

This file contains the following documents:

- 1. Summary of application (in plain language)
 - English
 - Alternative Language (Spanish)
- 2. First notice (NORI-Notice of Receipt of Application and Intent to Obtain a Permit)
 - English
 - Alternative Language (Spanish)
- 3. Second notice (NAPD-Notice of Preliminary Decision)
 - English
 - Alternative Language (Spanish)
- 4. Application materials
- 5. Draft permit
- 6. Technical summary or fact sheet



Este archivo contiene los siguientes documentos:

- 1. Resumen de la solicitud (en lenguaje sencillo)
 - Inglés
 - Idioma alternativo (español)
- 2. Primer aviso (NORI, Aviso de Recepción de Solicitud e Intención de Obtener un Permiso)
 - Inglés
 - Idioma alternativo (español)
- 3. Segundo aviso (NAPD, Aviso de Decisión Preliminar)
 - Inglés
 - Idioma alternativo (español)
- 4. Materiales de la solicitud
- 5. Proyecto de permiso
- 6. Resumen técnico u hoja de datos

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: Armagh Dairy, LLC
- Enter Customer Number: CN605607654
- 3. Name of facility: Armagh Dairy
- 4. Enter Regulated Entity Number: RN100796101
- 5. Provide your permit Number: WQ0004844000
- 6. Facility Business: This facility currently contains 2,299 Total Head in which 999 head are milking cattle in confinement. The facility has 13 Land Management Units (LMUs); LMU #1 50 ac, LMU #2 31 ac, LMU #3 12 ac, LMU #4 42 ac, LMU #5 28 ac, LMU #6 22 ac, LMU #7 21 ac, LMU #8 53 ac, LMU #9 34 ac, LMU #10 14 ac, LMU #11 20 ac, LMU #12 27 ac, LMU #13 36 ac. There are five Retention Control Structure(s) (RCS) on site; RCS #1-2-3 is 59.41 ac-ft, RCS #4 is 81.29 ac-ft, RCS #6 is 49.77 ac-ft, Surge Pond #1 is 27.31 ac-ft and Surge Pond #2 is 23.21 ac-ft. There are seven water wells located on the facility as well as four plugged wells. The facility is located in the drainage area of the Leon River Below Proctor Lake. Leon River Below Leon Reservoir, North Bosque River in Segment No. 1221, 1223, and 1226
- 7. Facility Location: 560 Country Road 347, Dublin, Texas 76446
- 8. Application Type: Major Amendment Permit Application for CAFO, TCEQ 00728, TIP for CAFO, TCEQ 00760
- 9. Description of your request: Change from Jersey to All breed of milking Cow Weights, Change from 999 milking to 500 Milking, reduction of extra wash water to Waterbalance in DA 1, addition of wells 12 & 13 in LMU #6, reduction in overall application acreage specifically LMU #4 from 42 ac to 41 ac, LMU #6 from 22 ac to 20 ac, LMU #10 from 14 ac to 6 ac, RCS #4 will be an Evaporative pond with TCEQ evaporative permit.
- 10. Potential pollutant sources at the facility include (list the pollutant sources): Manure, Wastewater, Dust, lubricants, Feed, Fuel Storage, Medicines, Cleaning Chemicals
- 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): Manure will be stored within the drainage area of RCS #1-2-3 and RCS #6. Wastewater will be stored in RCS's until properly irrigated through center pivot irrigation systems. Manure will be hauled offsite or land applied for beneficial use in accordance with the Nutrient Management Plan. RCS #1-2-3, RCS #6, and Surge Ponds #1 will be designed to store and maintain the minimum treatment, open lot sludge and 25yr-24hr rainfall volumes. All other cleaners, lubricants, fuels and medicines will be maintained and all manufacturers' directions followed. Dead cows will be composted within the drainage area of the RCS.

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.

PLANTILLA DE IDIOMA ESPAÑOL PARA SOLICITUDES DE PERMISO CAFO

El siguiente resumen se proporciona para esta solicitud de permiso de calidad del agua pendiente que está siendo revisada por la Comisión de Calidad Ambiental de Texas según lo requerido por el Plan de Participación Pública y el Plan de Acceso al Idioma de la TCEQ. La información proporcionada en este resumen puede cambiar durante la revisión técnica de la solicitud y no es una representación federal exigible de la solicitud de permiso.

- 1. Nombre del Solicitante: Armagh Dairy, LLC
- 2. Introduzca el Número de Cliente: CN605607654
- 3. Nombre de la Instalación: Armagh Dairy
- 4. Introduzca el Número de Entidad Regulada: RN100796101
- 5. Proporcione su Número de Permiso: WQ0004844000
- 6. Negocio de Instalación: Esta instalación cuenta actualmente con 2.299 cabezas totales, de las cuales 999 cabezas están ordeñando ganado en confinamiento. La instalación cuenta con 13 Unidades de Manejo de Tierras (UML); LMU #1 50 ac, LMU #2 31 ac, LMU #3 12 ac, LMU #4 42 ac, LMU #5 28 ac, LMU #6 22 ac, LMU #7 21 ac, LMU #8 53 ac, LMU #9 34 ac, LMU #10 14 ac, LMU #11 20 ac, LMU #12 27 ac, LMU #13 36 ac. Hay cinco Estructura(s) de Control de Retención (RCS) en el sitio; El RCS #1-2-3 es de 59.41 ac-ft, el RCS #4 es de 81.29 ac-ft, el RCS #6 es de 49.77 ac-ft, el Surge Pond #1 es de 27.31 ac-ft y el Surge Pond #2 es de 23.21 ac-ft. Hay siete pozos de agua ubicados en la instalación, así como cuatro pozos taponados. La instalación está ubicada en el área de drenaje del río León debajo del lago Proctor. Río León por debajo del embalse de León, río Bosque Norte en los segmentos Nº 1221, 1223 y 1226.
- 7. Ubicación de la Instalación: 560 Country Road 347, Dublin, Texas 76446
- 8. Tipo de Solicitud: Solicitud de Permiso de Enmienda Mayor para CAFO, TCEQ 00728, TIP para CAFO, TCEQ 00760
- 9. Descripción de su solicitud: Cambio de Jersey a Todas las razas de peso de vacas de ordeño, cambio de 999 ordeño a 500 ordeño, reducción de agua de lavado adicional a Waterbalance en DA 1, adición de pozos 12 y 13 en LMU # 6, reducción en la superficie total de aplicación específicamente LMU # 4 de 42 ac a 41 ac, LMU # 6 de 22 ac a 20 ac, LMU # 10 de 14 ac a 6 ac, RCS # 4 será un estanque evaporativo con permiso de evaporación TCEQ.
- 10. Las fuentes potenciales de contaminantes en la instalación incluyen (liste las fuentes contaminantes): estiércol, aguas residuales, polvo, lubricantes, piensos, almacenamiento de combustible, medicamentos, productos químicos de limpieza
- 11. Las siguientes mejores prácticas de gestión se implementarán en el sitio para gestionar los contaminantes de las fuentes contaminantes listadas (describa las mejores prácticas de gestión que se utilizan): El estiércol se almacenará dentro del área de drenaje de RCS # 1-2-3 y RCS # 6. Las aguas residuales se almacenarán en RCS hasta que se rieguen adecuadamente a través de sistemas de riego de pivote central. El estiércol se transportará

fuera del sitio o se aplicará la tierra para uso beneficioso de acuerdo con el Plan de Manejo de Nutrientes. RCS # 1-2-3, RCS # 6 y los estanques de oleada # 1 y # 2 estarán diseñados para almacenar y mantener el tratamiento mínimo, los lodos de lote abierto y los volúmenes de lluvia de 25 años a 24 horas. Todos los demás limpiadores, lubricantes, combustibles y medicamentos se mantendrán y se seguirán todas las instrucciones del fabricante. Las vacas muertas se compostarán dentro del área de drenaje del RCS.

A menos que se limite lo contrario, el estiércol, los lodos o las aguas residuales no se descargarán de una unidad de gestión de la tierra (LMU, por sus siglas en inglés) o una estructura de control de retención (RCS, por sus siglas en inglés) hacia o adyacente al agua en el estado de una CAFO, excepto como resultado de cualquiera de las siguientes condiciones:

- 1) una descarga de estiércol, lodos o aguas residuales que el permisionario no pueda prevenir o controlar razonablemente como resultado de una condición catastrófica que no sea un evento de lluvia;
- 2) desbordamiento de estiércol, lodo o aguas residuales de un RCS como resultado de un evento de lluvia crónico/catastrófico; o
- 3) una descarga de lluvia crónica/catastrófica de una LMU que ocurre porque el permisionario toma medidas para desaguar el RCS si el RCS está en peligro de desbordamiento inminente.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



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

PERMIT NO. WQ0004844000

APPLICATION. Armagh Dairy LLC, P.O. Box 2, Dublin, Texas 76446, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Wastewater Permit No. WQ0004844000 (TX0121452) for a Concentrated Animal Feeding Operation (CAFO) to authorize the change from Jersey to All breed of milking Cow Weights, change from 999 milking to 500 Milking, reduction of extra wash water to Waterbalance in DA 1, addition of wells in LMU #6, reduction in overall application acreage, RCS #4 will be an Evaporative pond with TCEO evaporation permit. The facility is located on the south side of Farm-to-Market Road 2156, approximately 1 mile west of the intersection of Farm-to-Market Road 219 and Farm-to-Market Road 2156, near the city of Dublin, in Erath County, Texas 76446. TCEQ received this application on September 11, 2024. The permit application will be available for viewing and copying at TCEO - Region 4 Office, 580 West Lingleville Road, Suite D. Stephenville. 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/pendingpermits/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=-98.373333,32.112777&level=18

ALTERNATIVE LANGUAGE NOTICE. Alternative language notice in Spanish is available at: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/cafo-applications. El aviso de idioma alternativo en español está disponible en https://www.tceq.texas.gov/permitting/wastewater/pending-permits/cafo-applications.

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 Armagh Dairy LLC at the address stated above or by calling Mr. Mike McDowell, Owner, at 707-696-6696 and Mr. Noel Courts, Environmental Manager, at 325-692-5878.

Issuance Date: December 5, 2024

Comisión de Calidad Ambiental del Estado de Texas



AVISO DE RECEPCIÓN DE LA SOLICITUD Y LA INTENCIÓN DE OBTENER CALIDAD DEL AGUA PERMISO MODIFICACION

PERMISO NO. WQooo4844000

SOLICITUD. Armagh Dairy LLC, P.O. Box 2, Dublin, Texas 76446, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) que enmiende el Permiso de Aguas Residuales No. WQ0004844000 (TX0121452) para una Operación de Alimentación Animal Concentrada (CAFO, por sus siglas en inglés) para autorizar el cambio de Jersey a Todo Tipo de Peso de Vaca en Ordeño, cambio de 999 ordeño a 500 Ordeño, reducción de agua de lavado adicional a Waterbalance en DA 1, adición de pozos en LMU # 6, reducción en la superficie total de aplicación, RCS # 4 será un estanque evaporativo con permiso de evaporación TCEO. La instalación está ubicada en el lado sur de Farm-to-Market Road 2156, aproximadamente 1 milla al oeste de la intersección de Farm-to-Market Road 219 y Farm-to-Market Road 2156, cerca de la ciudad de Dublín, en el condado de Erath, Texas 76446. TCEQ recibió esta solicitud el 11 de septiembre de 2024. La solicitud de permiso estará disponible para ver y copiar en TCEO -Oficina de la Región 4, 580 W. Lingleville Road, Suite D, Stephenville, Texas antes de la fecha de este aviso ...https://www.tceq.texas.gov/permitting/wastewater/pending-permits/cafoapplications. Este enlace a un mapa electrónico de la ubicación general del sitio o instalación se proporciona como una cortesía pública y no forma parte de la solicitud o aviso. Para conocer la ubicación exacta, consulte la aplicación.

https://gisweb.tceq.texas.gov/LocationMapper/?marker=-98.373333,32.112777&level=18.

AVISO ADICIONAL. El Director Ejecutivo de la TCEQ ha determinado que la solicitud es administrativamente completa y conducirá una revisión técnica de la solicitud. Después de completar la revisión técnica, el Director Ejecutivo puede preparar un borrador del permiso y emitirá una Decisión Preliminar sobre la solicitud. El aviso de la solicitud y la decisión preliminar serán publicados y enviado a los que están en la lista de correo de las personas a lo largo del condado que desean recibir los avisos y los que están en la lista de correo que desean recibir avisos de esta solicitud. El aviso dará la fecha límite para someter comentarios públicos.

COMENTARIO PUBLICO / REUNION PUBLICA. Usted puede presentar comentarios públicos o pedir una reunión pública sobre esta solicitud. El propósito de una reunión pública es dar la oportunidad de presentar comentarios o hacer preguntas acerca de la solicitud. La TCEQ realiza una reunión pública si el Director Ejecutivo determina que hay un grado de interés público suficiente en la solicitud o si un legislador local lo pide. Una reunión pública no es una audiencia administrativa de lo contencioso.

OPORTUNIDAD DE UNA AUDIENCIA ADMINISTRATIVA DE LO CONTENCIOSO.

Después del plazo para presentar comentarios públicos, el Director Ejecutivo considerará todos los comentarios apropiados y preparará una respuesta a todo los comentarios públicos esenciales, pertinentes, o significativos. A menos que la solicitud haya sido referida directamente a una audiencia administrativa de lo contencioso, la respuesta a los comentarios y la decisión del Director Ejecutivo sobre la solicitud serán enviados por correo a todos los que presentaron un comentario público y a las personas que están en la lista para recibir avisos sobre esta solicitud. Si se reciben comentarios, el aviso también proveerá instrucciones para pedir una reconsideración de la decisión del Director Ejecutivo y para pedir una audiencia administrativa de lo contencioso. Una audiencia administrativa de lo contencioso es un procedimiento legal similar a un procedimiento legal civil en un tribunal de distrito del estado.

PARA SOLICITAR UNA AUDIENCIA DE CASO IMPUGNADO, USTED DEBE INCLUIR EN SU SOLICITUD LOS SIGUIENTES DATOS: su nombre, dirección, y número de teléfono; el nombre del solicitante y número del permiso; la ubicación y distancia de su propiedad/actividad con respecto a la instalación; una descripción específica de la forma cómo usted sería afectado adversamente por el sitio de una manera no común al público en general; una lista de todas las cuestiones de hecho en disputa que usted presente durante el período de comentarios; y la declaración "[Yo/nosotros] solicito/solicitamos una audiencia de caso impugnado". Si presenta la petición para una audiencia de caso impugnado de parte de un grupo o asociación, debe identificar una persona que representa al grupo para recibir correspondencia en el futuro; identificar el nombre y la dirección de un miembro del grupo que sería afectado adversamente por la planta o la actividad propuesta; proveer la información indicada anteriormente con respecto a la ubicación del miembro afectado y su distancia de la planta o actividad propuesta; explicar cómo y porqué el miembro sería afectado; y explicar cómo los intereses que el grupo desea proteger son pertinentes al propósito del grupo.

Después del cierre de todos los períodos de comentarios y de petición que aplican, el Director Ejecutivo enviará la solicitud y cualquier petición para reconsideración o para una audiencia de caso impugnado a los Comisionados de la TCEQ para su consideración durante una reunión programada de la Comisión. La Comisión sólo puede conceder una solicitud de una audiencia de caso impugnado sobre los temas que el solicitante haya presentado en sus comentarios oportunos que no fueron retirados posteriormente. Si se concede una audiencia, el tema de la audiencia estará limitado a cuestiones de hecho en disputa o cuestiones mixtas de hecho y de derecho relacionadas a intereses pertinentes y materiales de calidad del agua que se hayan presentado durante el período de comentarios.

LISTA DE CORREO. Si somete comentarios públicos, un pedido para una audiencia administrativa de lo contencioso o una reconsideración de la decisión del Director Ejecutivo, la Oficina del Secretario Principal enviará por correo los avisos públicos en relación con la solicitud. Ademas, puede pedir que la TCEQ ponga su nombre en una or mas de las listas correos siguientes (1) la lista de correo permanente para recibir los avisos de el solicitante indicado por nombre y número del permiso específico y/o (2) la lista de correo de todas las solicitudes en un condado específico. Si desea que se agrega su nombre en una de las listas designe cual lista(s) y envia por correo su pedido a la Oficina del Secretario Principal de la TCEQ.

CONTACTOS E INFORMACIÓN A LA AGENCIA. Todos los comentarios públicos y solicitudes deben ser presentadas electrónicamente vía http://www14.tceq.texas.gov/epic/eComment/ o por escrito dirigidos a la Comisión de Texas de Calidad Ambiental, Oficial de la Secretaría (Office of Chief Clerk), MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Tenga en cuenta que cualquier información personal que usted proporcione, incluyendo su nombre, número de teléfono, dirección de correo electrónico y dirección física pasarán a formar parte del registro público de la Agencia. Para obtener más información acerca de esta solicitud de permiso o el proceso de permisos, llame al programa de educación pública de la TCEQ, gratis, al 1-800-687-4040. Si desea información en Español, puede llamar al 1-800-687-4040.

También se puede obtener más información de Armagh Dairy LLC en la dirección indicada anteriormente o llamando al Sr. Mike McDowell, propietario, al 707-696-6696 o llamando al Sr. Noel Courts, Gerente de Medio Ambiente, al 325-692-5878.

Fecha de emisión 5 de diciembre de 2024

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



COMBINED

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

AND

NOTICE OF APPLICATION AND PRELIMINARY DECISION FOR CAFO WATER QUALITY PERMIT

MAJOR AMENDMENT

PERMIT NO. WQooo4844000

APPLICATION AND PRELIMINARY DECISION. Armagh Dairy, LLC, P.O. Box 2, Dublin, Texas, 76446 has applied to the Texas Commission on Environmental Quality (TCEQ) for a major amendment of Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0004844000, for a Concentrated Animal Feeding Operation (CAFO), to authorize the applicant to add other breeds of cattle to the current Jersey cattle including Holstein and Guernsey; reduce the total land application area from 390 to 379 acres; and add Wells #12 & #13. TCEQ received this application on September 11, 2024.

The Applicant is issuing this combined notice because a revised application was submitted to keep the authorized 2,299 head, of which 999 head are milking. It was proposed in the original application to decrease the number of milking cows from 999 head to 500 head. The original NORI was mailed on December 5, 2024 and was published on January 7, 2025 and January 11, 2025 in Spanish and English, respectively.

The facility is located at 560 County Road 347, Dublin, Erath County, Texas 76446. The facility is located in the drainage areas of the Leon River Below Proctor Lake in Segment No. 1221, the Leon River Below Leon Reservoir in Segment No. 1223, and the North Bosque River in Segment No. 1226 of the Brazos River Basin. This link to an electronic map of the site or facility's general location is provided as a public courtesy and is not part of the application or notice. https://gisweb.tceq.texas.gov/LocationMapper/?marker=-98.373333,32.112777&level=18. For the exact location, refer to the application.

The TCEQ Executive Director has completed the technical review of the application and prepared a draft permit. The draft permit, if approved, would establish the conditions under which the facility must operate. This permit is consistent with the requirements of the antidegradation implementation procedures in 30 Texas Administrative Code §307.5 (c)(2)(G) of the Texas Surface Water Quality Standards and no lowering of water quality is anticipated. The TCEQ Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The permit application, Executive Director's Preliminary Decision, and draft permit are available for viewing and copying at the **Texas Commission on** Environmental Quality Region 4, Stephenville Office, 580 West Lingleville Road, Suite D, Stephenville, Texas 76401. 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.

ALTERNATIVE LANGUAGE NOTICE. Alternative language notice in Spanish is available at https://www.tceq.texas.gov/permitting/wastewater/pending-permits/cafo-applications.

CHANGE IN LAW. The Texas Legislature enacted Senate Bill 709, effective September 1, 2015, amending the requirements for comments and contested case hearings. This application is subject to those changes in law.

PUBLIC COMMENT / PUBLIC MEETING. You may submit public comments or request a public meeting about this application. The purpose of a public meeting is to provide the opportunity to submit comments or to ask questions about the application. TCEQ holds 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 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 a contested case hearing or reconsideration of the Executive Director's decision. A contested case hearing is a legal proceeding similar to a civil trial in a 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 permit number, the location and distance of your property/activities relative to the 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 germane 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 will only grant a contested case hearing on disputed issues of fact that are relevant and material to the Commission's decision on the application. Further, the Commission will only grant a hearing on issues that were raised in timely filed 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.

EXECUTIVE DIRECTOR ACTION. The Executive Director may issue final approval of the application unless a timely contested case hearing request or request for reconsideration is filed. If a timely hearing request or request for reconsideration is filed, the Executive Director will not issue final approval of the permit and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

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.

All written public comments and public meeting requests must be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or electronically at https://www14.tceq.texas.gov/epic/eComment/ within 30 days from the date of newspaper publication of this notice.

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. 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. Any personal information you submit to the TCEQ will become part of the agency's record; this includes email addresses. 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 Mr. Mike McDowell at the address stated above or by calling Mr. Noel Courts, M.E. Lowther Consulting, LLC. at (325) 692-5878.

Issuance Date: October 13, 2025

COMISIÓN DE CALIDAD AMBIENTAL DE TEXAS



COMBINADO

AVISO DE RECEPCIÓN DE LA SOLICITUD E INTENCIÓN DE OBTENER UNA PERMISO DE CALIDAD DEL AGUA

 \mathbf{Y}

ANUNCIO DE SOLICITUD Y DECISIÓN PRELIMINAR PARA CAFO PERMISO DE CALIDAD DEL AGUA MODIFICACIÓN IMPORTANTE

PERMISO Nº WQ0004844000

SOLICITUD Y DECISIÓN PRELIMINAR. Armagh Dairy, LLC, P.O. Box 2, Dublin, Texas, 76446 ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) una enmienda importante del Permiso No. WQ0004844000, para una Operación Concentrada de Alimentación Animal (CAFO), para autorizar al solicitante a agregar otras razas de ganado al ganado Jersey actual, incluidos Holstein y Guernsey; reducir el área total de aplicación de tierra de 390 a 379 acres; y agregue los pozos #12 y #13. La TCEQ recibió esta solicitud el 11 de Septiembre de 2024.

El solicitante emite este aviso combinado porque se presentó una solicitud revisada para mantener las 2.299 cabezas autorizadas, de las cuales 999 cabezas están ordeñando. En la solicitud original se propuso disminuir el número de vacas lecheras de 999 cabezas a 500 cabezas. El NORI original se envió por correo el 5 de diciembre de 2024 y se publicó el 7 de Enero de 2025 y el 11 de Enero de 2025 en español e inglés, respectivamente.

La instalación se encuentra 560 County Road 347, Dublin en Erath, Texas 76446. La instalación está ubicada en las áreas de drenaje del Leon River Below Proctor Lake en el segmento 1221, Leon River Below Leon Reservoir en el segmento 1223 y North Bosque River en el segmento 1226 de la cuenca del río Brazos. Este enlace a un mapa electrónico de la ubicación general del sitio o instalación se proporciona como cortesía pública y no es parte de la solicitud o aviso. https://gisweb.tceq.texas.gov/LocationMapper/?marker=-98.373333.32.112777&level=18. Para conocer la ubicación exacta, consulte la solicitud.

El Director Ejecutivo de la TCEQ ha concluido el examen técnico de la solicitud y ha preparado un bosquejo de permiso. El bosquejo de permiso, de ser aprobado, establecería las condiciones bajo las cuales la instalación debe operar. Este permiso es consistente con los requisitos de los procedimientos de implementación antidegradación en 30 Código Administrativo de Texas §307.5 (c) (2) (G) de los Estándares de Calidad de Aguas Superficiales de Texas y no se anticipa una disminución de la calidad del agua.

El Director Ejecutivo de la TCEQ ha tomado una decisión preliminar de que este permiso, si se emite, cumple con todos los requisitos legales y reglamentarios. La solicitud de permiso, la Decisión Preliminar del Director Ejecutivo y el bosquejo del permiso están disponibles para su visualización y copia en la **Texas Commission on Environmental Quality Region 4**, **Stephenville Office**, **580 West Lingleville Road**, **Suite D**, **Stephenville**, **Texas 76401**.

