall County:	Hamilton	Elevation:	No Data

Drilling Start Date: 12/18/2023 Drilling End Date: 12/18/2023

	Distribution (in)	Top Dupth (if)	Bolfom Depitr (ft.)
icrehola:	11	0	5
	8	5	20
	7	20	455

Drilling Mothod: Air Rotary Borehole Completion; Filter Pecked

Top Depth (fL) | fluttory Depter (ft.) Size Féar Pack Intervals. 200 455 Sand 12/20 Top Death (ff.). Balling (Sopility # 1 Description (disorber of socks & makerial) Annular Seel Date: a Cement 2 Bapa/Secks 200 Bentanita 7 BagafSacks

Scal Melhod; Pumped Soaled By: Driller

Distance to Property Line (ft.): 50+

Distance to Saptic Field or other concentrated contamination (ft.): 150+

Distance to Septic Tank (ft): 50+

Melhod of Verification: Customer

Surface Completion: Surface Strave installed Surface Completion by Driller

Water Level: 311 It hotow land surface on 2023-12-18

Packers:

Joltod

Pump Dopih (ft.): 420

Type of Pump: Well Tosts.

Yield: 40 GPM with Unknown ft. drawdown after 1 hours

7/1/2025 10:45:28 AM

Well Report Tracking Number 655732 Submitted on: 12/18/2023

Page 1 of 3

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX OCC CODE Title 12, Chapter 1901 251, authorizes the owner of the person for whom the well low debt the top person for whom the well log confidential and well and and well are confidential and well are described to the person of the well log confidential and well are the person of public record if if 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



Strate Depth (#) Water Quality: 219 - 455 2nd Trinkly

Chemical Analysis Mada: No

Oid the driller knowingly penetrate any strata which contained injurious constituents?

Certification Date:

This driller contribed that the driller drilled this well (or the well was drilles used the driller's direct supportion) and that each and affel the stistements bareln are tree and correct. The driller understood that failure to complete the required terms will result in the report(s) being returned for completion and resubnition.

Dfo |

Associated Well Services, Inc.

PO BOX 16 STEPHENVILLE, TX 78401

Orller Name: Juntin Moore

No Data

Liconse Number: 59346

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing: BLANK PIPE & WELL SCREEN DATA

New Plastic (PVC)

New Plastic (PVC) SCH 40

Makanid Schillings Top (#) Shrifton

0.020 355 455

0 355

Tep (#.)	elicificato (ff.)	Description
D	1	Topsoli
1	21	Yellow Caliche, Rock
21	178	Gray Clay, Shale, Limestone
178	219	Sandy Gray Clay, Shalo
219	290	Sandy Blue Clay, Sand, Gravel
200	315	Sand, Pos Gravel
315	355	Red Clay
355	390	Sandy Blue Clay, Sand, Red Clay
190	445	Sand, Gravel
445	455	Yellow Clay

eredags to an rowal Woll Report Tracking Number 665732 Submitted on: 12/18/2023 Page 2 at 1

7/1/2025 10:45:26 AM

Wall Report Tracking Number 655732 Submitted on: 12/18/2023

Page 1 of 3

Horizon Dairy - A



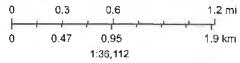


Plugging ReportsWell Reports



July 1, 2025





Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Horizon Dairy - B



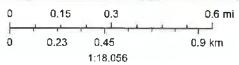




TWDB Groundwater

July 1, 2025

The data in Water Data Interactive represents the best available information provided by the TWDB and third-party cooperators of the TWDB. The TWDB provides information was this web site as a public service. Neither the State of Texas nor the TWDB assumes any legal liability or responsibility or makes any guarantees or warranties as to the accuracy, completeness or suitability of the information for any particular purpose. The TWDB systematically revises or removes data discovered to be incorrect. If you find inaccurate information or have questions, please contact