La solicitud, incluidas las actualizaciones, y los avisos asociados están disponibles electrónicamente en la siguiente página web: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/cafo-applications.

CAMBIO EN LA LEY. La Legislatura de Texas promulgó el Proyecto de Ley del Senado 709, efectivo el 1 de septiembre de 2015, que modifica los requisitos para comentarios y audiencias de casos impugnados. Esta solicitud está sujeta a esos cambios en la ley.

AVISO DE IDIOMA ALTERNATIVO. El aviso de idioma alternativo en español está disponible en https://www.tceq.texas.gov/permitting/wastewater/pending-permits/cafo-applications.

COMENTARIO PÚBLICO / REUNIÓN PÚBLICA. Puede enviar comentarios públicos o solicitar una reunión pública sobre esta solicitud. El propósito de una reunión pública es para brindar la oportunidad de enviar comentarios o hacer preguntas sobre la solicitud. La TCEQ celebra una reunión pública si el Director Ejecutivo determina que existe un grado significativo de interés público en la solicitud o si lo solicita un legislador local. Una reunión pública no es una audiencia de caso impugnado.

OPORTUNIDAD PARA UNA AUDIENCIA DE CASO IMPUGNADO. Después de la fecha límite para presentar comentarios públicos, el Director Ejecutivo considerará todos los comentarios oportunos y preparará una respuesta a todos los comentarios públicos relevantes y materiales o significativos. A menos que la solicitud sea remitida directamente para una audiencia de caso impugnado, la respuesta a los comentarios se enviará por correo a todos los que enviaron comentarios públicos y a aquellas personas que estén en la lista de correo para esta solicitud. Si se reciben comentarios, el correo también proporcionará instrucciones para solicitar una audiencia de caso impugnado o reconsiderar la decisión del Director Ejecutivo. Una audiencia de caso impugnado es un procedimiento legal similar a un juicio civil en un tribunal de distrito estatal.

PARA SOLICITAR UNA AUDIENCIA DE CASO IMPUGNADO, DEBE INCLUIR LOS SIGUIENTES ELEMENTOS EN SU SOLICITUD: su nombre; dirección, teléfono; nombre y número de permiso del solicitante; la ubicación y distancia de su propiedad / actividades en relación con la instalación; una descripción específica de cómo se vería afectado negativamente por la instalación de una manera que no es común para el público en general; una lista de todas las cuestiones de hecho controvertidas que usted planteó durante el periodo de comentarios y la declaración "[Yo/nosotros] solicito/amos una audiencia de caso impugnado". Si la solicitud de audiencia de caso impugnado se presenta en nombre de un grupo o asociación, la solicitud debe designar al representante del grupo para recibir correspondencia futura; identificar por nombre y dirección física a un miembro individual del grupo que se vería afectado negativamente por la instalación o actividad; proporcionar la información discutida anteriormente con respecto a la ubicación y distancia del miembro afectado de la instalación o actividad; explicar cómo y por qué se vería afectado el miembro; y explicar cómo los intereses que el grupo busca proteger son relevantes para el propósito del grupo.

Tras el cierre de todos los periodos de comentarios y solicitudes aplicables, el Director Ejecutivo remitirá la solicitud y cualquier solicitud de reconsideración o de una audiencia de caso impugnado a los Comisionados de la TCEQ para su consideración en una reunión programada de la Comisión.

La Comisión sólo concederá una audiencia de caso impugando sobre cuestiones de hecho controvertidas que sean relevantes y materiales para la decisión de la Comisión sobre la solicitud. Además, la Comisión sólo concederá una audiencia sobre cuestiones que se plantearon en comentarios presentados oportunamente que no fueron retirados posteriormente. Si se concede una audiencia, el tema de una audiencia se limitará a cuestiones de hecho en disputa o cuestiones mixtas de hecho y de derecho relacionadas con preocupaciones relevantes y materiales sobre la calidad del agua presentadas durante el periodo de comentarios.

ACCIÓN DEL DIRECTOR EJECUTIVO. El Director Ejecutivo puede emitir la aprobación final de la solicitud a menos que se presente una solicitud de audiencia de caso impugnado oportunamente o una solicitud de reconsideración. Si se presenta una solicitud de audiencia oportuna o una solicitud de reconsideración, el Director Ejecutivo no emitirá la aprobación final del permiso y enviará la solicitud y la petición a los Comisionados de la TCEQ para su consideración en una reunión programada de la Comisión.

LISTA DE CORREO. Si envía comentarios públicos, una solicitud de una audiencia de caso impugnado o una reconsideración de la decisión del Director Ejecutivo, se le agregará a la lista de correo para que esta solicitud reciba avisos públicos futuros enviadas por correo por la Oficina del Secretario Oficial. Además, puede solicitar ser colocado en: (1) la lista de correo permanente para un nombre de solicitante específico y número de permiso; y/o (2) la lista de correo para un condado específico. Para ser colocado en la lista de correo permanente y / o del condado, especifique claramente qué lista(s) y envíe su solicitud a la Oficina del Secretario Oficial de la TCEQ a la dirección a continuación.

Todos los comentarios públicos escritos y las solicitudes de reunión pública deben enviarse a la Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 787113087 -o electrónicamente a https://www14.tceq.texas.gov/epic/eComment/ dentro de los 30 días a partir de la fecha de publicación de este aviso en el periódico.

INFORMACIÓN DISPONIBLE EN LÍNEA. Para obtener detalles sobre el estado de la solicitud, visite la Base de Datos Integrada de los Comisionados en www.tceq.texas.gov/goto/cid. Busque en la base de datos utilizando el número de permiso para esta solicitud, que se proporciona en la parte superior de este aviso.

CONTACTOS E INFORMACIÓN DE LA AGENCIA. Los comentarios y solicitudes públicas deben enviarse electrónicamente a https://www14.tceq.texas.gov/epic/eComment/, o por escrito a Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Cualquier información personal que envíe a al TCEQ pasará a formar parte del registro de la agencia; esto incluye las direcciones de correo electrónico. Para obtener más información sobre esta solicitud de permiso o el proceso de permisos, llame al Programa de Educación Pública de la TCEQ, sin cargo, al 1-800-687-4040 o visite su sitio web en www.tceq.texas.gov/goto/pep. Si desea información en español, puede llamar al 1-800-687-4040.

También se puede obtener más información de Sr. Mike McDowell en la dirección indicada anteriormente o llamando a Sr. Noel Courts, M.E. Lowther Consulting, LLC. a (325) 692-5878.

Fecha de Emisión: de 13 de Octubre de 2025

INSTRUCTIONS FOR CAFO INDIVIDUAL PERMIT APPLICATION

This application applies to CAFO facilities authorized under 30 TAC Chapter 321.

Who Should Apply?

The owner of the facility must be the applicant. If the owner of the land is a separate entity or individual, then the owner of the land must be included as the co-applicant. For all TPDES applications, the operator must be listed as a co-applicant. A Signature Page must be completed for each applicant.

A permit must be transferred when a change in ownership or operator occurs. A transfer application (TCEQ-20031) must be submitted at least 30 days before the proposed transfer date.

When Is The Application Submitted?

For new and amendment applications, the completed application must be submitted at least 180 days before the date of the proposed discharge or disposal. The discharge cannot begin until a permit is issued. For renewal applications, the completed application must be submitted at least 180 days before the expiration date of the current permit.

Where to Send the Application Form

One original and two copies of the application, including attachments, must be provided to the address below. Also submit one copy of the application to the appropriate TCEQ Regional Office. Regional office addresses may be obtained on the TCEQ website at www.tceq.texas.gov. If information is submitted at a later date in response to a TCEQ request for further information, please forward a copy of the requested information to the TCEQ regional office as well.

Regular U.S. Mail:

Texas Commission on Environmental Quality Applications Review and Processing Team, MC 148 PO Box 13087 Austin TX 78711-3087

For Express Mail or Hand Delivery:

Texas Commission on Environmental Quality Applications Review and Processing Team, MC 148 Building F Room 2101 12100 Park 35 Circle Austin TX 78753

TCEQ Contact List

Permit Information and Application Forms: 512-239-4671
Technical Information 512-239-4671
Environmental Law Division: 512-239-0600

Copies of records on file with the TCEQ may be obtained for a minimal fee from the Records

ARMAGH DAIRY, LLC 30 TAC 321, SUBCHAPTER B MAJOR AMENDMENT APPLICATION

ARMAGH DAIRY, LLC P.O. BOX 2 DUBLIN, TEXAS 76446 ERATH COUNTY, TEXAS

> PREPARED FOR: MIKE MCDOWELL

SUBCHAPTER B APPLICATION FOR MAJOR AMENDMENT OF WQ0004844000

PREPARED BY:

NOEL COURTS, P.G. TX LICENSE NO. 11241 FL LICENSE NO. PG3091 LA LICENSE NO. 754

M.E. LOWTHER CONSULTING, LLC

ENVIRONMENTAL MANAGEMENT CONSULTANTS

ARMAGH DAIRY, LLC P.O. Box 2 DUBLIN, TEXAS 76446 ERATH COUNTY

SUBCHAPTER B PERMIT APPLICATION MAJOR AMENDMENT WQ0004844000

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 - • TRRC MAP WITH SUPPORTING LOGS
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- ANNUAL SOIL SAMPLING ANALYSIS, EFFLUENT, & MANURE

SECTION 6: ODOR CONTROL PLAN & PPP SIGNATURE PAGE

- ODOR CONTROL PLAN
- ▼ TCEO FORM 00760 PPP SIGNATURE PAGE



ARMAGH DAIRY, LLC P.O. Box 162 HICO, TEXAS 76457 ERATH COUNTY

SUBCHAPTER B PERMIT APPLICATION MAJOR AMENDMENT WQ0004844000

SECTION 1: ADMINISTRATIVE INFORMATION

- TCEQ FORM 00728, APPLICATION FOR A CONCENTRATED ANIMAL FEEDING OPERATION PERMIT (CAFO)
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- TCEQ FORM 10400, CORE DATA FORM



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

A Large CAFO, as defined in the CAFO rules at 30 TAC 321 32(14)(A), must request a waiver from e-reporting requirements codified in 40 Code of Federal Regulations §127.15 OR be required to submit CAFO annual reports electronically.

Are you requesting a waiver from e-reporting requirements?

☑ Yes, Indicate the type of waiver below.

☑ Temporary Waiver

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

☐ No, you must submit your application electronically through TCEQ ePermits system (STEERS)

at https://www3.tceq.texas.gov/steers/index.cfm. Check How to Apply through STEERS.

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

Note:

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

State Only CAFOs are exempt from this requirement.

TCEQ

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

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

SECTION 1. APPLICATION FEE

Minor Amendmo Renewal - \$315.0 New or Major Ai	. •					
Mailed Check/Money Order Number:						
	Check/Money Or	der Amount: <u>\$350.00</u>				
	Name Printed on	Check:				
EPAY	Voucher Number	:				
	Copy of Payment	Voucher enclosed? Yes 🔲				
SECTION 2. TY	YPE OF APPLICAT	ION				
A. Coverage:	State Only 🔲	TPDES 🖾				
B. Media Type:	Water Quality 🔲	Air and Water Quality 🗵				
C. Application 7	Гуре: New 🔲	Major Amendment				
	Renewal $oxtime$	Minor Amendment				
D. For amendm	ents, describe the pro	posed changes: Change from Jersey to All breed of milking Cow				
Weights, Chang	ge from 999 milking to 500	Milking, reduction of extra wash water to Waterbalance in DA 1,				
addition of well	s in LMU #6, reduction in	overall application acreage, RCS #4 will be an Evaporative pond with				
TCEQ evaporati	ive permit.					
E. For existing p	permits:					
What is the p	ermit number? <u>WQo</u>	004844000				
What is the B	EPA I.D. Number? TX	TX 0121452				

SECTION 3. FACILITY OWNER (APPLICANT) INFORMATION

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

Armagh Dairy, LLC

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

	this entity? CN 605607654
C.	What is the name and title of the person signing the application? The person must be an executive official meeting signatory requirements in 30 TAC § 305.44.
	First/Last Name: <u>Mike McDowell</u>
	Title: Owner Credential:
D.	Core Data Form
typ	mplete the Core Data Form for each customer and include as an attachment. If the customer be selected on the Core Data Form is Individual, complete Attachment 1 of Administrative port.
SE	CTION 4. CO-APPLICANT INFORMATION
Co	mplete this section only if another person or entity is required to apply as a co-permittee.
A.	What is the legal name of the co-applicant?
В.	If the applicant is an existing TCEQ customer, provide the Customer Number (CN) issued to this entity? CN
C.	What is the name and title of the person signing the application? The person must be an
	executive official meeting signatory requirements in 30 TAC § 305.44.
	First and Last Name:
	Title: Credential:
D.	Core Data Form
typ	mplete the Core Data Form for each customer and include as an attachment. If the customer be selected on the Core Data Form is Individual , complete Attachment 1 of Administrative port.
SE	CTION 5. APPLICATION CONTACT INFORMATION
	is is the person TCEQ will contact if additional information is needed about this plication.
	Prefix (Mr., Ms., Miss): Mr.
	Application Contact First and Last Name: Noel Courts, P.G.
	Title: Environmental Manager Credentials: Professional Geoscientist
	Company Name: M.E. Lowther Consulting, LLC

Mailing Address: P.O. Box 7332

City, State, and Zip Code: Abilene, Texas 79608

Phone Number: <u>325-692-5878</u> Fax Number: <u>325-692-1293</u>

E-mail Address: manureisgood@yahoo.com

SECTION 6. PERMIT CONTACT INFORMATION

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

A.	1. Prefix (Mr., Ms., Miss): <u>Mr.</u>				
	Permit Contact First and Last Name: Mike McDowell				
	Title: Owner Credentials:				
	Company Name: Armagh Dairy, LLC				
	Mailing Address: P.O. Box 2				
	City, State, and Zip Code: <u>Dublin, Texas 76446</u>				
	Phone Number: <u>707-696-6696</u> Fax Number: <u>N/A</u>				
	E-mail Address: farmstead@armaghcreamery.com				

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

Permit Contact First and Last Name: Noel Courts, P.G.

Title: Environmental Manager Credentials: Professional Geoscientist

Company Name: M.E. Lowther Consulting, LLC

Mailing Address: P.O. Box 7332

City, State, and Zip Code: Abilene, Texas 79608

Phone Number: 325-692-5878 Fax Number: 325-692-1293

E-mail Address: manureisgood@yahoo.com

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?

P	product 14 and 11 and 1				
\boxtimes	Yes, specify which applicant on the line below and go to Section 8)				
	<u>Owner</u>				
	No, complete this section				
efix (Mr., Ms., Miss):				

First and Last Name:
Title: Credentials:
Company Name:
Mailing Address:
City, State, and Zip Code:
Phone Number: Fax Number:
E-mail Address:
SECTION 8. LANDOWNER INFORMATION
A. Landowner where the production area is or will be located
Landowner Name: Armagh Dairy, LLC
B. Landowner of the land management units (LMUs)
Landowner Name: <u>Armagh Dairy, LLC</u>
SECTION 9. PUBLIC NOTICE INFORMATION
A. Individual responsible for publishing the notices in the newspaper
Prefix (Mr., Ms., Miss): Mr.
First and Last Name: <u>Mitchell Lowther</u>
Title: Owner Credentials:
Company Name: M.E. Lowther Consulting, LLC
Mailing Address: P.O. Box 7332
City, State, and Zip Code: <u>Abilene, Texas 79608</u>
Phone Number: <u>325-692-5878</u> Fax Number: <u>325-692-1293</u>
E-mail Address: mlowther001@hotmail.com
B. Method for receiving the notice package for the Notice of Receipt and Intent
E-mail:
☐ Fax Number:
Regular Mail:
Mailing Address: P.O. Box 7332
City, State, and Zip Code: Abilene, Texas 79608
C. Contact person to be listed in the notice

	Prefix (Mr., Ms., Miss): Mr.	
	First and Last Name: Mike McDowell	
	Title: Owner Credentials:	
	Company Name: Armagh Dairy, LLC	
	Phone Number: <u>707-696-6696</u>	
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: <u>TCEQ - Region 4 Office</u>	
	Physical Address of Building: <u>580 W. Lingleville Rd, Suite D</u>	
	City: Stephenville County: Erath	
	Phone Number: <u>254-552-1900</u>	
E.	Bilingual Notice Requirement	
For new, major amendment, and renewal applications. This information can obtained by contacting the bilingual/ESL coordinator at the nearest elementary or mischool. 1. Is a bilingual education program required by the Texas Education Code at the nearest elementary or middle school to the facility or proposed facility? Yes No		
	(If No , alternative language notice publication is not required; skip to Section 10. Regulated Entity (Site) Information.)	
	2. Are the students who attend either the elementary school or the middle school enrolled in a bilingual education program at that school? Yes No	
	3. Do the students at these schools attend a bilingual education program at another location? Yes \(\sigma \) No \(\sigma \)	
	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 \(\subseteq \text{No } \omega \)	
	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? <u>Spanish</u>	

SECTION 10. REGULATED ENTITY (SITE) INFORMATION

- A. Site Name as known by the local community: Armagh Dairy
- B. If this is an existing permitted site, provide the Regulated Entity Number (RN) issued to this

		RN <u>100796101</u>			
C. 1	Anima	al Type:			
		Dairy-0241		Laying Hens-252	
		Beef Cattle-0211		Sheep/Goats-0214	
		Swine-0213		Auction-5154 Other, specify:	
1		Broiler-0251		Other, specify.	
D. 1	Existi	ng Maximum Number of Animals: <u>2,299 o</u>	of which 9	99 Are Milking	
]	Propo	sed Maximum Number of Animals: 2,299	of which	500 Are Milking	
E. '	What	is the total LMU acreage? 379 Acres			
SEC	CTIO	N 11. MISCELLANEOUS INFORMATI	ON		
I	paid f	ny person who was formerly employed by to or service regarding this application? provide the name(s) of the former TCEQ	Yes 🗆	No 🗵	y and get
		facility located on Indian Country Lands? do not submit this application. You must			A Region 6
	Is the supply	production area located within the protect y? Yes □ No ⊠	tion zone	of a sole source drinking	g water
D.]	Is any	permanent school fund land affected by the	his applic	ation? Yes 🗆 No	
	If yes, land(s	provide the location and foreseeable impass).	acts and e	ffects this application ha	as on the
E. I	Delino	quent Fees and Penalties:			
]	Do yo	u owe fees to the TCEQ? Yes 🔲	No 🗵		
]	Do yo	u owe any penalties to the TCEQ?	Yes 🗆	No 🗵	
		answered yes to either of the above questi penalty, and an identifying number.	ons, prov	ride the amount owed, th	ne type of

SECTION 12. AFFECTED LANDOWNER INFORMATION

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

- **A.** Landowner map. Attach a landowner map or drawing, with scale, that includes the following. Each landowner should be designated by a letter or number on both the list and the map.
 - The applicant's property boundaries, including onsite and offsite LMUs; and
 - The property boundaries of all landowners within 500 feet of the applicant's property.

- B. Landowner list. Attach a separate list of the landowners' names and mailing addresses. The list must be cross-referenced to the landowners map.C. Landowner list media. Indicate the format of the landowners list.
 - Read/Writeable CD
 - ∠ 4 sets of mailing labels
- **D.** Landowner data source. Provide the source of the landowners' names and mailing addresses. <u>Erath County Appraisal District</u>

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. Minor Amendment

Attach the following items if applicable:

- Current vicinity map, site map, runoff control map, and LMU map
- RCS design calculations
- Nutrient Management Plan or Land application rate calculations
- Other technical documents affected by the proposed amendment

SIGNATURE PAGE

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

Permit Number: WO0004844000

Applicant:

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

I further certify that I am authorized under 30 Texas Administrative Code §305.44 to sign and submit this document, and can provide documentation in proof of such authorization upon request.

Signatory Name: LYAW MCDOWELC		
Title: OCUNE 12	8/20/25	
Signature:	Date: 8/30/24	
SUBSCRIBED AND SWORN to before me by	the said RYAN McDow Ellon	
this 30th day of Aug	, 20 24	
My commission expires on the 10-4-27	day of	
	Janutha	
(Seal)	Notary Public	
JENNIFER A. LOWERY NOTARY PUBLIC, STATE OF TEXAS 10 # 134589854 COMM. EXP. 10-04-2027	Evath County, Texas	

	TCEQ USE ONLY:
	plication type: Renewal Major Amendment Minor Amendment New Admin Complete Date:
	ency Receiving SPIF: Texas Historical Commission U.S. Fish and Wildlife Texas Parks and Wildlife Army Corps of Engineers
<u> </u>	
	SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)
	This form is required for all TPDES applications
1.	Applicant: Armagh Dairy, LLC
2.	Permit Number: WQ0004844000 EPA ID Number: TX 0121452
3.	Address of the project (location description that includes street/highway, city/vicinity, and county). The facility is located in the south side of Farm-to-Market 2156, approximately one mile west of the intersection of Farm-to-Market 219 and Farm-to-Market 2156.
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: Mr. Noel Courts, P.G.
	Company Name: M.E. Lowther Consulting, LLC
	Mailing Address: P.O. Box 7332
	City, State, and Zip Code: Abilene, Texas 79608
	Phone Number: <u>325-692-5878</u> Fax Number: <u>325-692-1293</u>
5.	County where the facility is located: <u>Erath</u>
6.	If the property is publicly owned and the owner is different than the permittee/applicant, please identify the owner. $\underline{N/A}$
<i>7</i> ·	Identify the name of the water body (receiving waters) or TCEQ segment number that will receive the discharge. <u>Leon River Below Proctor Lake</u> , <u>Leon River Below Leon Reservoir</u> , <u>North Bosque River – Segment No. 1221</u> , <u>1223</u> , <u>1226</u> of the Brazos River Basin
8.	Provide a 7.5 minute USGS quadrangle map with the project boundaries plotted and a general location map showing the project area. (This map is required in addition to the map in the administrative report.)
9.	Provide photographs of any structures 50 years or older on the property.
10.	Does your project involve any of the following? Select all that apply. Proposed access roads, utility lines, and construction easements Visual effects that could damage or detract from a historic property's integrity

Vibration effects during construction or as a result of project design Additional phases of development that are planned for the future

	Sealing of caves, fractures, sinkholes, or other karst features
	Disturbance of vegetation or wetlands
T	

- 11. List proposed construction impact (surface acres to be impacted, depth of excavation, sealing of caves or other karst features): N/A
- 12. Describe existing disturbances, vegetation & land use (plowing, other ground disturbances): Plowing / Aeration

The following applies only to applications for New TPDES permits and Major Amendments to TPDES Permits:

- 13. List construction dates of any buildings or structures on the property: N/A
- 14. Provide a brief history of the property, and name of the architect/builder, if known: N/A

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

- 15. List each Retention Control Structure and its required capacity (in acre feet). RCS #1-2-3 59.41 ac-ft, RCS #6 49.77 ac-ft, Surge Pond #1 27.31 ac-ft, Surge Pond #2 23.21 ac-ft
- 16. Provide the location and number of acres where wastewater and manure are land applied:

 LMU #1 50 Ac, LMU #2 31 Ac, LMU #3 12 Ac, LMU #4 41 Ac, LMU #5 28 Ac, LMU

 #6 20 Ac, LMU #7 21 Ac, LMU #8 53 Ac, LMU #9 34 Ac, LMU #10 6 Ac, LMU #11

 20 Ac, LMU #12 27 AC, LMU #13 36 Ac
- 17. List the maximum number of head to be permitted. 2,299 of which 500 are milking



Technical Information Packet for

Concentrated Animal Feeding Operations (CAFOs)

Name of Site <u>Armagh Dairy, LLC</u>

TCEQ Permit Number, if assigned $\underline{WQ0004844000}$

Date Prepared: 5/1/24

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.

Potential Pollutant Source	Best Management Practices
Manure and Manure Stockpiles	See Attached
Wastewater	See Attached
Sludge	See Attached
Compost	See Attached
Feed and Bedding	See Attached
Silage stockpiles	See Attached
Dead animals	See Attached
Dust	See Attached
Lubricants	See Attached
Pesticides	See Attached
Bulk cleaning chemicals	See Attached
Inorganic fertilizers	See Attached
Fuel storage tanks	See Attached
Other, specify:	See Attached
Medicines, Pen Maintenance	

Section 2. RETENTION CONTROL STRUCTURE DESIGN

Design Summary A.