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Horizon Dairy - C



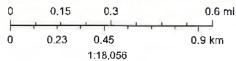


Plugging ReportsWell Reports



July 1, 2025

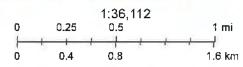




Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



July 1, 2025



Maxar

Public GIS Viewer Legend

Well Number * Water Supply from Oil / Gas 40 Observation Well Locations Observation from Oil Permitted Location TO Observation from Gas Dry Hole 💘 Observation from Oil / Gas Oil Storage □ Gas o Service Oll / Gas Service from Oil Plugged Oil 😘 Service from Gas Plugged Gas ★ Service from OII / Gas Canceled / Abandoned Location Storage from Oll / Gas Plugged Oil / Gas Injection / Disposal from Storage njection / Disposal Injection / Disposal from Storage / of Core Test Injection / Disposal from Storage / Gas Storage from Oll Injection / Disposal from Storage / Oil / Gas Storage from Gas Shut-In Oll ** Observation from Storage Shut-In Gas (Observation from Storage / Oil 1njection / Disposal from Oil Observation from Storage / Gas Observation from Storage / Oil / 🙀 Injection / Disposal from Gas 🦎 Injection / Disposal from Oil / Gas Service from Storage Geothermal Service from Storage / Oil ⊌o Brine Mining ☼ Service from Storage / Gas Yo Water Supply Service from Storage / Oil / Gas Water Supply from Oil

Public GIS Viewer Legend

- Plugged Storage / Gas Plugged Storage Oil / Gas %o Brine Mining * • Brine Mining / Oil
- Brine Mining / Gas
- Brine Mining / Oil / Gas
- Injection / Disposal from Brine
- Injection / Disposal from Brine Mining / Oil
- Injection / Disposal from Brine Mining / Gas
- Injection / Disposal from Brine Mining / Oil / Gas (F)
- No Observation from Bring Mining
- Observation from Brine Mining / Oil
- Observation from Brine Mining / 885
- Observation from Brine Mining /
- Service from Brine Mining
- Service from Brine Mining / Oil
- Service from Brine Mining / Gas
- Service from Brine Mining / Oil /
- ** Plugged Brine Mining
- Plugged Brine Mining / Oil
- 137 Plugged Brine Mining / Gas
- * Plugged Brine Mining / Oil / Gas
- [™] ⑤ 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
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- 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 /
- Plugged Storage / Brinc Mining / Gas
- Plugged Storage / Brine Mining / Oil / Gas

Orphan Wells



Commercial Disposal



Injection/Disposal

HCTS Deeper than 15,000 ft.



Page 2 of 3

Public GIS Viewer Legend

→ Water Supply from Gas.

Quads

Plugged Storage

Plugged Storage / Oil

Page 1 of 3

High Cost Tight Sands			
•	Alert Areas		
EOR H13 Oil Wells			
	Water		
Well Logs	3		
	City Limits		
Horiz/Djr Surface Locations			
○ Horizontal Well	Countles		
() Directional Well			
Horizontal/Directional Lines	Operator Cleanup Program Sites		
	Active		
LPGAS Sites	△ Closed		
· @	Voluntary Cleanup Program Sites		
QPipelines	 VCP, Accepted 		
	VCP, Closed		
Pipelinės	Brownfield Response Program Sites		
-			
Bay Tracts	★ Brownfield, Accepted		
Bay Tracts			
Bay Tracts Offshore Areas	★ Brownfield, Accepted ☆ Brownfield, Closed Commercial Waste Disposal Sites &		
	★ Brownfield, Accepted ↑ Brownfield, Closed Commercial Waste Disposal Sites & Discharge Permits		
Offshore Areas	★ Brownfield, Accepted ☆ Brownfield, Closed Commercial Waste Disposal Sites &		
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6.0 SURFACE WATER & TMDL ASSESSMENT

6.1 Surface Water Assessment

Figures 6.1A1-2, B & C, 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.