Design	Standards.	Characteristic,	and '	Values	Sources	Used
	~,	~,			~ ~ ~ ~ ~ ~ ~	

۱					
į	X	Natural	Resource	Conservation	. Service
ı	;				

	Other; specify:				
	Total Number of Animals:				
	In Open Lots: <u>500 Milking, 1,799 Dry</u> In Build	lings: <u>500</u>			
	Animal Housing Location, in hours/day:				
	Open Lots: 21.5 Hrs Buildings:	2.5 Hrs			
	Average Liveweight, in pounds per head:	<u>1,000 lbs</u>			
	Volatile Solids Removed by Separator System:	19.4% (VSS) & 20% (SB)			
	Volatile Solids Loading Rate, in lbs/day/1000 ft3:	4.69			
	Spilled Drinking Water, in gallons/day:	2,500 gal/day			
	Water for Cleanup, in gallons/day:	3,500 gal/day			
	Water for Manure Removal, in gallons/day:	<u>3,216 gal/day</u>			
	Recycled Wastewater, in gallons/day:	<u>-0-</u>			
В.	Wastewater Runoff				
Design Rainfall Amount, in inches: 11.90					
	Design Rainfall Event:				
	☐ 25 year, 24 hour ☐ SPAW				
	≥5 year, 10 day □ Other; specify:				
C	Retention Control Structure (RCS) Volume Allo	cations in Acre-Feet			

RCS Name	Design Rainfall Event Runoff	Process Generated Wastewater	Minimum Treatment Volume	Sludge Accumulation	Water Balance	Required Capacity	Actual Capacity
RCS #1-2-3	37.11	0.74	2.48	14.60	4.48	59.41	59.411
RCS #6	43.22	-0-	-0-	6.55	-0-	49.77	49.770
SP #1	-0-	-0-	-0-	1.85	25.46	27.31	27.31
SP #2	7.40	-0-	-0-	1.85	13.96	23.21	23.21

Indicate which RCSs are in-series: RCS #1-2-3 ac as one single RCS and are in series with RCS #6 via pump. Surge Pond #1 and Surge Pond #2 act in series and are used as irrigation ponds.

D. RCS Hydrologic Connection

RCS	Construction	Type of Hydrologic Connection Certification
Name	Date	
RCS #1-2-3	Before 1989	Liner Certification – 1989
RCS #6	Before 1989	Liner Certification – 1989
SP #1	Before 1989	Liner Certification – 2005
SP #2	2011	Liner Certification – 2011
Settling Pit	Before 1989	Liner Certification - 2008

E. Playa Lakes

Are any playa lakes used for RCSs?	Yes 🔲	No 🗵

Section 3. MANURE, SLUDGE, AND WASTEWATER HANDLING

A. Manure: Use or Disposal Method: Land Application to LMUs Transfer to other persons Third Party Fields Other; specify: Contract Hauler Land Application Location: \boxtimes Onsite \boxtimes Offsite Not Applicable Composting Location: \boxtimes Onsite Offsite Not Applicable В. Sludge: Use or Disposal Method:

Land Application to LMUs

☐ Third Party Fields

☑ Other; specify: Contract Hauler

Land Application Location:

X	Onsite	\boxtimes	Offsite	Not Applicable
Δ	Offsite		Olisite	Mor Applicable

C. Wastewater:

Use or Disposal Method:

□ Land Application to LMUs

☐ Total Evaporation

☑ Other; specify: Contract Pumper

Land Application Location:

Onsite

 ☐ Not Applicable

D. Land Application Summary.

For each Land Management Unit (LMU), provide the requested information. If needed, attach additional pages.

LMU Name	Acreage	Proposed Crops and Yield Goals	Application Rate (ac-ft/ac/yr or tons/ac/yr)
LMU #1	50 Acres	Coastal 4 Cut Hay / RG mod Graze	.3166 Ac-ft/ac/yr
LMU #2	31 Acres	Coastal 4 Cut Hay / RG mod Graze	.3083 Ac-ft/ac/yr
LMU #3	12 Acres	Coastal 4 Cut Hay / RG mod Graze	.3000 Ac-ft/ac/yr
LMU #4	41 Acres	Coastal 4 Cut Hay / RG mod Graze	9.3 Tons/ac/yr
LMU #5	28 Acres	Coastal 4 Cut Hay / RG mod Graze	9.3 Tons/ac/yr
LMU #6	20 Acres	Coastal 4 Cut Hay / RG mod Graze	9.3 Tons/ac/yr
LMU #7	21 Acres	Coastal 4 Cut Hay / RG mod Graze	19.9 Tons/ac/yr

Wastewater production, in ac-in/year: 346.44 ac-in/yr from WatrNutr

Estimated Wastewater application, in ac-in/year: 346.44 ac-in/yr from WatrNutr

Manure production, in tons/year: 7670 dry tons/year

TCEQ-00760 (11/16/2015)

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		Transfer to ot	her pe	ersons	
	\boxtimes	Third Party Fi	elds		
	\boxtimes	Other; specify	: <u>Con</u>	tract Hauler	
	Land Appl	ication Location	ı:		
		Onsite	\boxtimes	Offsite	Not Applicable
C.	Wastewa	iter:			
	Use or Dis	posal Method:			
	\boxtimes	Land Applicat	ion to	LMUs	
		Total Evapora	tion		
		Third Party Fi	elds		
	\boxtimes	Other; specify	: <u>Con</u>	tract Pumper	
	Land Appl	ication Locatior	ı:		
	\bowtie	Onsite	\boxtimes	Offsite	Not Applicable

Land Application Summary. D.

For each Land Management Unit (LMU), provide the requested information. If needed, attach additional pages.

LMU Name	Acreage	Proposed Crops and Yield Goals	Application Rate (ac-ft/ac/yr or tons/ac/yr)
LMU #8	53 Acres	Coastal 4 Cut Hay / RG mod Graze	9.3 Tons/ac/yr
LMU#9	34 Acres	Coastal 4 Cut Hay / RG mod Graze	9.3 Tons/ac/yr
LMU #10	6 Acres	Coastal 4 Cut Hay / RG mod Graze	19.9 Tons/ac/yr
LMU #11	20 Acres	Coastal 4 Cut Hay / RG mod Graze	19.9 Tons/ac/yr
LMU #12	27 Acres	Coastal 4 Cut Hay / RG mod Graze	14.9 Tons/ac/yr
LMU #13	36 Acres	Coastal 4 Cut Hay / RG mod Graze	14.9 Tons/ac/yr

Wastewater production, in ac-in/year: 346.44 ac-in/yr from WatrNutr

Estimated Wastewater application, in ac-in/year: 346.44 ac-in/yr from WatrNutr

Manure production, in tons/year: 7670 dry tons/year

Estimated manure application, in tons/year: 7670 Dry tons/yr

Estimated manure transferred to other persons, in tons/year: Up to 7670 Dry Tons/yr

E. Floodplain Information

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

If YES, describe management practices to protect the sites.

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

If YES, describe management practices. Land Application in accordance with NMP/NUP,

F. Soil Limitations

Buffering Surface Waters

Soil Types	Limiting Characteristics	Best Management Practices
See Attached		

G. Well Protection

Well ID Number	Well Type	Producing or Non-Producing	Open, Cased, or	Protective Measures	
			Capped		
1	Facility	Producing	Cased	Exception Request	

Well ID Number	Well Type	Producing or Non-Producing	Open, Cased, or Capped	Protective Measures
2	Facility	Producing	Cased	Exception Request
PW3	Facility	Non-Producing	Plugged	Plugged
CW4	Facility	Non-Producing	Plugged	Plugged
5	Facility	Producing	Cased	150' Buffer
6	Domestic	Producing	Cased	150' Buffer
7	Domestic	Producing	Cased	150' Buffer
PW8	Facility	Non-Producing	Plugged	Plugged
9	Facility	Producing	Cased	150' Buffer
PW10	Old Windmill	Non-Producing	Plugged	Plugged
11	Irrigation	Producing	Cased	150' Buffer
12	Irrigation	Producing	Cased	150' Buffer
13	Irrigation	Producing	Cased	150' Buffer

Section 4. AIR AUTHORIZATION SUMMARY

1/2 mile buffer*

A.

A.	Typ	e of Air Authorization
	\boxtimes	Air Standard Permit in 30 TAC § 321.43
		Permit By Rule in 30 TAC Chapter 116
		Individual Air Quality Permit
If Air	Stan	dard Permit is selected, then complete Sections B and C below.
В.	Ind	icate the AFO Status and Option.
		Operation started after August 19, 1998:

		¹ / ₄ mile buffer* and an odor control plan
\boxtimes	Oper	ation started on or before August 19, 1998:
		¹ / ₄ mile buffer*
	\boxtimes	odor control plan

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:

o - 1/4 mile: 3

1/4 - 1/2 mile: 5

½ - 1 mile: <u>70</u>

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

RECHARGE FEATURE CERTIFICATION STATEMENT

I certify that poter	ntial rec	harge featu	ıres, as de	efined in 30 Texas A	Administrative Code 321,	
Subchapter B,	\boxtimes	EXIST		DO NOT EXIST	on properties used in this	ì
application. All is	nformat	ion presen	ted on thi	is page and the atta	ched supporting documents i	S
true and accurate	to the b	est of my k	nowledge	. .		
Certification Sig	nature				Seal and Date	



TCEQ Core Data Form

TO	CEQ Use Only	

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION 1: General Information

	mation							
1. Reason for Submission (If other is						the necessary on liquities		
New Permit, Registration or Authori							on.)	
Renewal (Core Data Form should 2. Customer Reference Number (if iss	uad)			1	,	ner gulated Entity Refere	nce Numbe	or (if issued)
	1		s link to se RN numbe	arch	J. IXE	guiated Littly Refere	ince Numbe	i (ii issueu)
CN 605607654				HA.	RN	100796101		
SECTION II: Customer Inf	ormation							
4. General Customer Information	5. Effective Date	e for Cu	stomer Ir	nformat	ion U	odates (mm/dd/yyyy)	00/09/	/2024
□ New Customer □ Update to Customer Information □ Change in Regulated Entity Ownership								
	Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)							
The Customer Name submitted	•	•					rrent and	active with the
Texas Secretary of State (SOS)				JIIC AC	-			
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John) If new Customer, enter previous Customer below:					er below:			
Armagh Dairy, LLC								
7. TX SOS/CPA Filing Number	8. TX State Tax		its)		9. Fe	ederal Tax ID (9 digits)	10. DUN	S Number (if applicable)
0802977041	3206669573	8						
11. Type of Customer: Corporation	on	☐ Individual			Partnership: General Limited			
Government: City County Federal	State Other		Sole Pro	prietorship Other:				
			13. Independently Owned and Operated? ☑ Yes ☐ No					
14. Customer Role (Proposed or Actual) -	as it relates to the f	Regulated	d Entity list	ed on this	form.	Please check one of the	following:	
Operat	or	⊠ c	Owner & C	Operator				
Occupational Licensee Respo	nsible Party	□ V	oluntary o	Cleanup	Appli	cant Other:		
P.O. Box 2								
15. Mailing Address:								
City Dublin		State	TX	ZIF	7	6446	ZIP + 4	
16. Country Mailing Information (if outside	de USA)		1	17. E-Ma	il Add	iress (if applicable)		
18. Telephone Number	19.	Extensi	on or Co	de		20. Fax Numbe	r (if applicab	ole)
(707) 696-6696						()	-	
SECTION III: Regulated E	ntity Inform	ation						
21. General Regulated Entity Information	- 10			cted bel	ow thi	s form should be acco	mpanied by	a permit application)
	to Regulated Entity					ated Entity Information		
The Regulated Entity Name sub-	_	•	ed in o	rder to	mee	t TCEQ Agency L	ata Stand	dards (removal
22. Regulated Entity Name (Enter name of			d action is	taking pla	ice.)			
ZZ. Hogaratos Zittity Harrio (Zittor harro								

23. Street Address		1137 C	R 34	17										
the Regulated Enti														
(No PO Boxes)		City	\top_{D}	ublin	-	State	TX	z	IP	7644	46	ZIP+	4	
24. County		Erath		- 5 00				1.0	•					
	****	E	nter P	hysical Lo	catio	n Description	if no st	reet ac	ddress is p	rovic	led.	W.	- 1	
25. Description to Physical Located on the south side of FM 2156, approximately 1 mile west of the intersection of FM 2156 and FM 219 in Erath County, Texas														
26. Nearest City										State			Nea	rest ZIP Code
Dublin								146						
	n Decin								gitude (W)	ln	Decimal:			
Degrees		Minutes			Secor		De	egrees		-	Minutes	-	-	Seconds
32	2 7/2		06			46.2			98		12802 1270	2	3	24.6
29. Primary SIC Co	ode (4 dig	gits) 30	30. Secondary SIC Code (4 digits) 31. Primary NAICS Code (5 or 6 digits) 32. Secondary NAICS Code (5 or 6 digits)											
241		20	026											
	3. What is the Primary Business of this entity? (Do not repeat the SIC or NAICS description.)													
Dairy CAFO /	airy CAFO / Yogurt & Cheese Processing													
34. Mailing			P.O. Box 2											
Address:														
		City		Dublin		State	TX		ZIP		76446	ZIP -	+ 4	
35. E-Mail Ad	ldress:					8 23					* 25 5 5			
36. 7	36. Telephone Number 37. Extension or Code 38. Fax Number (if applicable)						ible)							
(707) 69	96-6696				1.230000.1000					()	-		
39. TCEQ Programs form. See the Core Date						write in the perr	nits/regisi	tration n	numbers tha	t will b	e affected by	the upda	les si	ıbmitted on this
☐ Dam Safety		☐ District				Edwards Aquifer		ПЕ	missions In	ventor	y Air C	Industria	al Ha	zardous Waste
☐ Municipal Solid W	/aste	☐ New So	urce F	Review Air		OSSF		⊠P	etroleum St	orage	Tank [PWS		
								7473						
Sludge		Storrn \	Vater			Title V Air		T	ires			Used O	1	
☐ Voluntary Cleanu	<u> </u>	☐ Waste Water ☐ Wastewater Agriculture ☐ Water Rights ☐ Other: TPDES			e									
U Voluntary Cleanu	P	vvasie	valei		<u></u>	vasiewalei Agii	Culture	<u></u>	vater rights	WQ0004844000			3	
SECTION IV	· Pro	narar I	nfor	matin	1							<u>YQ0004</u> ,	5440)OO
		rts, P.G		matio		1771	T	41. Tit	ie Ei	nszirz	onmental	Mana	ner.	Y - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
42. Telephone Nun		.43. E	_	de	44 F:	ax Number			-Mail Add		Jimichtai	IVIAIIA	501	
(325) 692-587						1)692-1293	3				yahoo.co	om		
SECTION V:		horized	Sig	nature	;	•					•			
46. By my signature signature authority to identified in field 39.	below, submit	I certify, to	the b	est of my	knowl									
Company:	M.E. Lo	wther Cor	sulting	g, LLC			Job Ti	tie:	Environn	nenta	Manager			
Name(In Print):		ourts, P.G.		D						Pho	one: (325) 69	2-58	78
Signature:										Dat	te: S	19/2024		

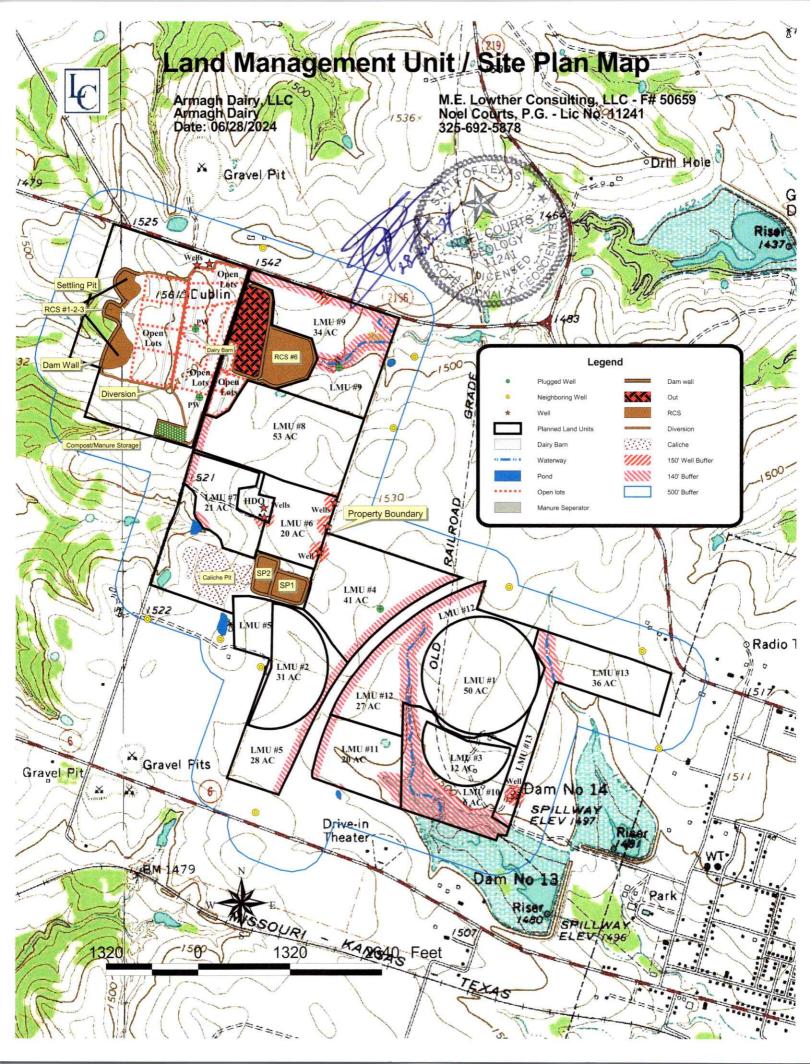
TCEQ-10400 (04/15) Page 2 of 2

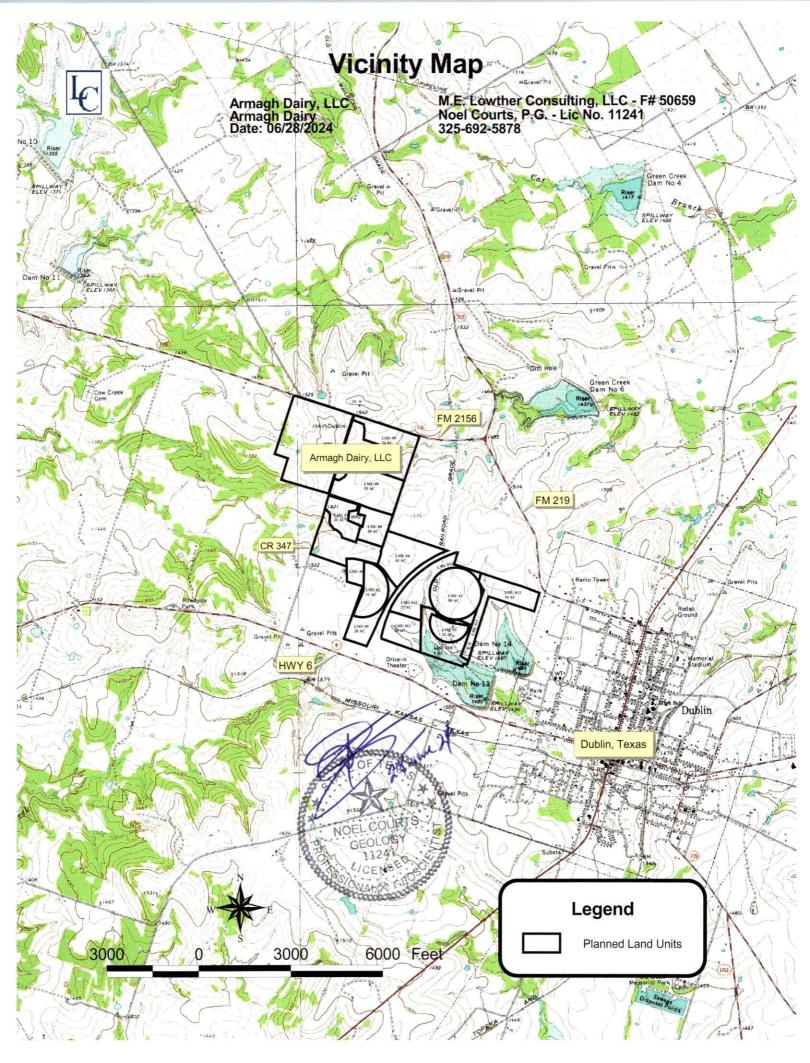
ARMAGH DAIRY, LLC P.O. Box 2 DUBLIN, TEXAS 76446 ERATH COUNTY