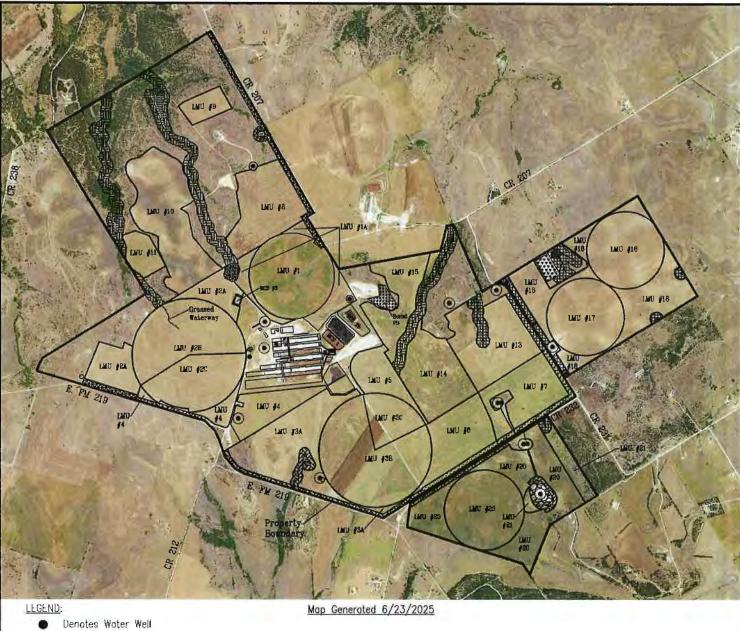
The "water in the state" designation is based on Enviro-Ag Engineering, Inc., site inspections, the permittee's knowledge of the property and the USDA-FSA aerial photograph (2016). The buffer zones and LMU boundaries in Figures 6.1A1-2, B & C are submitted with this application for TCEQ approval.

6.2 TMDL Assessment

Horizon Dairy is located in Segment 1221 and 1226, Leon River Below Proctor Lake and the North Bosque River, Brazos River Basin, which is a 303(d)-listed watershed. To demonstrate that Horizon 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.
- 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.)

С.	deposition by maintaining permanent pastures and additional filter strips adjacent to waters in the state, as described above in Section 6.1	



Denotes Plugged Well

Denotes No Evidence Well

Denotes Well w/100-ft Buffer

Denotes Well w/150-ft Buffer

Denotes 100' Buffer Zone

Denotes 124' Buffer Zone

Denotes 128' Buffer Zone

Denotes 133' Buffer Zone

Denotes 136' Buffer Zone

Denotes 142' Buffer Zone

🖅 Denotes Fresh Water Pond

Denotes Caliche Pit

Tovo Denotes Irrigation Reservoir

Denotes Burial Location

Source: USDA-NRCS. Geospatial Data Gateway. Available at: http://datagateway.nrcs.usda.gov/. Digital Raster Graphic

County Mosaic by NRCS - Accessed March 2015.

Horizon Dairy, LLC Hico, Texas Hamilton County

Aerial Photograph - Phase 1 Figure 6.1A Page 55





Refer to Figure 1.4 for a production area map. 46 Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS

ENCINEERING. INC.

3404 Aloway Blvd. AMARILLO, TEXAS, 79118 TEL (806) 353-6123 FAX (806) 353-4132



Denotes Water Well

O Denotes Plugged Well

Denotes No Evidence Well

Denotes Well w/100-ft Buffer

Denotes Well w/150-ft Buffer

Denotes 100' Buffer Zone

Denotes 124' Buffer Zone

Denotes 128' Buffer Zone

Denotes 133' Buffer Zone

Denotes 136' Buffer Zone

Denotes 142' Buffer Zone

EEEE Denotes Fresh Water Pond

Page Denotes Caliche Pit

♥♥♥♥ Denotes Irrigation Reservoir

Denotes Burial Location

Source: USDA-NRCS. Geospatial Data Gateway. Available at: http://datagateway.nrcs.usda.gov/. Digital Raster Graphic County Mosaic by NRCS - Accessed March 2015.

> Horizon Dairy, LLC Hico, Texas Hamilton County

Aerial Photograph - Phase 2 Figure 6,1A Page 56





SCALED AS SHOWN

Refer to Figure 1.4 for a production area map.

ENGINEERING. INC.

AG Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Sivd. AMARILLO, TEXAS, 79119 TEL (606) 353-6123 FAX (806) 353-4132



Denotes 100' Buffer Zone

EEEE Denotes Fresh Water Pond

Denotes Caliche Pit



SCALED AS SHOWN

Source: USDA-NRCS, Geospatial Data Gateway. Available at:

http://datagateway.nrcs.usda.gov/. Digital Raster Graphic County Mosaic by NRCS — Accessed March 2015.