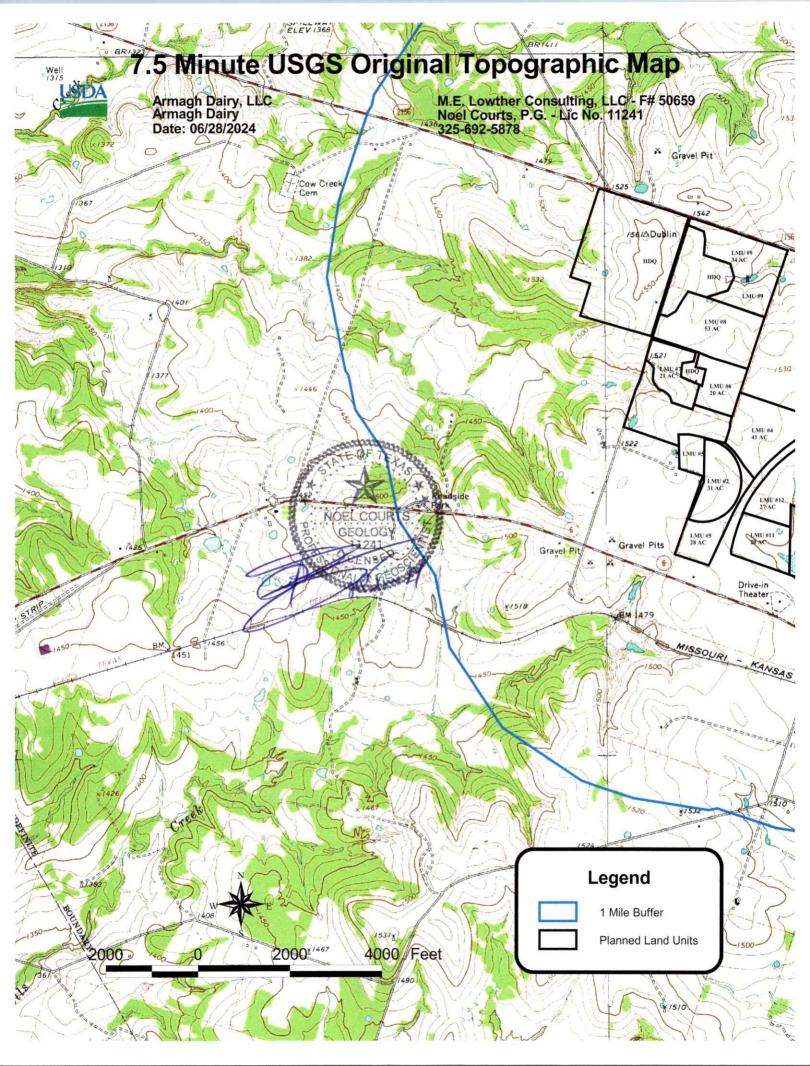
SUBCHAPTER B PERMIT APPLICATION MAJOR AMENDMENT WQ0004844000

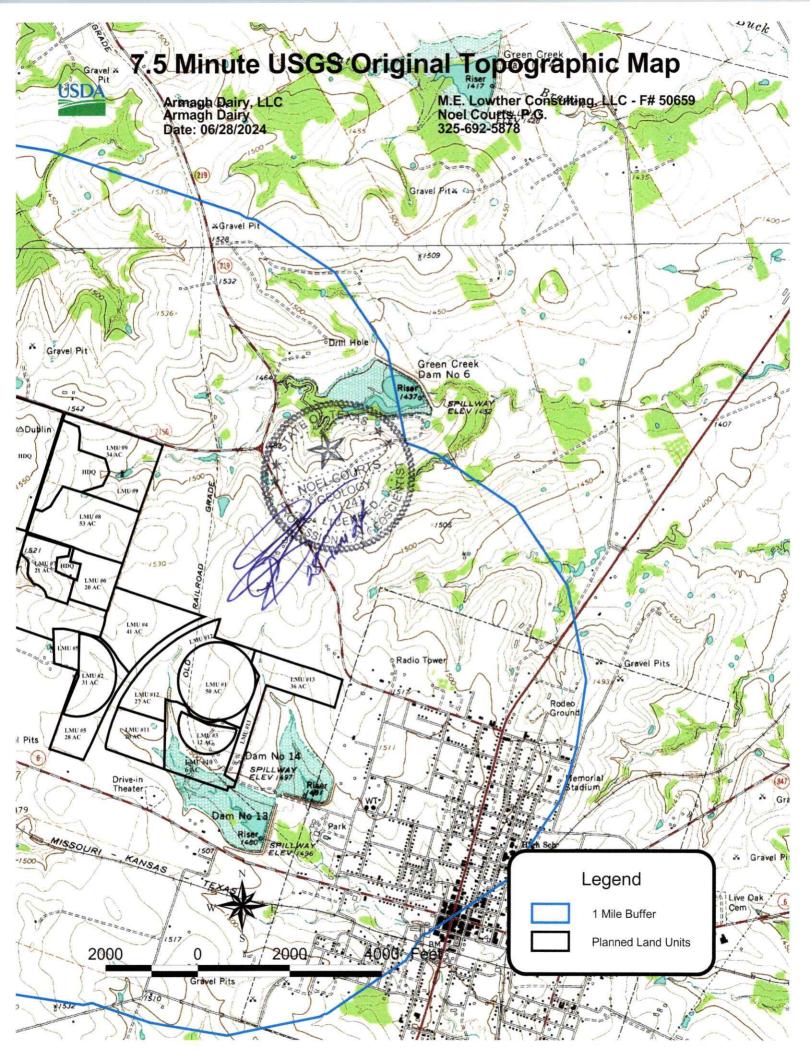
SECTION 2: FACILITY MAPS

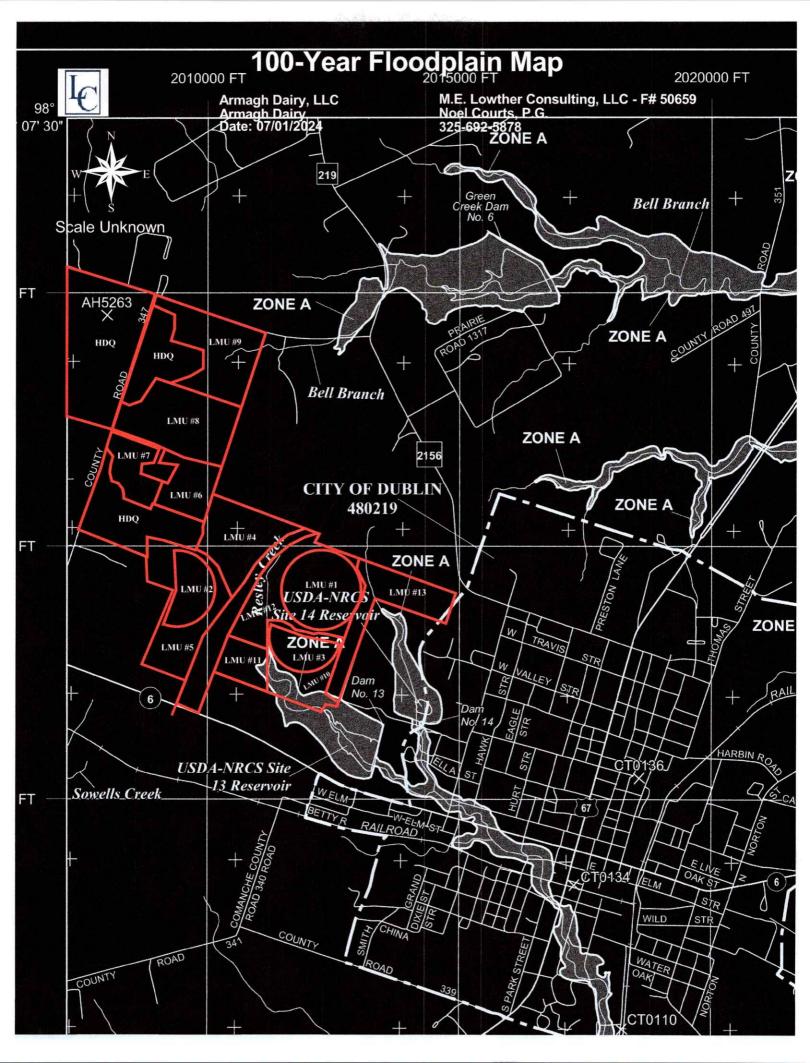
- SITE PLAN MAP
- LAND MANAGEMENT UNIT (LMU) MAP
- VICINITY MAP
- ${\color{red} {\Bbb E}}$ Original 7.5 minute USGS Quadrangle Map
- 100 YEAR FLOODPLAIN MAP
- RUNOFF CONTROL MAP
- SOILS MAP
- ADJACENT LANDOWNERS MAP & LIST

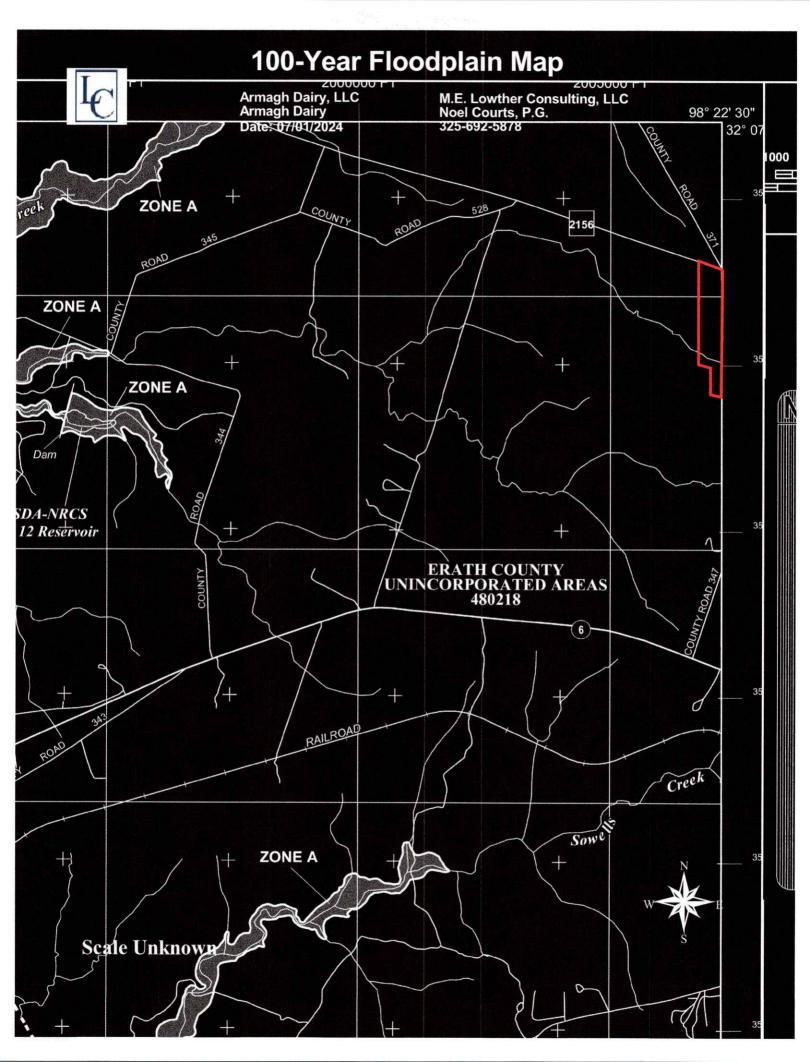








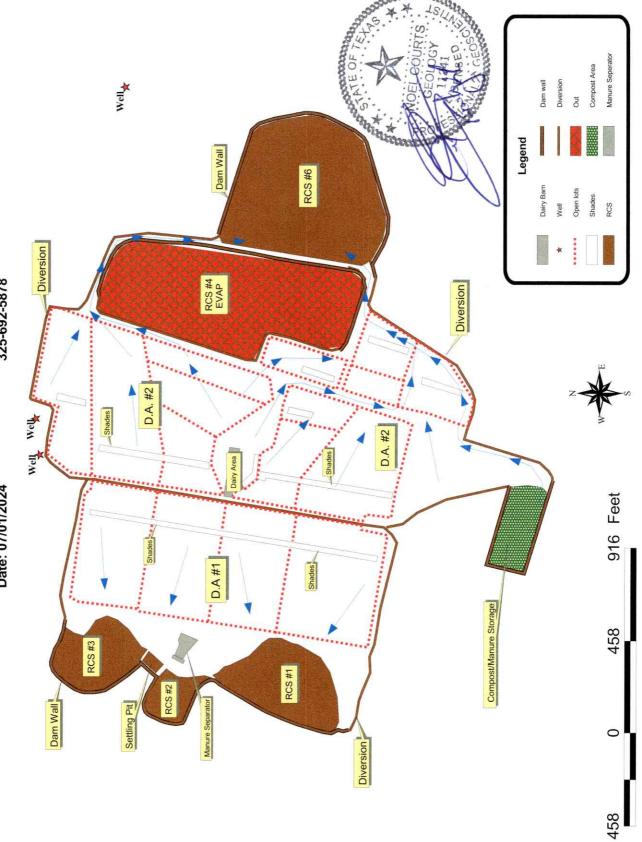




Runoff Control Map

Armagh Dairy, LLC Armagh Dairy Date: 07/01/2024

M.E. Lowther Consulting, LLC - F# 50659 Noel Courts, P.G. - Lic No. 11241 325-692-5878



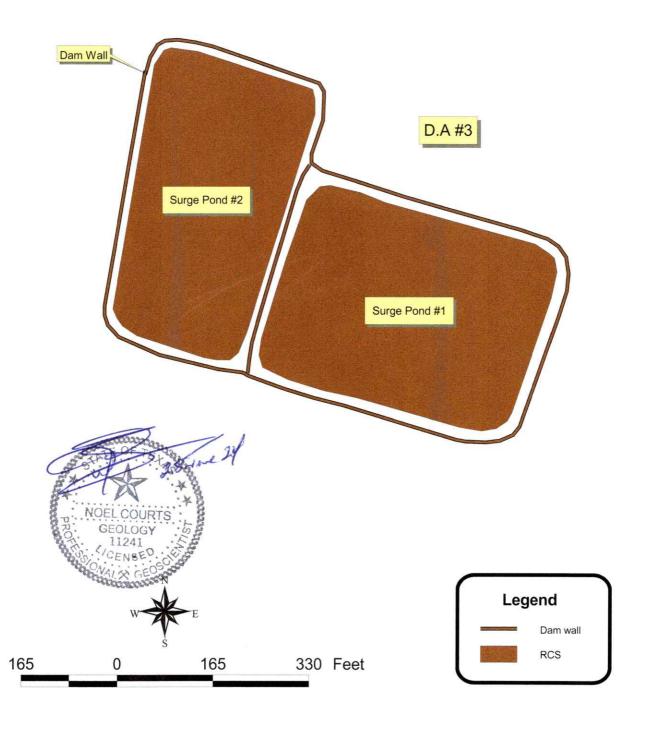




Runoff Control Map (Surge Ponds)

Armagh Dairy, LLC Armagh Dairy Date: 06/28/2024 M.E. Lowther Consulting, LLC - F# 50659 Noel Courts, P.G. - Lic No. 11241 325-692-5878

All surface water is diverted away from the Surge Ponds. The only water that enters the Surge Ponds is direct rainfall and irrigation water transferred to the Surge Ponds from D.A. #1 & D.A. #2.



32° 7′ 25″ N

32° 7' 25" N



32° 5′ 10" N

Map Scale: 1:20,300 if printed on A portrait (8.5" \times 11") sheet. Meters 1800 300 1200 ___Feet 3000 0 500 1000 2000 3000 Map projection: Web Mercator Corner coordinates: WGS84

98° 20' 50" W

32° 5' 10" N

Conservation Service Natural Resources

MAP LEGEND

M 8 Soil Map Unit Polygons Area of Interest (AOI) Soil Map Unit Points Soil Map Unit Lines Special Point Features Area of Interest (AOI) Soils

Special Line Features Very Stony Spot Stony Spot Wet Spot Other

Source of Map: Natural Resources Conservation Service

Coordinate System: Web Mercator (EPSG:3857)

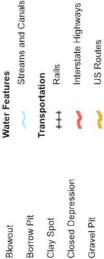
Web Soil Survey URL:

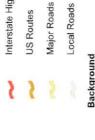
Please rely on the bar scale on each map sheet for map

measurements.

The soil surveys that comprise your AOI were mapped at

MAP INFORMATION





Gravelly Spot

Maps from the Web Soil Survey are based on the Web Mercator distance and area. A projection that preserves area, such as the projection, which preserves direction and shape but distorts Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as Survey Area Data: Version 20, Sep 5, 2023 Erath County, Texas of the version date(s) listed below. Soil Survey Area:

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger. Date(s) aerial images were photographed: Jan 26, 2021—Jan

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Spoil Area











Marsh or swamp

Lava Flow

Landfill

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot Sandy Spot Severely Eroded Spot

Slide or Slip

Sinkhole

Sodic Spot



USDA

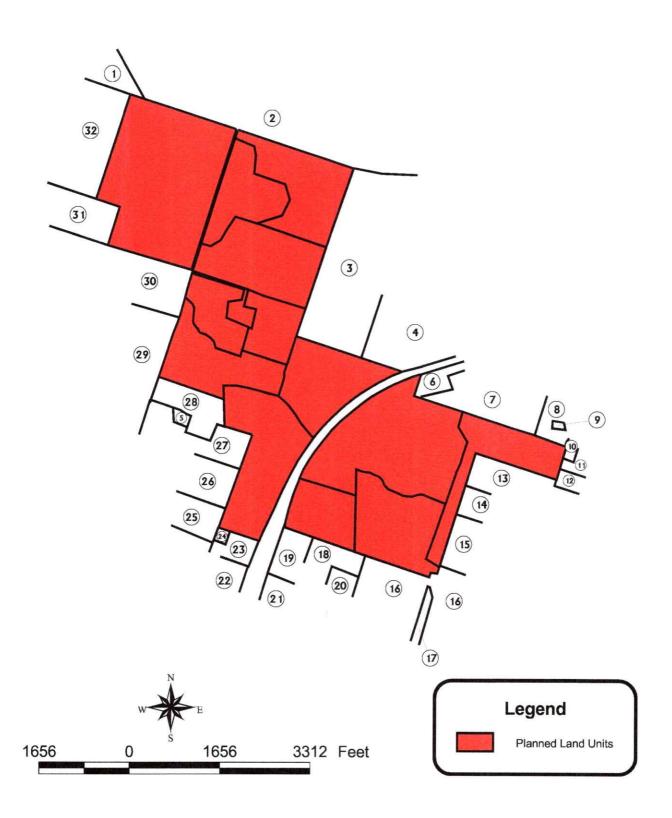
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BdC	Bolar-Denton complex 3 to 5 percent slopes	1.0	0.1%
DeB	Denton silty clay, 1 to 3 percent slopes	201.6	29.1%
HfD2	Hico-Fairy complex, 3 to 8 percent slopes, moderately eroded	4.2	0.6%
НоВ	Slidell clay, 1 to 3 percent slopes	114.9	16.6%
РсВ	Purves clay, 1 to 3 percent slopes	47.3	6.8%
PcC	Purves clay, 3 to 5 percent slopes	4.8	0.7%
Pd	Purves-Dugout-Maloterre complex, 1 to 20 percent slopes	318.6	46.0%
Totals for Area of Interest		692.5	100.0%

Adjacent Landowners Map



Armagh Dairy, LLC Armagh Dairy Date: 08/05/2024 M.E. Lowther Consulting, LLC - F# 50659 Noel Courts, P.G. - Lic No. 11241 325-692-5878



TREY & MORGAN STEWART 455 TENNYSON DR. STEPHENVILLE, TX 76401

MAP NUMBER -1

WAYNE WAGNER 11963 CR 355 DUBLIN, TX 76446 MAP NUMBER - 4

DORMAN & LINDA WAY 1025 N FM 219 DUBLIN, TX 76446 MAP NUMBER - 8

MARIA FACIO 741 CLIFTON ST DUBLIN, TX 76446 MAP NUMBER - 11

LLOYD JO PHARISS 12 WOODLAND TRAIL DUBLIN, TX 76446 MAP NUMBER - 14

EDITH ELIZABETH QUIRL 6976 HWY 16 DUBLIN, TX 76446 MAP NUMBER - 17

SHAMROCK STORAGE DUBLIN, LLC 2130 W SH 6 DUBLIN, TX 76446 MAP NUMBER - 20

JOHN & SANDRA HODGES 1800 WARWICK CRESCENT CIR ARGYLE, TX 76226 MAP NUMBER - 23

ROBERTO & SYNTHIA HERNANDEZ 5895 S SWEET LILAC PLACE TUSCON, AZ 85747 MAP NUMBER - 28

TYSON CLICK
P.O. BOX 998
STEPHENVILLE, TX 76401
MAP NUMBER - 31

SHANNA CROUCH 2366 FM 2156 DUBLIN,TX 76446 MAP NUMBER - 2

JESUS BANDA 483 CR 528 DUBLIN, TX 76446 MAP NUMBER - 5

CHAMBERS FAMILY TRUST 975 N FM 219 DUBLIN, TX 76446 MAP NUMBER – 9

GARY & LINDA GREENWAY REVOCABLE LIVING TRUST 7 BRIARWOOD DUBLIN, TX 76446 MAP NUMBER - 12

TIMGAS PROPERTIES, LLC 2 RIDGEWOOD ST DUBLIN, TX 76446 MAP NUMBER - 15

SLYVIA WOODS 2436 W SH 6 DUBLIN, TX 76446 MAP NUMBER - 18

ELITE MUTUAL INVESTMENTS, LLC 1608 GRACE DR EULESS, TX 76039 MAP NUMBER - 21

ROBIN RICHMOND 3154 W SH 6 DUBLIN, TX 76446 MAP NUMBER - 24

JENTRY BONKE 2512 CR 347 DUBLIN, TX 76446 MAP NUMBER - 29

VANDER HORST ENTERPRISES, LLC P.O. BOX 500 DUBLIN, TX 76446 MAP NUMBER - 32 JIMMY HENDERSON & EDWARD GAYLORD II 1525 CR 495 DESDEDOMA, TX 76445 MAP NUMBER - 3

CROELL, LLC 2010 KENWOOD AVE NEW HAMPTON, IA 50569 MAP NUMBER – 6 & 7

MCPHERSON PATSY CAROLYN TRUST 5913 NW 72ND PLACE OKLAHOMA CITY, OK 73132 MAP NUMBER - 10

JEFF TIMMMONS 2 BRIARWOOD DUBLIN, TX 76446 MAP NUMBER - 13

STEWART MACK P.O. BOX 5004 GRANBURY, TX 76049 MAP NUMBER - 16

WWC ENTERPRISES, INC P.O. BOX 17 DUBLIN, TX 76446 MAP NUMBER - 19

TOBY MILLS 15401 FM 205 STEPHENVILLE, TX 76401 MAP NUMBER - 22

JOSE BARERRA 257 W. COLLEGE ST STEPHENVILLE, TX 76401 MAP NUMBER – 25/26/27

JE WOFFORD ESTATE C/O CHARLES NABORS 117 WOFFORD ST DELEON, TX 76444 MAP NUMBER - 30

ARMAGH DAIRY, LLC P.O. Box 2 DUBLIN, TEXAS 76446 ERATH COUNTY

SUBCHAPTER B PERMIT APPLICATION MAJOR AMENDMENT WQ0004844000

SECTION 3: RCS DESIGN CALCULATIONS (WATRNUTR), CAPACITY, & HYDROLOGIC CONNECTION CERTIFICATIONS

- WATER BALANCE RCN, AND WATRNUTR CALCULATIONS DA #1, #2-3, & DASB
- © CAPACITY CERTIFICATIONS RCS'S #1-4, #6, SB #1 & SB #2
- LINER CERTIFICATIONS RCS'S #1-4, #6, SB #1 & SB #2, SETTLING PIT
- CLOSURE PLAN & COMPLETION LETTER RCS #5



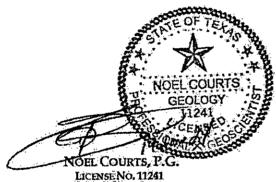
ARMAGH DAIRY, LLC

DAIRY BARN MTV, SLUDGE & OPEN LOT SLUDGE CALCULATIONS FOR D.A. #1, D.A. #2
D.A. #3
Revised 6/19/2024

ARMAGH DAIRY, LLC P.O. BOX 162 HICO, TEXAS 76457 ERATH COUNTY, TEXAS

REPORT FOR: MIKE MCDOWELL

PREPARED BY:



M.E. LOWTHER CONSULTING, LLC

Jim C. Wyrick

Soil Science
License Number

770

OCENSE

ON ALL & GEO 125/24

EICENSE NO. 770

EAST TEXAS ENVIRONMENTAL SERVICES

M. BERRY, P.E. To SEGISTER STONAL ENGINEERS OF TEXAS

M. BERRY, P.E. To SEGISTER STONAL ENGINEERS

FIRM NO. 21204

SEAL NO. 44452

Obligo 24

ARMAGH DAIRY, LLC - Dairy Barn

SLUDGE VOLUME

All of the waste from the dairy barn at Armagh Dairy goes into a Screen Separator that removes 19.4% of the solids produced. From the Screen Separator the remaining waste goes through a settling pit that removes 20% of the solids produced. Any manure separating facilities have 10%-65% total solids efficiency according to NRCS Practice Standard Code 632—"Solid/Liquid Waste Separation Facility". The adjusted total live weight contributing to the waste volume is 72,917 pounds @ 1,400 lbs/cow. The sludge from the dairy barn is calculated below:

Adjusted Live weight Contributing Manure	72,917lbs
Vibratory Screen Separator	19.4%
Adjusted Live weight	58,771 lbs
Settling Basin Efficiency	20%
Adjusted Live weight	47,017,1bs
Sludge Accumulation Rate cuff/year/lbs live weight	0.25

Sludge Volume = (47,017 lbs) (0.25 cu ft/year/lbs live weight) = .27 ac-ft/yr X 20yr = 5:40 ac-ft 43,560 cu ft/ac-ft

ARMAGH DAIRY, LLC - Dairy Barn

MINIMUM TREATMENT VOLUME

All of the waste from the dairy barn at Armagh Dairy goes into a Screen Separator that removes 19.4% of the solids produced. From the Screen Separator the remaining waste goes through a settling pit that removes 20% of the solids produced. Any manure separating facilities have 10%-65% total solids efficiency according to NRCS Practice Standard Code 632 – "Solid/Liquid Waste Separation Facility". The MTV from the dairy barn is calculated below:

Volatile Solids Produced	787 lbs/day
Vibratory Screen Separator	19.4%
Adjusted Volatile Solids Entering RCS	634 lbs/day
Settling Basin Efficiency	20%
Actual Volatile Solids Entering RCS	507 Ibs/day
Design Loading Rate (lbs VS/1000 cu.ft./day)	4.69
Treatment Volume = (507 lbs/day) (1000 cu.ft) = 4.69 lbs VS	108,102 cu.ft.
Treatment Volume = 108,102 cu.ft. =	248 Ac-Ft
27.cu.ft./cu.yd. x 1613.33 cu.yd./ac-ft	A CONTRACTOR



ARMAGH DAIRY, LLC

SLUDGE VOLUME FROM OPEN LOTS

OPEN LOT D.A. #1:

Sludge storage for a ten year period may be calculated using the following equation: Sludge Volume = 25% x (25yr-10dy storm volume runoff from open lots)

For this facility the 25yr-10dy storm volume from open lots = 18.40 ac-ft

Open Lot Volume = $.25 \times 18.40 = 4.60$ for a ten year period.

The planned sludge cleanout interval for RCS #1, 2, 3 is 20 years; therefore, allotted sludge volume for the proposed RCS is as follows:

4.60 ac-ft (20 years) = 9.20 ac-ft 10 years

OPEN LOT D.A. #2:

Sludge storage for a ten year period may be calculated using the following equation:

Sludge Volume = 25% x (25yr-10dy storm volume runoff from open lots)

For this facility the 25yr-10dy storm volume from open lots = 38.00 ac ft

Open Lot Volume = $.25 \times 38.00 = 9.50$ for a ten year period.

The planned sludge cleanout interval for RCS #6 is 25 years; therefore, allotted sludge volume for the proposed RCS is as follows:

9.5 ac-ft (7 years) = 6.55 ac-ft 10 years

OPEN LOT SURGE BASINS D.A.3:

Sludge storage for a ten year period may be calculated using the following equation:

Sludge Volume = 25% × (25yr-10dy storm volume runoff from Total Design Runoff Volume)

For this facility the 25yr-10dy storm volume from Total Design Runoff Volume = 7.40 ac-ft

Open Lot Volume = $.25 \times 7.40 = 1.85$ for a ten year period.

The planned sludge cleanout interval for Surge Basin 1&2 is 20 years; therefore, allotted sludge volume for the proposed RCS is as follows:

1.75 ac-ft (20 years) = 3.70 ac-ft 10 years

II - Armagh Dairy, LLC

OPERATION:

Armagh Dairy, uses a manual scrape system for the lanes in Drainage Area #1 and uses approximately 3 gal/hd/day for a total use of 3,216 gal/day to scrape the lanes. Clean up and wash water used for the Dairy Barn is approximately 7 gal/hd/day for a total use of 3,500 gal/day. Other water that enters the system in D.A. #1 is approximately 5 gal/hd/day for a total use of 2,500 gal/day. The total Processed Generated Wastewater Volume totals 10,107 gal/day.

*See Attachment for RCN for LMU's.

** See Attachment for RCN for Area in Between Open Lots and RCS's.

CERTIFICATION:

OEL COURTS GEOLOGY

Prepared By:

Lowther Consulting, LLC

Prepared By:

Jim C. Wyrick

C Wyrici R 770

East Texas Env. Services x

Prepared By:

M. Berry, P.E. Firm No. F-21204

Seal No. 44452

06/30/24

ARMAGH DAIRY - TOTAL RUN D.A. 1 - 2 - 3 Revised 6/19/2024 AGRICULTURAL WASTE MANAGEMENT PLAN

ERATH COUNTY

repared by:

Noel Courts, P. Grands

Professional Geoscientist

M.E. Lowther Consulting, LLC

Jim C Wyrick, Pay.
Professional Geosden

East Texas Environmental

CENSED SO

M. Berry, P.E. MA MORTON BERRY

Firm No. F-21204

Seal No. 44452

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IN COOPERATION WITH:

NATURAL RESOURCES CONSERVATION SERVICE UNITED STATES DEPARTMENT OF AGRICULTURE

MANURE PRODUCTION DATA FOR CONFINED ANIMAL FEEDING OPERATIONS

TYPE OF ANIMAL (Dairy=0, Swine=1, Laying Hens=2, Beef Feedlot=3, Sheep Feedlot=4, Horses=5, Turkeys=6, Broilers=7) => 0

Feeding Facilities For: Dairy

	Buildings,			
	Concrete Pens	Open		
	& Alleys	Lots	Total	
Number of Animals	500	500		
Average Liveweight per Head, lbs/hd	1,400	1,400		SALL
Total Liveweight, lbs	700,000	700.000		- * · · · · · · ·
Confinement Period, hours/hd/day	Ž.5	21.5	24,0	Z*:
Adjusted Total Liveweight, lbs	72,917	627,083	700,000	MAX NORTON BE
Wet Manure Production, Ibs/day	7,438	63,963	71,400	44452
Dry Manure Production, lbs/day	1,072	.9.218	10.290	ON COISTERE
Dry Manure Production, tons/year	196	1,682	1,878	ON OWAL EN
Volatile Solids (VS) Production, lbs/day	787.	6,766	7,55 3	
Total Nitrogen Production, lbs/day	40	343	383	
Total Phosphorus (P2O5), lbs/day	Ž0	169	189	111/27
Total Potassium (K2O), lbs/day	.34	290	324	1 140
Sodium Production, Ibs/day	6	49	55	M/2176 obly0
COD Production, lbs/day	977	8,403	9,380	•
BOD5 Production, lbs/day	152	1,304	1,456	

Engineering Job Approval Authority Job Class for Ag. Waste Management System, meets specification	
Remarks	Date:

MANURE PRODUCTION DATA FOR CONFINED ANIMAL FEEDING OPERATIONS

TYPE OF ANIMAL (Dairy=0, Swine=1, Laying Hens=2, Beef Feedlot=3, Sheep Feedlot=4, Horses=5, Turkeys=6, Broilers=7) => 0

Feeding Facilities For: Dairy

indigence of the control of the cont	Buildings,		.,,, . , .
	Concrete Pens	Open	
	& Alleys	Lots	Total
Number of Animals	0.	1.799	
Average Liveweight per Head, lbs/hd	Ö	Ĭ.200	
Total Liveweight, lbs	Ö	2,158,800	
Confinement Period, hours/hd/day	0.0	24.0	24.0
Adjusted Total Liveweight, lbs	0	2,158,800	2,158,800
Wet Manure Production, lbs/day	Ó.	220,198	220,198
Dry Manure Production, lbs/day	Ó	31,734	31,734
Dry Manure Production, tons/year	.0	5,792	5,792
Volatile Solids (VS) Production, Ibs/day	0	23,293	23,293
Total Nitrogen Production, lbs/day	0	1,181	1,181
Total Phosphorus (P2O5), Ibs/day	.0	583	583
Total Potassium (K2O), lbs/day	Ö	1.000	1,000
Sodium Production, lbs/day	0	168	168
COD Production, lbs/day	0	28,928	28,928
BOD5 Production, lbs/day	Ö	4,490	4,490

This plactice, Ag. waste wanagement system, meets specifications, signed by.	Engineering Job Approval Authority Job Class for Ag. Waste Marie Practice, Ag. Waste Management System, meets specification	
Remarks Date:	The sould be seen as a second	Date:

VOLUME OF MANURE & WASTEWATER FROM CONFINEMENT BUILDINGS

TINOME COMPRESSIE	MIL DO			
Wet Manure Production	= '	892	gal/day	
Water Used for Manure Removal		•		
a. Dry Manure Production	Ħ	1072	lbs/day	
b. Water Volume Required for Manure Removal 1. Flush Systems:				
(Enter gallons water per pound of dry	æ≯	: 0:		
manure production, range 8-12 gal/lb)		₩.		
Total flush water	=	ĝ	gal/day	
2. Manual Scrape/Wash System (Enter gallons of water per pound of dry manure production,				
Range: 3 - 6 gal/lb)	=>	3		
Total manual wash water	, 388 .	3216	gal/day	نه د که نم
Cleamp and Washwater (Default=10 gal/hd/day)	,=>,	7.	gal/hd/day	,
	' =	3500	gal/day	5. MA
Other Water That Enters Wastewater System	⇔≻	. 5 ;	gal/hd/day	4
[e.g. drinking water, etc.(12 gal/hd/day)].	***	2500	gal/day	, 1 ₁
Total Process Generated Wastewater Volume		X		
Daily Volume	== :	10107	gal/day	
Less Volume of Recycled Wastewater Used for				
Manure Removal	= >∙	10	gal/day	
Design Wastewater Storage Volume, Minimum Allo	wable			
Minimum Storage Days (Use Exhibit 2)*	= >		days	
Minimum Design Storage Volume	77-	0.74	ac-ft	
Net Manure and Wastewater Volume for Land Appli	cation			
Monthly Volume	==	0.94	ac-ft/month	
Annual Sludge Accumulation Rate, ac-ft	=	0.27		
Desired Sludge Storage Volume in Pond	=>	24.85	ac-ft	
Sludge Cleanout Interval	= 20		7yr (RCS:6)	20yr (SP 13:2)
Design Sludge Accumulation Storage Volume (Not to be less than I Year accumulation)	, , ,,,,,	24.85	ac-ft	
*Use Exhibit 2 of Texas Water Commission regulat	ions for			
your particular location.				

ESTIMATED VOLUME OF RUNOFF FROM OPEN LOTS

				6.1
Total area draining into Runoff Control Structure (R	CS)			
a. Area of open lot surface	≠ >	63.53	acres	
b. Area between open lot surface and RCS	=>	9.65	acres	
c. Surface area of RCS	=>	23:25	acres	
d. Total area (#1.a +#1.b + #1.c)	111	96,43	acres	
Design rainfall (25-year frequency, 10-day)				
duration storm), inches (Use Exhibit 1)	i) =>	11.90	inches	
Design runoff depth, inches (Use exhibit 3)				~~ ***** *.
a. For Open Lot Surface * CN	=> .	90		OF TEXAS
		10,66	inches	
b. For Area Between Lots and RCS ** CN	= >:	87		W NORTON BERRY
			inches	MAX NOR 44452
c. For Surface Area of RCS		ti no.	inches	TO SECISTER OF
c. not similate Wieskin Kess		TESO	iniches	SSIONALE TO
Design rimoff volume from 25-year, 10-Day storm				1112
a. For Open Lot Surface	€ 29-	56.5	ac-fi	ومورم حالا
b. For Area Between Lots and RCS	<u></u> ;==;	8.2	ac-ft	12 (co) 2
c. For Surface Area of RCS	=	23.1	ac-ft	1 20 20 4 POLTSO 12
d. Total Design Runoff Volume	≖,	87.7	ac-ft	•

NOTE: Runoff Control Structures must be capable of storing Design Runoff Volume plus Design Storage Volume, if runoff and process generated wastewater streams are combined.

SUMMARY OF REQUIRED AND DESIGNED STORAGE PONDS

Minimum Design Wastewater Storage Volume	0.74 ac-ft
Minimum Design Runoff Storage Volume	87.72 ac-ft
Sludge Accumulation Storage Volume	27,33 ac-ft
Additional Capacity Allowance	43,90 ¹ ;ac-ft
Total Capacity Designed	159.70° ac-ft

Primary Anaerobic Manure Treatment Lagoons, Sheet 5 of 10,, Use Where Applicable.

^{*} Use NRCS soil cover complex curve No. 90 for unpaved (soil) lots and curve No. 95 for concrete surfaces.

^{**} Use appropriate NRCS soil cover complex curve number for particular type of cover. Contact local Natural Resources Conservation Service field office for assistance.

DESIGN BASIS FOR PRIMARY ANAEROBIC MANURE TREATMENT LAGOONS

(WHERE APPLIC	ABLE)		
Design Factor	· · · · · · · · · · · · · · · · · · ·	Dairy	
Adjusted Total Liveweight Contributing Manure			
to Lagoon	å=	47017	Îbs
Recommended Unit Treatment Volume (see footnote)	=>	0.00	
(RUTV), cubic feet/pound liveweight	=	3.00	
Total Treatment Volume	imr .	-3.7.M	We also
	P GET		A True
Design checks (see footnotes):	ž [U]	Militia	
a. Volatile Solids (VS) Loading Rate (1984)		0.0056	
b. Hydraulic Park Fri	Ħ	104	days
c. Estil Bludge Cleanout Interval,			
1. Sludge Accumulation Rate,	₩,	0.250	
cu ft/year/lb liveweight			
2. Sludge Cleanout Interval	=	6:0	years
Additional Capacity Allowance for:			
a. Design Runoff Volume, (one stage logoons (=>-	**	ac-ft
b. Sludge storage	=>		ac-ft
ć: Additional Storage	=>	0,0	ac-ft
Total Primary Lagoon Capacity	≟= ;	3.2	ac-ft

Notes: 2. If user entry area equals 0, then default values are used (dairy=3, swine=1.75, poultry, laying hens=2.5, beef=2, sheep=2, horses=2). User may specify alternate value which will override template default.

- 4.a. VS Loading Rate—Volatile Solids Production (Worksheet I, #10) / Total Treatment Volume. Desired range is 0.0025-0.0040 lbs VS/day/cu ft for odor control.
- 4b. Hydraulic Retention Time-Total Treatment Volume / Total Manure and Wastewater Volume. Desired range is 160-400 days for good treatment.
- 4.c. Sludge Cleanout Interval (when half full)

Interval = Total Treatment Volume (cuft) x 0.5

Adj. Total Live Wt. x Sludge Accum. Rate

LAND AREA FOR DISPOSAL OF MANURE OR EFFLUENT FROM TREATMENT LAGOONS,

BASED ON PLANT-AVAILABLE NITROGEN (PAN)

			Buildings		Open Lots		
Total Daily Nitrogen Production		** **** **** ***	40	more->	343	lbs/day	
Total Annual Nitrogen Production		==	14558	more->	125200	lbs/yr	
Percent Nitrogen Loss from manure storage					**		
or treatment system*		=>	20.	more->	50	percent	
Annual Nitrogen Loss from manure storage							
or treatment system		=	2912	more->	62600	lbs/yr	
Total Annual Nitrogen Remaining		#	11647	more->	62600	lbs/yr	
Availability of Nitrogen in Manure or Effluent,	6						
(Normal range is 80-95% in lagoon effluent;							
50-80% in fresh or pit-stored manure; or 40-509	6	:	غان بەر. ئالىنىدى	,			
in feed lot manure)		€÷≯	80	more->	50	percent	
Annual Plant-Available Nitrogen (PAN) Applie	d to Soil		9317	more->	3,1300	Ibs/yr	
PAN Losses from Soil Surface Application**	賴軟	=>	20:	more->	20	percent	
PAN Losses from Soil Surface Application		767	1863	more->	6260	lbs/yr	
PAN Entering Soil		#	7454	more->	25040	lbs N/yr	
Land Required for Various PAN Application Re	ites:						
Assumed PAN Application	Buildi	ngs		Open Lots		Total	
Rate, lbs/ac/yr	Acre	s-		Acres		Acres	
100	75.		<u>. L.</u> .	250	(200)	325.	
150	50:		+	167	:===	217	
200	37		+*.	125	7 000 -1	162	
<u>300</u> .	25		1	83	(=2)	108	
400	19		+-	63	≔ ′	81.	

^{*}Nitrogen Loss from Lagoon Surface-Normal loss is 40-65% for primary treatment lagoons with 200 days or more storage; 10-20% from liquid manure settling basins or storage pits; and 40-50% from open feedlot surface.

MAX NORTON BERRY

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F-21204

^{***} Normal range of nitrogen loss from soil surface is 15-35% for surface application or, 5% for soil injection. Losses are highest in warm weather and on high pH soils.

LAND AREA FOR DISPOSAL OF MANURE OR EFFLUENT FROM TREATMENT LAGOONS,

BASED ON PLANT-AVAILABLE NITROGEN (PAN)

		Buildin	gs	Open Lots	
Total Daily Nitrogen Production	-	-	0 more->	1181	lbs/day
Total Annual Nitrogen Production	#	<u> </u>	0 more->	431015	lbs/yr
Percent Nitrogen Loss from manure storage					
or treatment system*	==)	· 2	0 more->	50	percent
Annual Nitrogen Loss from manure storage					
or treatment system	3	= ,	0 more->	215508	lbs/yr
Total Annual Nitrogen Remaining	-	. ,	0 more->	215508	lbs/yr
Availability of Nitrogen in Manure or Effluent,% (Normal range is 80-95% in lagoon effluent;					
50-80% in fresh or pit-stored manure; or 40-50%					
in feed lot manure)	يُنت	. :8	0 more->	<i>5</i> 0;	percent
Annual Plant-Available Nitrogen (PAN) Applied	to Soil		0 more->	107754	lbs/ÿr
PAN Losses from Soil Surface Application**	** =>	2	0 more->	20	percent
PAN Losses from Soil Surface Application	=	: . ,	0 more->	21551	lbs/yr
PAN Entering Soil		• ,	0 more->	86203	lbs:N/yr
Land Required for Various PAN Application Rai	tes:				
Assumed PAN Application	Buildings	***************************************	Open Lots	······································	Total
Rate, lbs/ac/yr	Acres		Acres		Acres
100	0	+	862	.=-	862
150	Ö.	4:1	575	'= '	575
200	0	+	431	= ;	431
300	0	#	287	*##	287
400	0	+	216	<u> </u>	216

^{*} Nitrogen Loss from Lagoon Surface—Normal loss is 40-65% for primary treatment lagoons with 200 days or more storage; 10-20% from liquid manure settling basins or storage pits; and 40-50% from open feedlot surface.

MAX NORTON BERRY

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^{**} Normal range of nitrogen loss from soil surface is 15-35% for surface application or, 5% for soil injection. Losses are highest in warm weather and on high pH soils.

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·					ROD	GEI	ANA			 		·	
	DRAINAC			ACRES				CONTRO	L STRUCT				
MANURE	PROD. RO	CS AREA	23,25	ACRES		LOCA	TION NO.	24	FIEL	D OFFICE	STEPHE	NVILL	
	4									COUNTY	ERATH		
SLUDGE	ACCUMU	ILATION	27.33	AC FT		30-DAY	CURVEN	IMBERS	CŘĈ	PS FOR	VATER D	ÉMÁN	
MIN. WAS				AC-FÍ		F	POND	74.0		mudagrass		AC.	
	TIONAL S											- 4	
ADDE					7 890 Pa 7	** ********	FIELD	.60.0		uda/SmGr		AC	
		BTOTAL		AC-FT			ENCY, %	75.00	·	nım/SmGr		AC	
	R-10DAY						TH, IN/YR.	2.79	S	mall Grain		AC	
TOTAL	POND C	PACITY	159.70	AC-FT	EVAI	ORATIO	N COEFF.	69.70	Assume	d Seepage	0.0	ACET	
			INFLOW		EFFECTIVE	OROSS EVAR	NET POND	CROP	ACTUAL	STORAGE	SURF AREA	SPILE	
MONTH	RAINFALL	RUNCEF	TOPOND	INFLOW	RAINFALL	EVAP	EVAP.	DEMAND	ŴĮĮĦĎŖĄŴĮ.	at E.O.M.	a EOM.		
	(D) IN	(2) IN.	(3) AC-FT	.(3a) AC-FT	(4) IN.	. (5) IN.	(8) AC-FT	(10) ACET	÷(10b) AC-FT	(II) AC FT	(121AC	()3) AC	
4.5	7					·	• • •	.	45	27,33	19.99	0.00	
JAN.	1.70	0.02	1.77	0.94.	1.68	2.50	1.26	6.27	1.46	27,33	19.99	0.00	
FEB	1.83	0,03	2,20	0.94:	1.80	2.73	1.47:	17.47	1.67	27,33	19.99	0.00	
MAR	1:81	0,03	2.13	0,94.	1.78	4.17	3.08;	64.73	0.00	27.33	19.99	0.00	
APR	3,61	0.59	10,75	0.94;	3.05	.4.75	3,24:	73.65	8,46	27.33	19.99	0,00	
MAY	4:50	1:02	15,85	0.94	3,48	5.63	4.17	79.20	12,62	27.33	19.99	0.00	
IIN	2.50	04.7	.4.89	0,94	2.33	7.75	5.83.	44.75	0.00	27:33.	19.99	.0,00	
JUL	2.00	0.06	2.81	0,94	1,94	9,94	3.75	49.84)	30,00	27,33	19.99	0.00	
AUG	2.00	0.06	2.81	0.94	1.94	10.37	3.75	26:12:	0.00	27.33	19,99	.0.00	
SEP	3,25	0.43	8.60	0.94	2.82	\$.00	8.28	24.86	1.27	27.33	19,99	0.00	
OCT.	3,21	0.41	8,39	0.94	2,80	6.56	6.16	25.44:	3.18	27:33	19.99	0.00	
NOV	2.00	0.06	2.81.	0.94	1,94	4.38	3.75	11,24	0.00	27,33	19.99	0.60	
DEC	167	0.02	1.68	0.94	1.65	3.25	230 47,15	1.99	0.22	27,33	19.99	0.00	
TOTALS	30,11	291	64.69	11,33	27,20	70.03	47.15	425.55	28.87		Reset	Û.	
	30.11					70.03			28.87	Checks			
* * 15.		<u> </u>			<u></u>	<u> </u>							
*	-		STORA	GE-ARE	A TABLE	FOR RU	VOFF.CON	TROL ST	RUCTURE	,	, , , , , , , , , , , , , , , , , , ,		
STOR	AGE DAT	A TYPE	R	(C=CIR	CULAR, R	- RECTA	NGULAR, c	rs-STAC	E DATA)				
		CULAR	- •	•		NGULAR							
	DEPTH FT 0.0							WATER BUDGET VERIFIES THAT					
Si	DE SLOPI			S					DAY STORM RUNOFF STORAGE				
-	OP DIAME								ATION IS MAINTAINED:				
*.				•									

FREE BOARD, FT 2.00 BOTTOM WIDTH, FT 811.89

TOP WIDTH, FT 858.30 THROUGHOUT THIS CLIMATIC CYCLE. TOP LENGTH, FT 1100.00 **

SURFACE AREA, AC 21:67 VOLUME, ACFT 159.70

BOTTOM LENGTH, FT 1053:59: NOTE: USER INPUT VALUES FOR NUTRIENTS USED IN NUTRIENT BALANCE WORKSHEET!