Horizon Dairy, LLC Hico, Texas Hamilton County

Aerial Photograph Figure 6,1B Page 57

Refer to Figure 1.4 for a production area map.



46 Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Blvd. AMARILLO, TEXAS 79116 TEL (806) 353-6123 FAX (805) 362-4132



LEGEND:

Denotes Well w/150-ft Buffer Denotes 100' Buffer Zone

EEEE Denotes Fresh Water Pond

Denotes Caliche Pit

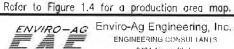


SCALED AS SHOWN

Source: USDA-NRCS. Geospatial Data Gateway. Available at: http://datagateway.nrcs.usda.gov/. Digital Raster Graphic County Mosaic by NRCS — Accessed March 2015.

> Horizon Dairy, LLC Hico, Texas Hamilton County

Aerial Photograph Figure 6.1C Page 58



AG Enviro-Ag Engineering, Inc. ENGINEERING COASULTANTS 3404 Airway Bled. AMARILLO, TEXAS 79118 TCL (806) 353-6123 FAX (806) 353-4132

7.0 AIR STANDARD PERMIT REQUIREMENTS

7.1 Permit Requirements

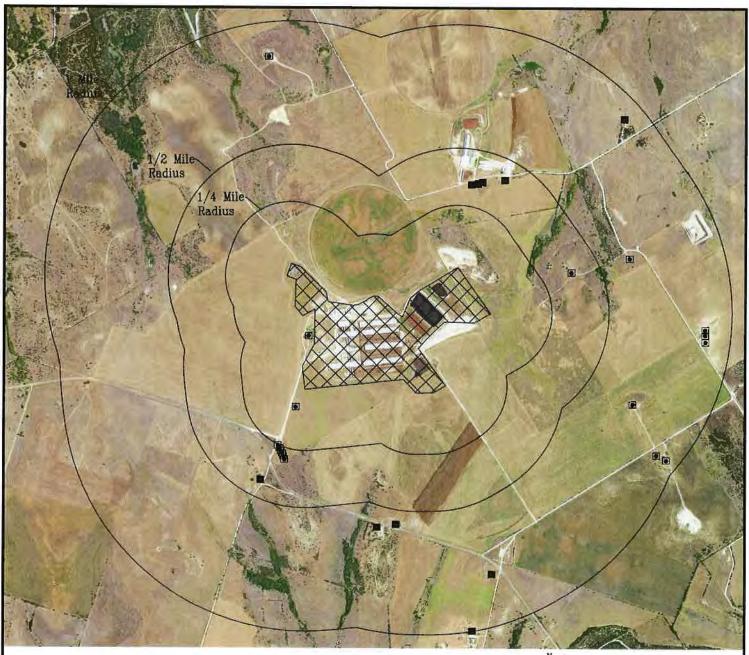
This facility was constructed prior to August 19, 1998. The facility meets the ½-mile buffer option required in 30 TAC §321.43(j)(2) for facility expansion. The facility is designed, and will be operated, in accordance with the provisions and emissions limitations of the air standard permit in 30 TAC §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).

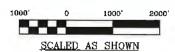
An Area Land Use Map (Figure 7.1) is attached depicting the locations of all occupied residences or business structures, schools (including associated recreational areas), churches, or public parks within 1 mile of the permanent odor sources of the facility. The map includes a north arrow, direction 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 Horizon 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 within 3 days.
- Maintain required treatment volume in the treatment pond.





Legend:

■ Denotes Occupied Structure

Denotes Applicant Owned Structure

Site Visit - 6/18/2025 Map Generated - 6/23/2025

Source: USDA-NRCS. Geospatial Data Gateway. Available at: http://datagateway.nrcs.usda.gov/. National Ag. Imagery Program Mosaic-Accessed Nov., 2017.

WNW PA NNE PROPERTY NE PROPERT

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.

Horizon Dairy, LLC Hico, Texas Hamilton County Area Land Use Map Figure 7.1 Page 60



Enviro-Ag Engineering, Inc.

ENGINEERING CONSULTANTS
3404 Airway Divd.

AMARILLO 1FXAS 79116
TEL (805) 353-6123 FAX (806) 353-4132