DEPTH, FT	0.0; S	TAGE		STAGE STORAGE DATA SUMMARY						
FREE BOARD, FT	0.00		*,							
Leave Extra Rows at Bo	ttom with Bl	anks or Zeros	l _e	METHOD: RECTANGULAR						
ROW	DEPTH.	AREA		ROW	DEPTH	AREA	STORE	RE. WIDTH LEN		
	FT.	AC .		#	Fr.	AC	ACFT	ÉT	FI'	
BOTTOM:	0.00	(h00	133,	0	.0.00	19.64	0.00	811:89	1053,39	
1		ZE OF 5X	4s 1,	.1	0.77	19.84	15.27	816.53	1058.23	
2;	يتر في	·	* *	2	1.55	20.04	30.69	821.17	1062.87	
3	نبي مثر			3	2.32	20.24	46.26	825,82	1067,52	
4	7 *:		BERRY	4	3.09	20.44	61.99	830,46	1072.16	
Ş	MA	X NORTON		, 5 :	3.87	20.64	77.88	835:10:	1076,80	
6-	7,500	44452		6	4.64	20.85	93.92.	839,74.	1081,44	
7*	4.%	PEGISTE	P. C. T.	7	5.41	21.05	110,13	844.38	1086,08	
8	``````````````````````````````````````	ree o	رون معتقد الما	.8	6.19	21,26	126.49	849.02	1090,72	
.9:	•	10000000		9	6.96	21.47	143,01	853.66	1095.36	
10:			alt .	10	7:73	21.67	159:70	858,30		
.ļ1		1110	204 24	11:	8.73	21.94:	181:51	864:30	1106.00	
12.		1 7.7	204) CY BOE 25YR	12	9.73	22.22	203.59	870:30	1112.00	
₹		. 06	BOT, 25YR	-10DAY	3.58.	20.57	71:97	853.66	1095.36	
Į»				LLWAY	7.73	21.67	159.70	858,30	1100.00	
F				BOARD	9.73	22.22	203.59	870,30	1112.00	

WATER BUDGET ANALYSIS

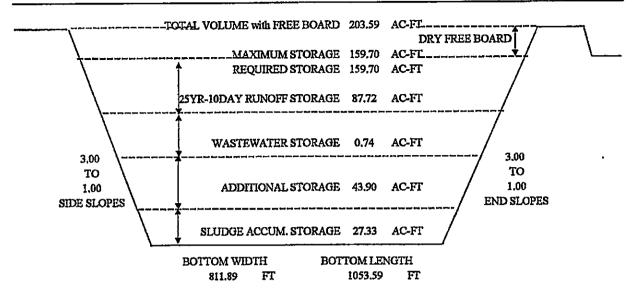
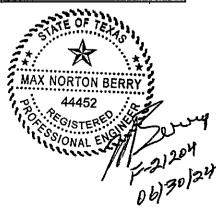


DIAGRAM OF RUNOFF CONTROL STRUCTURE

-		IPTIVE U		SPECIFIC	C CROP AI	REAS		NET CRO	OP DEMAND	(C.UEF	f.Rainf	'ALL)
FIELD	0	1,2,3	~ 0	0	0	٥	ď	1,2,3	0	0	0	0
VEGETATION	Bermudagrass Pastureland	Bermuda/SmGr Pastureland	Sorghum/SmGr Cropland	Small Grain Cropland	Grain Sorghum Cropland	Alfalfa Pastureland	Bermudagrass Pastrreland	Bermuda/SmGr Pastureland	Sorghum/SmGr Cropland	Small Grain Cropland	Grain Sorghum Cropland	Alfalfa Pastureland
JAN	0.99	2.49	1.50	1,50	0,00	1.10	0.00	0.81	0.00	0.00	0.00	0.00
FEB	1,35	4.05	2.70	2.70	0.00	1.50	0.00	2.25	0.90	0.90	0.00	0.00
MAR	3.33	10.13	6,80	6.80	0,00	3.70	1.55	8,35	5,02	5.02	0.00	1.92
APR	4.05	12,55	8.50	8.50	1.10	4.50	1.00	9.50	5.45	5.45	0,00	1.45
MAY	7.20	13.70	9.50	6.50	2.90	8,00	3.72	10.22	6.02	3.02	0.00	4.52
· JUN	8,10	8.10	7. 60	0.00	5,90	9.00	5.77	5.77	5.27	0,00	3.57	6.67
JUL	8.37	8.37	9.10	0.00	8.70	9.30	6.43	6.43	7.16	0.00	6.76	7.36
AUG	5.31	5.31	5,00	0.00	5.70	5.90	3,37	3.37	3.06	0.00	3.76	3.96
SEP	6.03	6,03	0.00	0.00	1.40	6.70	3.21	3.21	0.00	0.00	0.00	3.88
OCT	4.68	6.08	1.40	1.40	0.00	5.20	1.88	3.28	0.00	0.00	0.00	2.40
NOV	1,89	3,39	1.50	1.50	0.00	2,10	0,00	1.45	0.00	0.00	0.00	0.16
DEC	18,0	1,91	1.10	1.10	0,00	0,90	0.00	0,26	0.00	0.00	0.00	0.00



ARMAGH DAIRY, LLC P.O. Box 2 DUBLIN, TEXAS 76446 ERATH COUNTY

SUBCHAPTER B PERMIT APPLICATION MAJOR AMENDMENT WQ0004844000

SECTION 4: RECHARGE FEATURE CERTIFICATION AND SUPPORTING DOCUMENTS

- RECHARGE FEATURE CERTIFICATION STATEMENT
- RECHARGE FEATURE EVALUATION AND CERTIFICATION
- ATTACHMENTS
 - ➤ WELL LOCATION MAP
 - ➤ GEOLOGIC ATLAS MAP WITH LEGEND
 - > SOILS MAP WITH NON-TECHNICAL SOILS DESCRIPTIONS
 - > TWDB MAP WITH SUPPORTING LOGS
 - > TRRC MAP WITH SUPPORTING LOGS
 - > TCEQ MAP WITH SUPPORTING LOGS
 - ➢ WELL LOGS / PLUGGING REPORTS
 - ➤ WELL EXCEPTION REQUEST LETTER WITH PHOTOGRAPHS

RECHARGE FEATURE EVALUATION AND CERTIFICATION

Revised 7/1/2024

ARMAGH DAIRY, LLC P.O. Box 2 DUBLIN, TEXAS 76446 ERATH COUNTY, TEXAS

REPORT FOR: MIKE McDowell

WRITTEN BY:

NOEL COURTS, P.G.

PROFESSIONAL GEOSCIENTIST
TX LICENSE NO. 11241/FL LICENSE NO. PG3091/LA LICENSE NO. 754



M.E. LOWTHER CONSULTING, LLC FIRM #50659

ENVIRONMENTAL MANAGEMENT CONSULTANTS

GENERAL REMARKS

This recharge feature evaluation and associated certification was conducted at the request of Mr. Mike McDowell, Owner of Armagh Dairy, LLC. Norman Mullin, P.E. of Enviro-Ag Engineering, compiled the findings in a previous recharge feature certification dated June 10, 2009 for Aztex Dairy, Inc. Noel Courts, Geologist, reviewed, revised and updated information on Aztex Dairy, Inc. in 2014 and currently for Armagh Dairy, LLC, contained herein.

PURPOSE OF REPORT

The subject property is the location of a Concentrated Animal Feeding Operation (CAFO) with Retention Control Structures (RCS) and Land Management Units (LMU) for the application of wastewater. A retention control structure is any pond, pit, tank, basin, conveyance, or lagoon used to store and/or treat manure, litter, wastewater, or sludge. Waste would include any of the following: manure, litter, bedding, and feedwaste from animal feeding operations. Wastewater is any waste that comes into contact with manure, litter, bedding, or any raw material, intermediate, final material, or product used in or resulting from the production of animals, poultry, or direct products (i.e. milk, meat, or eggs). Wastewater also includes process-generated wastewater as well as precipitation. 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 wastewater from the retention control structure or land application site into the underlying aquifer as required in Title 30 Texas Administrative Code, Chapter 321, Subchapter B. The following records and/or maps from the following entities/agencies were reviewed to locate any recharge features: (a) Texas Railroad Commission (TRRC), (b) Texas Water Development Board (TWDB), (c) Texas Commission on Environmental Quality (TCEQ), (d) Natural Resource Conservation Service (NRCS), (e) owner of site, (f) an on-site inspection, and (g) previous land owner.

PROPERTY DESCRIPTION

The subject property is located in Erath County, on the south side of FM 2156, approximately one mile west of the intersection of FM 219 and FM2156 in Dublin, Texas. The property consists of approximately 379 applicable acres. Elevations of the property range from 1542 to 1490 feet above mean sea level (AMSL) (See Attachments – Well Location Map). The highest elevations are located along the northeastern boundary of the Headquarters Area along FM 2156. The lowest elevations are located along south central boundary of the property in LMU #10. The current land use of the property is agricultural (improved pastureland) over seeded with small grains. All acreage in the Land Management Units was calculated by subtracting all buffered areas.



SITE DESCRIPTION

The existing RCS's are located west, east and down slope of the dairy area, and Surge ponds located in the Headquarters Area south of LMU #6. RCS #1, 2, 3, 4, 5, 6 were constructed prior to 1988-1990. Glen Draper, P.E. certified the sizes of RCS #1-6 on September 16, 1999. RCS #1 has a certified capacity of 34.141 acre-feet, RCS #2 has a certified capacity of 4.464 acre-feet, and RCS #3 has a certified capacity of 20.806. These three RCS's (1-2-3) work as one RCS in Drainage Area #1 and have a combined capacity of 59.411 acre-feet. RCS#4 in Drainage Area #2 has a certified capacity of 81.294 acre-feet. RCS#6 in Drainage Area #3 has a certified capacity of 49.77 acre-feet. RCS #5 was pushed in and removed from the facility's design. A closure plan dated September 16, 2010 by Mr. Norman Mullin, P.E. and is enclosed this document as proof. Surge Pond #1 and #2 were surveyed by Enviro-Ag Engineering and SP #1 has a certified capacity of 27.31 acre-feet, and SP #2 has a certified capacity of 23.21 acre-feet. Surge Ponds #1 and #2 are located in Drainage Area #4 and act in series and have a combined capacity of 50.52 acre-feet of storage. All wastewater generated from the dairy area, sludge from the dairy barn, and the open lots in D.A. #1 are collected in RCS #1-2-3. RCS #6 will catch and contain all the runoff from the open lots in D.A. #2 as well as transferred water from D.A. #1. The Surge Ponds will catch and contain any direct precipitation as well as transferred water for irrigation from D.A. #1 and #2. Solid manure and compost will be stored within the open lot drainage area or designated areas (See Site Plan Map) and is then land applied at agronomic rates, hauled offsite to a compost facility, or to 3rd party for land application. Surge Pond #1 and Surge Pond #2 are used for irrigation and are dewatered to LMU #1, #2 or #3 using a center pivot irrigation systems.

DEFINITION OF RECHARGE FEATURE

For the purpose of this report, the definition of "recharge feature" shall be the same as the definition presented in 321.32 (50) (Definitions) of the Subchapter B Rules. Recharge feature is defined 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 an aquifer; exposed geologic formations that are identified as an aquifer; or a water course bisecting an aquifer."

LOCAL GEOLOGY

Erath County is dominated by the geologic formations of Lower Cretaceous age. The rocks dip to the southeast at 10 to 25 feet per mile. The geologic formations located within the permit are, using stratigraphic up succession, the Twin Mountains Formation, the Glen Rose Formation (Kgr), the Paluxy Formation (Kpa) and the Walnut Formation (Kwa) of the Lower Cretaceous age, and Alluvium (Qal). All of which are part of the Trinity Aquifer system that supplies groundwater to the area. The Paluxy and Walnut Formations outcrop all of Aztex Dairy, Inc.'s property (See Attachments – Geologic Atlas Map).

*The Twin Mountains and Glen Rose Formations underlie all formations within the property and its description was added to this Recharge Feature Certification.



Twin Mountains Formation (Ktm)

Also know as the Travis Peak Formation, the Twin Mountains Formation consists of three members. These three members include the Hensell Sand Member, the Pearsall Member, and the Hoston Sand Member. The Pearsall member is a clay rich member and acts as an aquiclude between the Hensell Sand and Hoston Sand Members.

Hoston Member - The Hoston Sand Member is the oldest of the Twin Mountains formation is approximately 350 feet in thickness. The Hoston is the Lower Trinity, and is composed of a red and white conglomerate, sandstone, claystone, shale, dolomite, and limestone. The Hoston Member, or Lower Trinity, yields small to large quantities of fresh to slightly saline groundwater with dissolved solids averaging 700mg/l (milligrams per liter).

Pearsall Member – The Pearsall Member is the middle unit of the Twin Mountains Formation and is approximately 60 feet in thickness. The Pearsall Member consists of multicolored clays interbedded with lenses of sand and is the unit that separates the Hoston and Hensell Members. The Pearsall Member is considered an aquiclude and is not known to yield any amounts of groundwater.

Hensell Member - The Hensell Member is the youngest of the Twin Mountains Formation and is approximately 200 feet in thickness. The Hensell is considered in the Middle Trinity hydrologic unit and is composed of red to gray clay, silt, sand, conglomerate, and thin limestone beds grading downdip into silty dolomite, marl, calcareous shale, and shaley limestone. The Hensell Member, or Middle Trinity, yields small to moderate quantities of fresh to slightly saline groundwater.

Glen Rose Formation (Kgr)

The Glen Rose Formation overlies the Twin Mountains, or Travis Peak, Formation and underlies the Paluxy Formation. The Glen Rose Formation is approximately 300 feet in thickness, and is considered to be in the Middle to Upper Trinity hydrologic unit. The Glen Rose Formation is composed of alternating resistant and non-resistant beds of blue shale, nodular marl, and impure, fossiliferous limestone. The Glen Rose Formation also contains two distinct evaporite zones. The Glen Rose Formation yields very small to small quantities of relatively mineralized groundwater.

Paluxy Formation (Kpa)

The Paluxy Formation overlies the Glen Rose Formation. The Paluxy Formation is approximately 200 feet in thickness. The Paluxy Formation is composed of quartzarenite consisting of medium to very fine quartz sand and coarse silt, with variable amounts of limonite, hematite, pyrite, and magnetite and insignificant amounts of tourmaline and feldspar. The Paluxy Formation is also composed of waxy clay and shale, which are commonly dark and contain organic material. The Paluxy Formation yields small to moderate amounts of groundwater.



Walnut Formation (Kwa)

The Walnut Formation overlies the Paluxy Formation. The Walnut Formation is approximately 100 - 140 feet in thickness. The Walnut Formation is composed of limestone and claystone interbedded. The limestone in the upper part is argillaceous, nodular, thin to medium bedded, and iron stained. In the lower part the limestone is fine to coarse grained, hard, in part nodular, and has ripple markings on the bedding surface. The Walnut Formation yields vary small to no groundwater to the area.

GROUND WATER

The Trinity Aquifer is the primary source of groundwater in Central Texas. The Trinity Group contains the Twin Mountains (Travis Peak) Formation, the Glen Rose Formation, and the Paluxy Formation. The Twin Mountains Formation is divided into members which from oldest to youngest are the Hoston Member, Pearsall Member, and the Hensell Member. The Hoston Member and Hensell Member are the primary water sources within the Twin Mountains Formation with the Pearsall Member acting as the aquiclude between the Hoston and the Hensell Members. All formations yield quantities of groundwater, but the Twin Mountains Formation is the principal aquifer in Erath County, and is the location where most wells are drilled.

NATURAL RECHARGE FEATURE EVALUATION

The property of Armagh Dairy, LLC is located on the outcrop of the Trinity Aquifer. The Walnut Formation outcrops the entire property while the Paluxy Formation outcrops at the edge of the property around the waterway locations. The Paluxy Formation is a natural recharge area of the Trinity Aquifer.

Recharge of groundwater is the process by which water is filtered and added to the zone of saturation. The "outcrop" of an aquifer is the area in which the host formations are exposed at the land surface. This area is considered to be a "recharge zone" for the aquifer.

The primary source of groundwater in this area is infiltration of precipitation either directly into an outcrop or indirectly by way of leakage from another formation or seepage from stream flow. Only small amounts of precipitation seeps down through the soil layers into the water table. There are no evident surface features such as karstified rock, continuous fractured limestone bedrock, intermittent seeps, or thick sandy surfaces that would indicate the percolation of pollutants into the groundwater.

ARTIFICIAL RECHARGE FEATURE EVALUATION

Current and Previous Landowners

Mike McDowell, of Armagh Dairy, LLC, is the current landowner, was interviewed and supplied the information for the property. Mr. McDowell identified 9 active water wells, four plugged wells, Bell Branch, Resley Creek, a Caliche Pit Area, a manure separator, settling pit, five RCS's and two surge ponds on the property. The previous landowner, Fred Lueck, was contacted and supplied the same information.



Site Inspection

An on-site inspection was conducted by Norman Mullin, P.E. and company prior to the dated report of July 10, 2009 and another conducted by Noel Courts, Geologist, on August 8, 2013, June 26, 2016, January 12, 2019, and June 3, 2024 to locate and verify any additional water containment structures and to locate the wells drilled or plugged on the property. Nine active water wells, four plugged wells, Bell Branch, Resley Creek, a Caliche Pit Area, a manure separator, settling pit, five RCS's, two surge ponds, and an old quarry pit were located on the property.

There are two active wells and two plugged wells located on the dairy facility of the Headquarters Area, one active well and one plugged well located in LMU #9, two wells (one active and one emergency) located in the House Area between LMU #6 and LMU #7, three active wells located along the eastern boundary of LMU #6, a plugged well located in LMU #4, and one active well located in the southern section of LMU #13.

Well #1 is located approximately 125 feet north of the open lots in D.A. #2. The well has a four inch steel sleeve and is located on a concrete slab. The surface and slab are both sloping away from the well head. This is a producing well that was drilled by a licensed well driller. This well supplies water for the dairy barn and for trough water for the cattle. Well #1 has a previous submission for a well exception request that was approved in the current permit issued date 12 July 2010.

Well #2 is located approximately 90 feet northwest of the open lots in D.A. #2. The well has a twelve inch steel sleeve and is located on a concrete slab. The surface and slab are both sloping away from the well head. This is a producing well that was drilled by a licensed well driller. This well supplies water for the dairy barn and for trough water for the cattle. Well #2 has a previous submission for a well exception request that was approved in the current permit issued date 12 July 2010.

Plugged Well #3 (TWDB 3162106) was located at the dairy barn. This was plugged in 2005 according to the previous landowner. Please see well plugging report.

Plugged Well #4 (CW-4) is located south of the open lots in D.A. #3. This is an old well that is not in production. This well has been plugged and is still located within a well house on a concrete slab. Well #4 has a previous submission for a well exception request that was approved in the current permit issued date 12 July 2010.

Well #5 is located along the northern boundary of LMU #9. The well has a twelve inch steel sleeve and is located on a concrete slab. The surface and slab are both sloping away from the well head. This is a producing well that was drilled by a licensed well driller. This well supplies trough water for the cattle. This well will maintain a 150-foot buffer from any land application.

Well #6 is located at the facility house between LMU #6 and LMU #7. The well has an eight inch steel sleeve and is located on a concrete slab maintain within a well house with an impermeable surface covering. The impermeable surface covering is sloping away from the well head. This is an emergency well that was drilled by a licensed well driller. Well #6 shall maintain a 150-foot buffer from any land application.



Well #7 (TWDB 91596) is located at the facility house between LMU #6 and LMU #7. The well has a four inch steel sleeve and is located on a concrete slab maintain within a well house with an impermeable surface covering. The impermeable surface covering is sloping away from the well head. This is a producing well that was drilled by a licensed well driller. Well #7 shall maintain a 150-foot buffer from any land application.

Plugged Well #8 was located in LMU #4. This was plugged in 1990 according to the previous landowner. Please see well plugging report and certification letter.

Well #9 (TWDB 67513) is located in the southern section of LMU #13. The well has a six inch steel sleeve and is located on a concrete slab. The surface and slab are both sloping away from the well head. This is a producing well that was drilled by a licensed well driller. Well #9 will maintain a 150-foot buffer from any land application.

Plugged Well #10 (TWDB 41331) was located in LMU #9. This was plugged in 2005 according to the previous landowner. Please see well plugging report and certification letter.

Well #11 is located along the boundary of LMU #6 and LMU #4. The well has a six inch steel sleeve and is located on a concrete slab. The surface and slab are both sloping away from the well head. This is a producing well that was drilled by a licensed well driller. Well #11 will maintain a 150-foot buffer from any land application.

Well #12 (TWDB 655427) is located along the boundary of LMU #6 and LMU #4. The well has an eight inch steel sleeve and is located on a concrete slab. The surface and slab are both sloping away from the well head. This is a producing well that was drilled by a licensed well driller. Well #12 will maintain a 150-foot buffer from any land application.

Well #13 (TWDB 655426) is located along the boundary of LMU #6 and LMU #4. The well has a six inch steel sleeve and is located on a concrete slab. The surface and slab are both sloping away from the well head. This is a producing well that was drilled by a licensed well driller. Well #131 will maintain a 150-foot buffer from any land application.

Bell Branch, Resley Creek, a Caliche Pit Area, a manure separator, settling pit, five RCS's and two surge basins are also located on the property. An old quarry pit was located on the property south of the surge basins. The material mined from this pit was used to build the berms and lots on the facility.

Artificial Penetrations

There are nine active wells and four plugged wells located on Armagh Dairy, LLC. Well locations were plotted on the enclosed map(s) using GPS systems. Any additional information was obtained from the TWDB, TRRC, and TCEQ and also incorporated into the enclosed map(s). The TWDB showed four wells of which one well has been plugged. Documentation for these wells has been attached to this document. The TRRC and TCEQ WIID sites did not show any wells on the facility. Maps are attached to this document.

Water Containment Structures

The dairy facility has five RCS's, a settling pit, and two surge ponds; all have been tested and liner documentation performed by a Professional Engineer or Professional Geoscientist.

Armagh Dairy, LLC Recharge Feature Certification



Local Groundwater District

This facility is located within the Middle Trinity Groundwater Conservation District. The district was contacted and no additional data was obtained.

SOILS DESCRIPTIONS

Please see attached Soils Map and Non-Technical Soils Descriptions obtained from the NRCS Web Soils Survey.

100-YEAR FLOODPLAIN

On August 1, 2013, a site evaluation of the 100-year floodplain was completed. All control facilities are located, or will be constructed outside the 100-year floodplain. LMU #'s 1-9 & 12 are located outside 100-year floodplain and are suitable for the application of wastes. LMU #'s 10, 11, & 13 have some parts of the LMU in which the 100 year floodplain is located but has been buffered out of the applicable acreage. All wastewater and solid manure will be applied at agronomic rates not to exceed the hydrologic needed of the permanent grass, and cropland growth requirements. (*Please see Best Management Practices*)

METHODS USED

Any and all potential recharge features were identified utilizing the following techniques: on-site inspection of the facility, current and previous landowners, online review and GIS of facility using Texas Railroad Commission (TRRC), Texas Commission on Environmental Quality (TCEQ), Texas Water Development Board (TWDB), Natural Resource Conservation Service (NRCS), and the Middle Trinity Groundwater Conservation District. ArcView 3.3 and Geospatial Gateway were used in all map making to include buffers for waterways and ponds.

Conclusions

The subject property is located on the Walnut Formation and in the Paluxy Formation outcrop, which is a recharge zone of the Trinity Aquifer. The Trinity Aquifer is the major aquifer and primary source of groundwater for Erath County. The only artificial penetrations on the property are seven active water wells and four plugged water wells all of which have been documented.

IDENTIFICATION OF PREVIOUSLY UNKNOWN RECHARGE FEATURES

If, during future excavations or explorations, any suspected recharge feature is encountered, it will be brought to the attention of the Professional Geoscientist (PG) or Professional Engineer (PE). The PG or PE will have construction halted until the potential recharge feature can be evaluated. If it proves to be a previously unidentified recharge feature, a plan to protect the feature will be developed, or the excavation will be abandoned and moved. Afterwards, the Recharge Feature Certification will be modified as appropriate.



In addition, monitoring of the farm will be maintained by management to identify previously undocumented recharge features. If any are identified, a PG or PE will be contacted to evaluate the feature, and based on that evaluation appropriate protective measures will be enacted and the Recharge Feature Certification will be revised accordingly.

BEST MANAGEMENT PRACTICES

Practices, which increase the intake rate of soil such as aeration and crop management, are recommended. Buffer zones will be maintained as required by TCEQ Standards depending upon soil types and hydrologic group from all natural waterways and 150 feet from any wells where waste will not be applied. These buffer zones will be strictly maintained to prevent any discharge to watercourses. Filter Strips and vegetative barriers will be utilized where appropriate following the guidelines of NRCS codes 393 and 601. Based on construction methods, pond liner certification, and adherence to best management practices listed in Subchapter B rules, this facility should not pose a hazard to regional ground or surface water. Best management practices are:

- 1. Maintenance of berms and waterways.
- 2. Application of wastewater at agronomic rates.
- 3. Careful monitoring of wastewater levels.
- 4. Maintaining vegetative cover on application fields.
- 5. Application rates should not exceed the intake rate of soil.
- 6. Strict observance of buffer zones around waterways and wells.
- 7. Annual soil testing should be done to monitor the level of nutrients in the soil.
- 8. Regular monitoring of the equipment during the application process should be maintained.
- 9. Where steep topography or highly erodible soils are located in application areas adjacent to waterways additional buffer distances will be established.
- 10. Existing wells with less than 150 feet of buffer will receive special attention by frequent inspections.



CERTIFICATION

The undersigned hereby certifies that:

The facility <u>has</u> recharge features on the property owned or leased by the applicant based on the criteria outlined in Title 30 Texas Administrative Code, Chapter 321, Subchapter B. Natural recharge features as defined in Title 30 Texas Administrative Code, Chapter 321, Subchapter B. The site location is on the Trinity Aquifer outcrop.

The proposed plan, with implemented and maintained best management practices, will prevent any adverse impacts from waste application to recharge features, surface water and groundwater qualities.

Written & Certified By.

NOEL COURTS
GEOLOGY
11241

Noel Courts, P.G.

Professional Geoscientist, License Number 11241

Date

REFERENCES

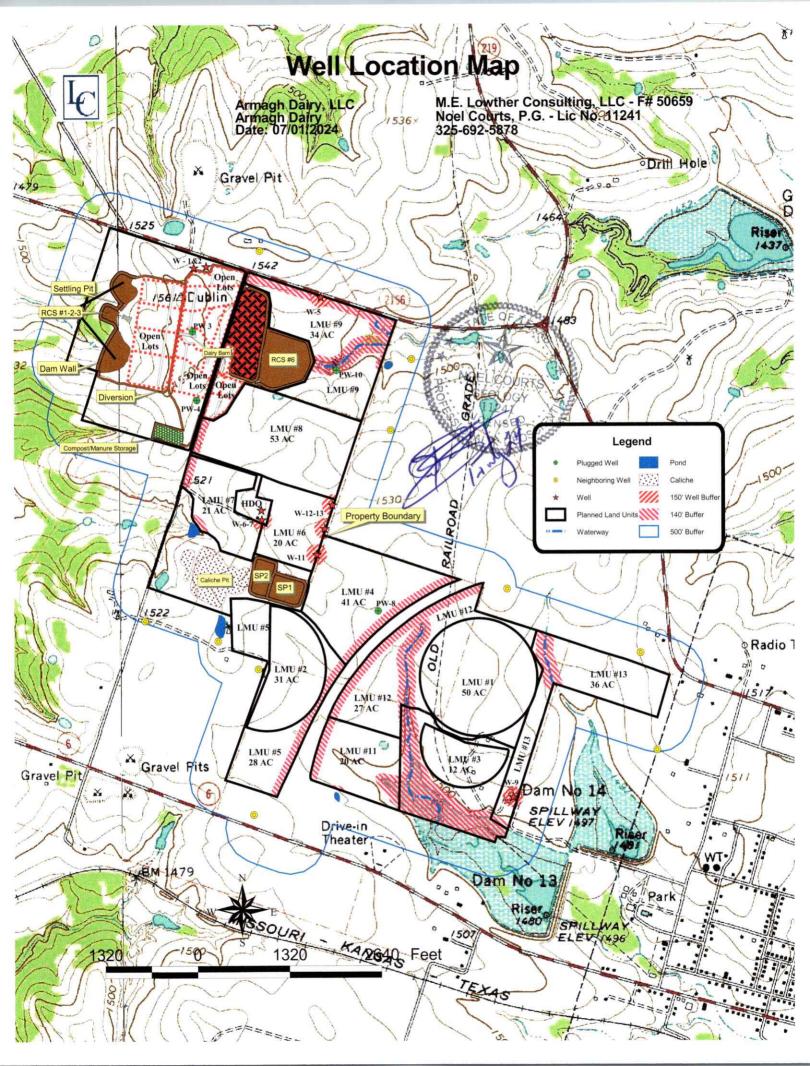
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- Wyrick, Jim P.G. & Courts, Noel, *Recharge Feature Certification*. M.E. Lowther Consulting, LLC, September 22, 2016. 11p.
- Mike McDowell, President of Armagh Dairy, LLC & Current Landowner
- Fred Lueck, Previous Landowner



ATTACHMENTS

Maps and Driller's Logs Well Exception Request Letter Updated Well Exception Request Letter



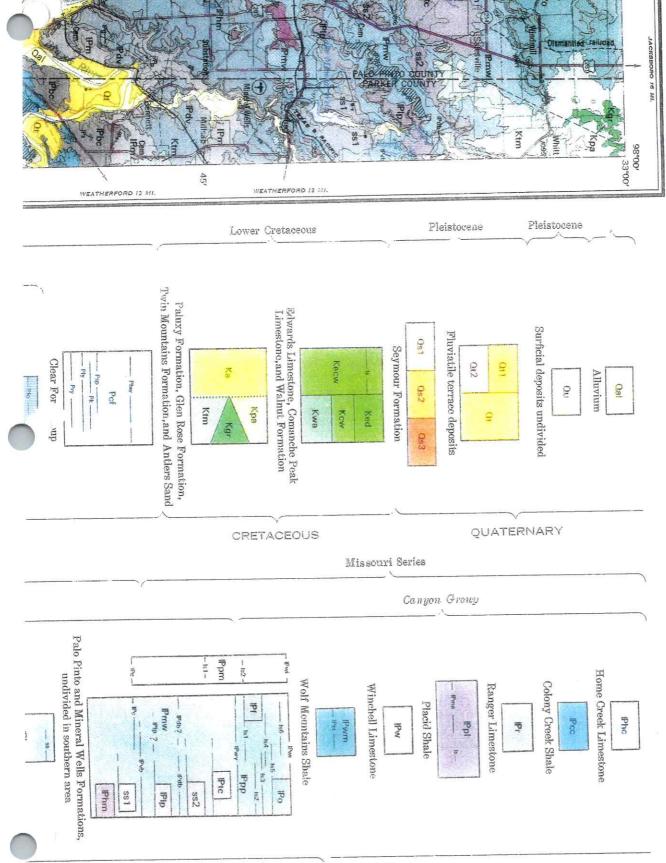


Geologic Atlas of Texas - Abilene Sheet M.E. Lowther Consulting, LLC Noel Courts, P.G. 325-692-5878 Armagh Dairy, LLC Mike McDowell NOEL COURT Date: 04/01/2019 GEOLOGY Legend Planned Land Units

8000 Feet

4000

4000





GEOLOGIC ATLAS OF TEXAS, ABILENE SHEET

FREDERICK BYRON PLUMMER MEMORIAL EDITION

VIRGIL E. BARNES, Project Director



Qal

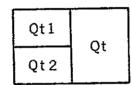
Alluvium

Flood-plain deposits, includes low terrace deposits near flood-plain level and bedrock locally in stream channels; thickness up to 25 feet



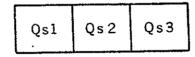
Surficial deposits undivided

Sand, clay, caliche, and gravel; includes older terrace remnants, lag gravel, residual soil, and colluvium commonly cemented by caliche; mapped where sufficiently thick and extensive to obscure bedrock, upper surface commonly slopes toward present streams, rests principally on mudstones of Clear Fork Group; contemporaneous with Qt and Qal; thickness up to 10 feet



Fluviatile terrace deposits

Gravel, sand, and silt. Mostly undivided, Qt. Along Clear fork of Brazos River, Hubbard ravel, sand, and silt. Mostly undivided, Qt. ALONG CLEAR FORK OF BRAZOS RIVER, HUBBARD CREEK, AND ELM CREEK divided into two terrace groups, low terrace deposits undivided, Qt 1, and high terrace deposits probably representing one terrace, Qt 2. Gravel, sandy, pebbles rounded, include quartz, igneous rock, and metamorphic rock from distant sources intermingled with local bedrock fragments especially along smaller streams; sand, fine- to coarse-grained quartz, reddish brown to gray; silt, sandy, clayey, bedded to lenticular, commonly cross-bedded. Thickness up to 25 feet



Seymour Formation

Sand, gravel, and clay, deposits separately mapped include thin deposits, Qs 1, thick

deposits, Qs 2, and deposits of limestone gravel, Qs 3

Thin deposits, Qs 1, sand, friable, conglomerate in basal part, pebbles consist of chert, quartz, sandstone, limestone, and/or igneous and metamorphic rocks, cross-bedding and small channel fill deposits scarce, too thin to support much timber; thickness 1-10

Thick deposits, Qs 2, sand, friable, local clay lenses, bedded, basal conglomerate similar to Qs 1 may be present, thick enough to support dense growth of post oak, RESTRICTED TO NORTH SIDE OF CLEAR FORK OF BRAZOS RIVER, probably represents uncient channel deposits

of the Clear Fork; thickness 10-80 feet Limestone gravel, Qs 3, mostly pebbles from Cretaceous outcrops to south and southwest, angular to moderately well rounded, calcite cement, near base some pebbles similar to those in Qs 1, deposits elongate in direction of slope, wedge-shaped in cross section, deposited by northward-flowing, high-gradient streams; thickness 5-40 feet



Lower Cretaceous

— Is —	Ked
Kecw	Kcw
Necw	Kwa

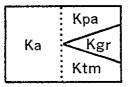
Edwards Limestone, Comanche Peak Limestone, and Walnut Formation

Limestone and claystone; Edwards Limestone, Ked, SEPARATELY MAPPED IN EASTERN CAL-LAHAN COUNTY; Edwards Limestone, Comanche Peak Limestone, and Walnut Formation, Kecw, UNDIVIDED IN WESTERN CALLAHAN, TAYLOR, AND RUNNELS COUNTIES; Comanche Peak Limestone and Walnut Formation, Kcw, UNDIVIDED IN EASTERN CALLA-HAN AND NORTHERN BROWN COUNTIES; Walnut Formation, Kwa, MAPPED SEPARATELY IN ERATH COUNTY

Edwards Limestone; limestone, Is, SEPARATELY MAPPED IN WESTERN PART OF AREA. Upper part, including at base limestone, is-argillaceous, nodular to evenly bedded, light gray, alternating hard and soft units weather recessive compared to lower part, Exogyra texana and foraminifers locally abundant, thickness about 40 feet. Lower part—fine to coarse grained, mostly argillaceous, some recrystallized, locally dolomitic with chert in 2-5 inch beds, mostly nodular to massive, locally thin bedded, weathers light gray to light brown, fossils include foraminifers, gastropods, and rudistids as molds and silicity. fied remnants locally, forms steep scarp, thickness about 100 feet. Thickness of Edwards Limestone about 140 feet

Comanche Peak Limestone, fine grained, argillaceous, nodular, light gray, burrowed, marine megafossils include echinoids and molds and shells of molluses; thickness 15-20

Walnut Formation, limestone and claystone interbedded. Limestone, in upper part—
argillaceous, nodular, thin to medium bedded, iron stained, burrowed; in lower part—
fine to coarse grained, hard, in part nodular, ripple marked on bedding surfaces in
EASTERN ERATH COUNTY, light brown, gray, white. Claystone, calcareous, limestone
nodules in upper part, sandy in lower part, light brown to gray. Megafossils include
Exogyra, Gryphaea, other pelecypods, echinoids, molds of gastropods, Oxytropidoceras
abundant near middle in ERATH AND CALLAHAN COUNTIES. Thickness 100-140 feet, thickens eastward cannot be distinguished from Coungache Peak Limestone WEST OF CALens eastward, cannot be distinguished from Comanche Peak Limestone WEST OF CAL-LAHAN COUNTY



Paluxy Formation, Glen Rose Formation, Twin Mountains Formation, and Antlers Sand

Paluxy Formation, Kpa, sandstone and claystone interbedded. Mostly sandstone, very fine to fine grained, in part argillaceous, silty, friable, some calcite cement, cross-bedded to laminated, evenly bedded, mostly light gray, some red, a few channel fill bodies contain

aminatea, eventy beatest, mostly thin grap, some rea, a few chainer hat obtes obtesting pyrite nodules and plant fragments in southern area. Claystone, locally sandy, blocky, gray. Thickness 100-170 feet, thins southward

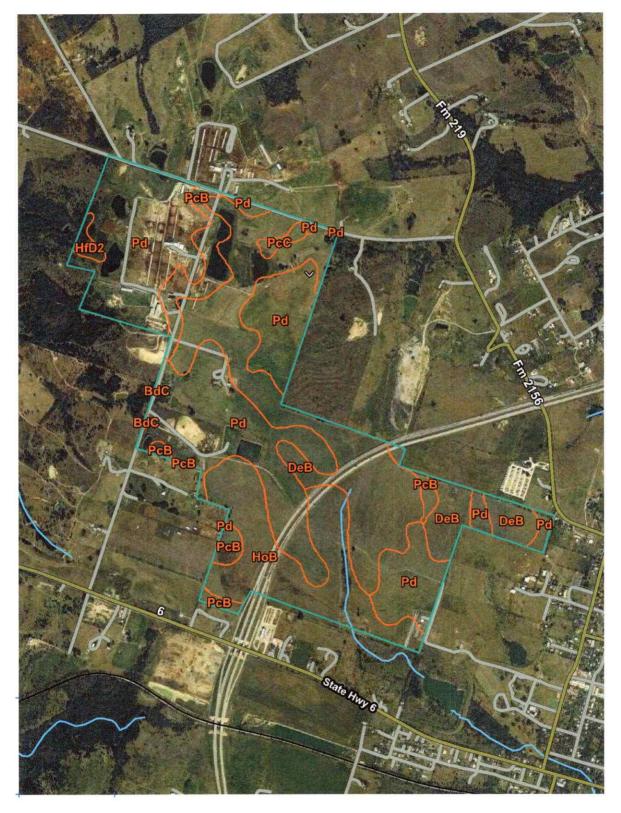
Glen Rose Formation, Kgr, limestone and claystone alternating. Limestone, fine grained, some recrystallized, argillaceous, locally sandy, hard, evenly bedded, light gray to white, marine megafossils; at base in EASTERN ERATH COUNTY a 10-foot unit, fine grained, hard, forms prominent bench. Claystone, calcurcous, sandy, blocky. IN EASTERN CLIATION of the pade of calcurcous, and livestone interhedded. CALLAHAN COUNTY some thin beds of calcarcous sandstone and limestone interbedded. Erodes to distinctive stairstep topography. Thickness up to 100 fect, feathers out northwestward

Twin Mountains Formation, Ktm, upper part claystone, middle part sandstone above claystone, lower part mostly sandstone, some claystone and conglomerate. Upper claystone unit, silty, mostly gray, locally green, yellow, purplish red. Middle sandstone unit, fine to medium grained, well sorted, friable, locally siliceous pebbles at base, locally cross-bedded, mostly light gray, some light brown near middle. Middle claystone unit, silty, gray at base, mostly dark grayish red, locally interrupted by broad channel sands with basal conglomerate of sandstone fragments and scattered chert pebbles, fossils are Charophyta. Lower unit, sandstone, medium to coarse grained, locally large-scale crossbedding, light gray; claystone, silty, gray; conglomerate, pebbles of chert and quartz, argillaceous, sandy, gray, brown. Thickness about 150 feet
Antlers Sand (basal Cretaceous or "Trinity Sand"), Ka, upper part sandstone and clay-

stone interbedded, middle part claystone, lower part sandstone and conglomerate interbedded. Sandstone, fine grained, some very fine grained in upper part, argillaceous, conflomeratic in lower part, friable, calcite coment in lower part, arguaceous, conflomeratic in lower part, friable, calcite coment in lower part, thin bedded to massive, cross-bedded, gray to yellowish brown. Claystone, sandy, locally calcareous, blocky, brown to purplish pink. Conglomerate, pebbles of chert and quartz, locally green silty elay clasts, argillaceous, sandy, friable, reddish brown, gray. Conglomerate most abundant component of formation in Western Callahan and taylor counties where mudstone is scarce. Thickness 180–200 feet, thins westward

32° 7' 26" N

32° 7' 26" N



32° 5' 9" N

32° 5′ 9" N

N

0	300	600	1200	Mete
0	1000	2000	4000	Fe



98° 22' 51" W

98° 20' 49" W

Conservation Service Natural Resources

MAP LEGEND

Very Stony Spot Stony Spot Spoil Area Wet Spot M Soil Map Unit Polygons Area of Interest (AOI) Soil Map Unit Points Soil Map Unit Lines Special Point Features Area of Interest (AOI) Soils





Closed Depression

Borrow Pit

Blowout

Clay Spot



Gravelly Spot

Gravel Pit



Marsh or swamp

Lava Flow

Landfill

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot Sandy Spot Severely Eroded Spot

Slide or Slip

Sinkhole

Sodic Spot

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at

Please rely on the bar scale on each map sheet for map measurements. Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

distance and area. A projection that preserves area, such as the Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required. This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Version 20, Sep 5, 2023 Soil Survey Area: Erath County, Texas Survey Area Data: Soil map units are labeled (as space allows) for map scales 1:50,000 or larger. Date(s) aerial images were photographed: Jan 26, 2021—Jan

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

USDA

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BdC	Bolar-Denton complex 3 to 5 percent slopes	0.9	0.1%
DeB	Denton silty clay, 1 to 3 percent slopes	205.5	29.3%
HfD2	Hico-Fairy complex, 3 to 8 percent slopes, moderately eroded	5.0	0.7%
НоВ	Slidell clay, 1 to 3 percent slopes	112.6	16.0%
PcB	Purves clay, 1 to 3 percent slopes	46.7	6.7%
PcC	Purves clay, 3 to 5 percent slopes	4.8	0.7%
Pd	Purves-Dugout-Maloterre complex, 1 to 20 percent slopes	326.3	46.5%
Totals for Area of Interest		701.8	100.0%

Component Description (Nontechnical)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the selected area. The component descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit. A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the associated soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas (components) for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The "Map Unit Component Nontechnical Descriptions" report gives a brief, general description of the soil components that occur in a map unit. Descriptions of nonsoil (miscellaneous areas) and minor map unit components may or may not be included. This description is written by the local soil scientists responsible for the respective soil survey area data. A more detailed description can be generated by the "Map Unit Description" report.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Report—Component Description (Nontechnical)

Erath County, Texas

Map Unit: BdC—Bolar-Denton complex 3 to 5 percent slopes

Description Category: PHG

Bolar: 55 percent

7C - FRIABLE CLAYEY UPLAND - Moderately deep to very deep friable clayey uplands with slopes 0 to 5 percent; friable when moist; somewhat sticky when wet; high natural fertility; medium to high water holding capacity and fair to good plant-soil-moisture relationship; high production potential..

Description Category: PHG

Denton: 35 percent



7C - FRIABLE CLAYEY UPLAND - Moderately deep to very deep friable clayey uplands with slopes 0 to 5 percent; friable when moist; somewhat sticky when wet; high natural fertility; medium to high water holding capacity and fair to good plant-soil-moisture relationship; high production potential...

Map Unit: DeB-Denton silty clay, 1 to 3 percent slopes

Description Category: PHG

Denton: 85 percent

7C - FRIABLE CLAYEY UPLAND - Moderately deep to very deep friable clayey uplands with slopes 0 to 5 percent; friable when moist; somewhat sticky when wet; high natural fertility; medium to high water holding capacity and fair to good plant-soil-moisture relationship; high production potential.

Map Unit: HfD2—Hico-Fairy complex, 3 to 8 percent slopes, moderately eroded

Description Category: PHG

Hico, moderately eroded: 55 percent

8C - LOAMY UPLAND - Moderately deep to very deep uplands with loamy surfaces and friable loamy subsoils: slopes 0 to 8 percent; medium natural fertility; medium to high water holding capacity with good plant-soil-moisture relationship; medium to high production potential.

Map Unit: HoB-Slidell clay, 1 to 3 percent slopes

Description Category: PHG

Slidell: 85 percent

7A2 - HEAVY CLAYEY UPLAND (CALCAREOUS) - Deep and very deep heavy clayey uplands with slopes of 0 to 5 percent; dense clayey subsoils; reaction is moderately alkaline throughout; high natural fertility; seasonally wet or droughty; KVery high to high water holding capacity but fair plant-soil-moisture relationship; medium to high production potential.

Map Unit: PcB—Purves clay, 1 to 3 percent slopes

Description Category: PHG

Purves: 89 percent

13A - SHALLOW CLAYEY - Very shallow and shallow clayey uplands less than 20 inches thick; medium natural fertility; droughty very low to low water holding capacity with poor plant-soil-moisture relationship; low production potential.

Map Unit: PcC-Purves clay, 3 to 5 percent slopes



Description Category: PHG

Purves: 89 percent

13A - SHALLOW CLAYEY - Very shallow and shallow clayey uplands less than 20 inches thick; medium natural fertility; droughty very low to low water holding capacity with poor plant-soil-moisture relationship; low production potential.

Map Unit: Pd-Purves-Dugout-Maloterre complex, 1 to 20 percent slopes

Description Category: PHG

Purves, stony clay: 37 percent

13A - SHALLOW CLAYEY - Very shallow and shallow clayey uplands less than 20 inches thick; medium natural fertility; droughty very low to low water holding capacity with poor plant-soil-moisture relationship; low production potential.

Description Category: PHG

Dugout, gravelly clay loam: 25 percent

14A - SHALLOW LOAMY - Shallow loamy uplands less than 20 inches thick; low natural fertility; droughty, very low to low water holding capacity with poor plant-soil-moisture relationship; low production potential.

Description Category: PHG

Maloterre, gravelly clay loam: 22 percent

14A - SHALLOW LOAMY - Shallow loamy uplands less than 20 inches thick; low natural fertility; droughty, very low to low water holding capacity with poor plant-soil-moisture relationship; low production potential.

Description Category: PHG

Aledo, gravelly clay loam: 5 percent

14A - SHALLOW LOAMY - Shallow loamy uplands less than 20 inches thick; low natural fertility; droughty, very low to low water holding capacity with poor plant-soil-moisture relationship; low production potential.

Description Category: PHG

Bolar, stony clay loam: 5 percent

8D - SLOPING LOAMY UPLAND - Very deep to deep uplands with loamy surfaces and friable loamy subsoils; slopes greater than 8 percent; medium natural fertility; medium to high water holding capacity with good plant-soil-moisture relationship; medium to high production potential.

Description Category: PHG

Brackett, gravelly clay loam: 5 percent

14A - SHALLOW LOAMY - Shallow loamy uplands less than 20 inches thick; low natural fertility; droughty, very low to low water holding capacity with poor plant-soil-moisture relationship; low production potential.

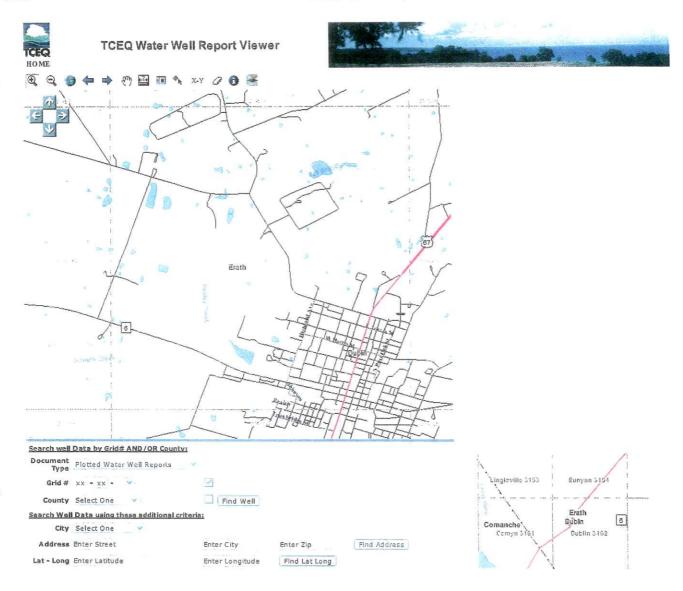
Description Category: PHG

Bolar, clay loam: 1 percent

8C - LOAMY UPLAND - Moderately deep to very deep uplands with loamy surfaces and friable loamy subsoils; slopes 0 to 8 percent; medium natural fertility; medium to high water holding capacity with good plant-soil-moisture relationship; medium to high production potential.

Data Source Information

Soil Survey Area: Erath County, Texas Survey Area Data: Version 20, Sep 5, 2023







Plugging Reports Well Reports

TWDB Groundwater



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Texas Water
Development Board

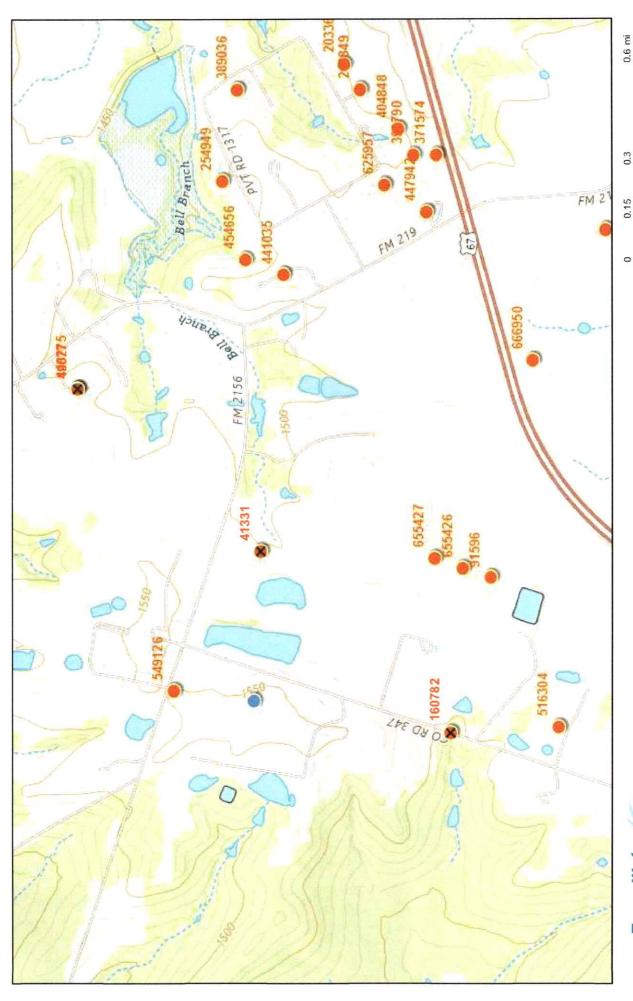
June 17, 2024

Plugging Reports Well Reports

TWDB Groundwater



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Texas Water
Development Board June 17, 2024

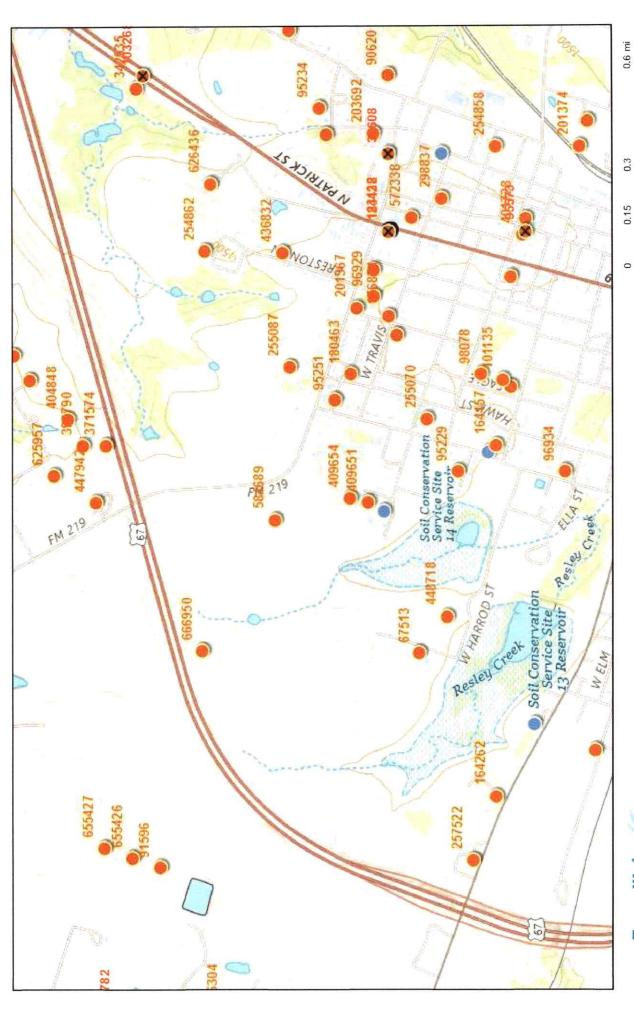
Plugging Reports Well Reports

TWDB Groundwater

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography

1:18,056

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 vie this web-site as a public service. Neither the State of Texas northe TWDB assumes any logal Hobity or responsibility or makes any guarantees or wernanties as to the accuracy, completeness or suitability of the information for any particular purpose.



Texas Water Development Board June 17, 2024

Plugging Reports Well Reports

TWDB Groundwater

USGS The National Map: National Boundaries Datasel, 3DEP Elevation Program, Geographic Names Information System, National Hydrography 1 km 1:18,056 0.25

The data in Water Data Interactive represents the best available information provided by the TWDB and thing-party cooperators of the TWDB.
The TWDB provides information via this wide bits as a bable service. Nather the State in PTWDB assumes any agail liability or necessary any anameters or warrantees so warrantees or warrantees or warrantees or warrantees or warrantees as to be some soft and the information for any particular purpose.



June 17, 2024



Esri, HERE

ATTENTION OWNER: Confidentially Privilege Notice on Reverse Side	f Texas EPORT			Toxes Waier Well Drillers Scard P.O. Scar 13087 Austin, TX 78711-3067 512-371-6209				
1) OWNER FRED LUEC () 2) LOCATION OF WELL: County ERATH	•				159, DUBLIN) (City) oction from DUBL			(Zp)
Driller must complote the legal description Quarter- or Hail-Scale Texas County Ge LEGAL DESCRIPTION: Section No Block No Distance and direction from two lake \$\infty\$ SEE ATTACKED MAP	on below with distance and dire neral Highway Mep and attach o Township	ction from two i the map to this	nlersocting 50ct form. Abstract No.	ion or survey	Eners, or he must locate a Survey Name	nd identity th		
3) TYPE OF WORK (Check): X Naw Woll Despening Descriptioning Plugging	4) PROPOSED USE (Cha C) Domestic Sindus C) Intigation C) Test	noM 🖸 Leith	ction □De	Matering	5) DRILLING METHO Musi Rolary C \$1 Air Rolary C) Air Hammer	Detted 🖸	☐ Driver
5) WELL LDG: Data Drilling: Starled 6/3 19 94 Completed 6/3 19 94	DIAMETER OF HODIA. (in.) From (ft.) 9-3/4 Surfaces	To (ft.) 485	2	REHOLE COH Open Hole Gravol Pecke ravol Packed	☐ Straight Well		ierresmed to 485	
From (it.) To (it.)	Description and color of lormatic	on malerial	5) CAI	Stoel, Pla	CPIPE, AND WELL SCRI	EEN DATA: Setin	g (ft.)	Gago Castin
0 3 3 8 8 24	CLAY LIME CLAY		Dia cr (in.) Used \$-5.8		itted, etc. fig., if commercial EL PIPE	From Q	To 485	Screen
24. 48 48 124	LIME SHALE LIME							
124 140 140 195 195 220 220 304 304 340	CLAY AND SHAL LIME CLAY SAND AND CLAY		Ç.,	meniod kom	ATA [Rule 267.44(1)] O to 115 CONVENTION	ft No. of St AL	roka Used	
13) TYPE PUMP:	e side if necessary) □ Submorsible □ Cylinde Lete. 450 th	er	10) SL	mented by IRFACE COM Specified St	COMPANY APLETION unlace Stab Installed [Ru	la 287,44(2)(4)1	TEEL
14) WELL TESTS:	Detret D. Talba	グ目 Estimated 19942m		Pittoss Ada	leei Sieeva Installad [Rui ptar Used [Ruia 287,44() Itemaliya Procedura Usec	(日)[71]	_
15) WATER QUALITY: Sid you knowingly penetrate any constituents?	i .	nsenijiRCE	SI	evel alls woll naiser	155 II, below land		Date	3/94
Type of water?	Depth of strata			ACKERS:				
I hereby certify that this well was drilled be that believe to complete items 1 thru 15 m COMPANY NAME Druids F.	d topoli at his trade, and a					32		
ADDRESS	0. BOX 518		GRANE (Cay)	URY	(8	TX	7 ē (Zip)	048

TWC-0199 (Rev. 05-18-90)

Please attach alsotric log, chemical analysis, and other pentinent information, if available.

TEXAS WATER COMMISSION COPY

(Recisted Dollar Traines)

For TWC use only: Well No. .

Located on map 31.61.3

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING PRIVILEGE OF CONFIDENTIALITY

The Water Well Drillers Board and the Texas Water Commission are concerned that some persons having wells drilled may not be aware of the confidentiality privilege provision of Section 5 of the Water Well Drillers Act. Section 5, the Reporting of Well Logs, reads as follows:

"Every Ilcensed water well driller drilling, deepening or otherwise altering a water well within this State shall make and keep, or cause to be made and keep, a legible and accurate well log, and within 60 days from the completion or cessation of drilling, deepening or otherwise attening such a water well, shall deliver or transmit by certified mail a copy of such well log to the Commission, and the owner thereof or the person having had such well drilled. Each copy of a well log, other than a Commission copy, shall include the name, mailing address, and telephone number of the Board and the Commission. The well log required herein shall at the request in writing to the Commission, by certified mail, by the owner or the person having such well drilled be held as confidential matter and not made of public record."

The last sentence specifies the means whereby you can, if you wish, assure that logs of your wells will be kept confidential.

From (ft.)	Ťo (ft.)	Description and color of formation material
340	445	TAN SAND
445	453	RED CLAY
453	462	SAND
462	485	CLAY
 		
	· · · · · · · · · · · · · · · · · · ·	
1		
7,		
. 1 / (







STATE OF TEXAS WELL REPORT for Tracking #549126

Owner:

Armagh Creamery

Owner Well #: No Data

Address:

PO Box 2

Dublin, TX 76446

Grid #: Latitude: 31-62-1

Well Location:

560 CR 347

Dublin, TX 76446

Longitude:

32° 06' 56.49" N 098° 22' 16.52" W

Well County:

Erath

Elevation:

No Data

Type of Work: Replacement

Proposed Use:

Stock

Drilling Start Date: 7/22/2020

Drilling End Date: 7/22/2020

Borehole:

Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)		
14	0	5		
11	5	512		

Drilling Method:

Air Rotary

Borehole Completion:

Filter Packed

Filter Pack Intervals:

Top Depth (ft.)	Bottom Depth (ft.)	Filter Material	Size		
280	512	Sand	12/20		

Annular Seal Data:

Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)			
0	15	Cement 8 Bags/Sacks			
15	280	Bentonite 27 Bags/Sacks			

Seal Method: Pumped

Distance to Property Line (ft.): 100+

Sealed By: Driller

Distance to Septic Field or other

concentrated contamination (ft.): 150+

Distance to Septic Tank (ft.): 100+ '

Method of Verification: Customer

Surface Completion:

Surface Sleeve Installed

Surface Completion by Driller

Water Level:

384 ft. below land surface on 2020-07-22

Packers:

No Data

Type of Pump:

Submersible

Pump Depth (ft.): 480

Well Tests:

Jetted

Yield: 30+ GPM with Unknown ft. drawdown after 1 hours

Water Quality:

Strata Depth (ft.)	Water Type
255 - 490	2nd Trinity

Chemical Analysis Made: No

Did the driller knowingly penetrate any strata which contained injurious constituents?:

No

Certification Data:

The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information:

Bottom (ft.)

490

512

Associated Well Services, Inc.

PO BOX 16

STEPHENVILLE, TX 76401

Description

Sand, Gravel, Sandstone,

Sandy Blue Clay

Yellow Clay, Shale

Driller Name:

Justin Moore

License Number:

59346

Comments:

Top (fl.)

435

490

No Data

Lithology: DESCRIPTION & COLOR OF FORMATION MATERIAL

0 1 Rock Yellow Caliche Rock 1 15 15 60 Grey Clay, Shale, Limestone 60 135 Sand, Sandy Blue Clay 255 Grey Clay, Shale 135 355 Blue, Grey Sandy Clay 255 Sand, Tiny Gravel, Sandy 410 355 Blue Clay 410 435 Red, Blue Clay

Casing: BLANK PIPE & WELL SCREEN DATA

Dla (in.)	Туре	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
6.9	Blank	New Plastic (PVC)	SDR 17	0	352
6.9	Screen	New Plastic (PVC)	0.032	352	512

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation P.O. Box 12157 Austin, TX 78711 (512) 334-5540

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program

P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616

Email address: water.well@license.state.tx.us

PLUGGING REPORT

This form must be completed and filed with the department within 30 days following the plugging of the well.

- Agriculturally land		នេះ	DESTRICTION OF THE	LANDER COM			
						State	Zip
Name	VOLES SAGE	Address		City	· ·	State	76440
A A	LEX DAIR	4 Box 159	i	1 Just			
7.50							7ia
200.5	A Olivadorica	Physical Address		City //	t	State	Zip Colog
Count	FRATU	1133 CK7	17	0-611	UL	 	
<u> </u>		3 Jana 321	061778	Lat. 98 1	22/332	- Grid# Mil	lille .
3) Or	wner's <u>well No.</u>				e-Watering	5) NÎ
4) Ty		11 0101	-			107 13	
Deill	Down Installer or Landow	her performing the plugging open	rations must locate an	d identify the locati	on of the well within a :	specific grid on within the grid by	
a full	scale gridded map available	her performing the plugging open from Texas Natural Resource in	nformation Service. 1: tescription is optional.	us location of the w	CH Should be autom		
placin	g a corresponding cut in th	esquare to the right true to see a	Too ari but and a T.			Control of the Contro	
			DATA DRAVE	electional and			
				License No.		}	
6) D	riller Unkas	EEN Com		Liconso i vo:	·		
	000,000,00		110			183	
7) D	rilled any Ever	8) Diameter of h		Inches 9) To	otal depth of well_	(6) feet.	
7)0	mieu	The second secon					
		V	C.CURRENTE	1111	DUMINITY H. ATA	REMOVEA	BLE CASING
10)	Date well plugged	11/22/20	207	Plea	se check box besid	e the method of p	lugging used
				ugging		,	•
12)	Name of Driller/Pum	p Installer or Well Owner	performing and pr			e cement from bo	ttom to top.
,		<i>N/ I</i>			Tremmie pipe	cement from 50	
- Tic	ense No.	11/4		<u></u>	Ł		
- Lio					Tremmie pip	e bentonite from	bottom to 2 feet from
13)	ANTAGA SOCIATION DAG				From surface	, cement top 2 fee	et.
		त्तरहाकानात्ररसम्बद्धाः । इ.स.च्या	7 <u> </u>				
	a				Pour in 3/8 b	entonite chips wh	en standing water in
23.24	1.1.7	\circ	183		. well is less th	ian 100 feet depti	, cement top 2 feet.
					I arge diame	ter well filled wit	h clay material from
<u> </u>					top to botton		
┢	_ 						
	TA PENERVEINE	TORTHER CECENT	KORYNYKULE	26-2 4 -1941-19-3		TATAL SALES	
					Well u	wat Do	f:/
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L							
			was aranga	MESTICININ	e), ededáketől	al (de la company)	Maria de la Servicio de la composición
	1	this well (or the well was	nlugged under my	supervision) a	nd that all of the st	atements herein a	re true and correct.
Į.	certify that I plugged	this well (or the well was e to complete items 1 thro	ugh 13 will result	in the report(s)	being returned for	completion and	resubmitted.
1	understand that tallur	C to complete terms 2 and					
7	ompany or individua	I's Name (type or print)	FRE	2 2 4	4 OCK		
	ompany or marriage			3. 67		ate / X_	Zip 76
4	Address Bax	159	City	1 Dans	1 1 1		11 , 24 ,72
		A	1 1	Signatur	pla Xu		n i
	Signature	Anni prinkalian sa ana	2D2(0		Mennin		
			And the second s				



Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 31-62-106



GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	3162106
County	Erath
River Basin	Brazos
Groundwater Management Area	8
Regional Water Planning Area	G - Brazos G
Groundwater Conservation District	Middle Trinity GCD
Latitude (decimal degrees)	32.112778
Latitude (degrees minutes seconds)	32° 06' 46" N
Longitude (decimal degrees)	-98.371667
Longitude (degrees minutes seconds)	098° 22' 18" W
Coordinate Source	+/- 1 Second
Aquifer Code	218TWMT - Twin Mountains Formation
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1552
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	470
Well Depth Source	Driller's Log
Drilling Start Date	
Drilling End Date	11/19/1985
Drilling Method	Mud (Hydraulic) Rotary
Borehole Completion	Gravel Pack w/Perforations

Well Type	Withdrawal of Water
Well Use	Irrigation
Water Level Observation	Miscellaneous Measurements
Water Quality Available	No
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	Fred Luke
Driller	Dowell Well Service
Other Data Available	Drillers Log
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	8/20/1986
Last Update Date	

Packers - No Data

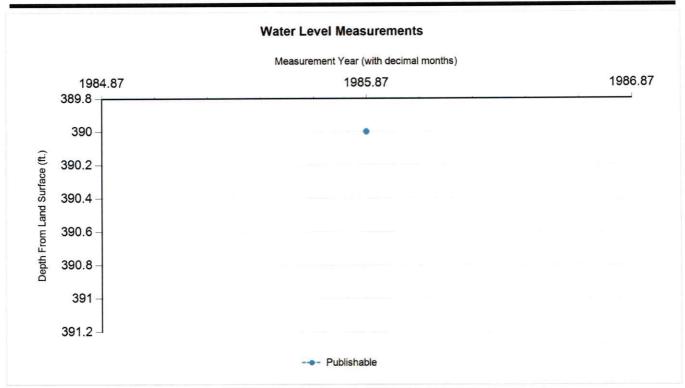
Remarks	Cem	ented from 0 to 20) feet.					
Casing								
Diameter (in	.)	Casing Type	Casing Material	Schedule	Gauge	Top Depth (ft.)		Bottom Depth (ft.)
	7	Screen	Steel				0	470
Well Test	s - 1	Vo Data						
Lithology	- N	o Data						
Annular S	Seal	Range - No D	ata					
Borehole	- No	o Data		Plugg	ed Back - No L	Data		

Filter Pack - No Data

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 31-62-106





Status Code	Date	Time	Water Level (ft. below land surface)	Change value in () indicates rise in level	Water Elevation (ft. above sea level)	#	Measuring Agency	Method	Remark ID	Comments
Р	11/19/1985		390		1162	1	Registered Water Well Driller	Unknown		

Code Descriptions

Status Code Status Description

P Publishable



Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 31-62-106

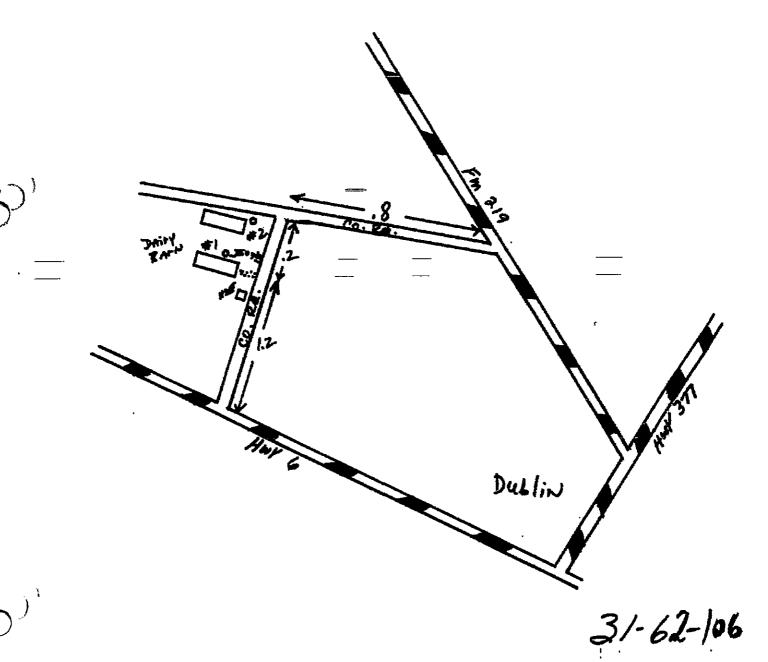


Water Quality Analysis - No Data Available

GWDB DISCLAIMER: Except where noted, all of the information provided in the Texas Water Development Board (TWDB) Groundwater Database (http://www.twdb.texas.gov/groundwater/data/gwdbrpt.asp) is believed to be accurate and reliable; however, the TWDB assumes no responsibility for any errors appearing in rules or otherwise. Further, TWDB assumes no responsibility for the use of the information provided. PLEASE NOTE that users of these data are responsible for checking the accuracy, completeness, currency and/or suitability of all information themselves. TWDB makes no guarantees or warranties as to the accuracy, completeness, currency and/or suitability of all information themselves. TWDB specifically disclaims any and all liability for any claims or damages that may result from providing GWDB data or the information it contains. For additional information or answers to questions concerning the TWDB GWDB, contact the Groundwater Data Team at GroundwaterData@twdb.texas.gov.

TEXAS DEPARTMENT OF WATER RESOURCES

"BY	DATE	DIVISION		SHEET NO,	OF
CHKD	DATE	JOB NAME			
			JOB NO	PROG. CODE	



TOWR-0738

T. V

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer(s) Tarin Ills. (372) Project No.	_ State Wel	11 tho3/	-62	106
Field Ho./Owner's Well Ho.	County	-11-16	, <u>-</u>	
1. Location:i, Section, Block, Survey	, Lut, _3 ;	2-06-44	, Long. 🤼	1-22-76
2. Owner: Fred Luke Address: P.O.	Box 15	9 Du	blin,	7. 7644
Tenant (other):Address:		-==		
priller: Dowell Well Service Address: P.O. B		Tirbica	inite !	6.76801
3. Land Surface Elevation: /552 ft. above msl determined by lago	<u>-</u> ,			
4. Drilled: 1/-/9 19 85; Bug, Cable Tool, Motary, Air, 1991				
5. Depth: Rept. 470 ft. Heasft. 20-476		SING, BLANK ted From		L SCREEN
6. Borchole Completion: Open Hole, Straight Wall, Underreamed Gravel Parket	Diam. (in.)	Type	\$etting from	(feet)
7. Pump: Mfr. Type Sugar.	6%	Step	0	470
No. Stages, Bowls Diamin., Settingft.				
Column Diamin., Length Tailpipeft.				
8. Hotor: Hfr. Fuel Plec. HP.	-			
9. Yield: Flow gpm, Pump gpm, Heas., Rept., Est. Date				
10. Performance Test: Date Length of Test Hade by				
Static Level 390 ft. Pumping Levelft. Drawdownft.				
Production gpm Specific Capacity gpm/ft.			ļ	
11. Quality: (Remarks on taste, odor, color, etc.)	 [<u> </u>		
Analyses Date Laboratory TDS Sp Cond				
DateLaboratoryTDSSp Cond				
12. Other data available (as circled): Pumping Test, Power & Yield Test, Utillers Log		\	 	
	<u> </u>	<u></u>	<u> </u>	
Formation Samples, Geophysical Log(s)(type)	عامليان	1. F	above	and Surface
13. Water Level(s): 390 ft. meas. 19 above 250		18 	apove f	and Surface
ft. rept. 19 above 19 below 14. Use: Dom., Stock, Public Supply, Ind., (Tr), Observation, other (Test Hole	Oli Test		N RA	rk)
14. Use: Dom., Stock, Public Supply, Ind., Irry, Uservation, telest notes. 15. Recorded by: F. B. Herry Source of data: 065 accorded by:	no dek	oc Date:	8-20	-86
16. Remarks: Well # 2 drilled May 1986 - 492		1,	~	
16. Remarks: WELL TO A CULCA MAY 115 D TIE	- LAL SEA	af Alleria ,		
	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			·
17. Location or Skatch:				

W/L Obs. Well W/Q Obs. Well State Well No. 31 -62-106

TWDB 0308 (Rev. 12-11-85)

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ene v ik tek			State 0	# .	•			am Water Well Critiers	Board
nd original copy by			ITER WE					O, Bux 13007 usin, Texas 76711	
icia mai to we les West Commission l. Sex 13087 ich, Texas 78711	ATTE	ETION OWNED	t: Confidenti	elily Pri	vilege	Notice as	Kenera side		
OWNER FRED LIN	ke		Address	0 /) (Stree	₿q.	<u>√ /</u> € FD)	59 Dehli	JEX. The	y y(,
COUNTY EATH		ــــــــــــــــــــــــــــــــــــــ	miles in	(N.E.) S.W.,	ree')	, direction from) I rownt	
] Legal date	ription					
iller must complete the legal descripts descripts the distance and direction from two	otion to the righ						ek NoTowns	· · · · · · · · · · · · · · · · · · ·	
on or survey lines, or he must locate all on an afficial Quarters or mail \$	NUCLICATION OF THE	• (1)4	Abstract				Survey Name Intersecting section or surv	ly light	
eneral Highway Map and strach the	map to this for	m.	Datate				55- 5		
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TYPE OF WORK (Check):		o utag (Check): □ Industrial C		7 m	. 	h.,	E) DRILLING METHOD		
Name where Desputing		Linguatres L ∐Test Well □				·¥	■Air Rotary □Cab		
Reconditioning Officering		METER OF HO				IOLE CO	MPLETION:		
WELL LOG:	Ois, fin.)	From (ft.)	To (ft.)	1		n Hole	C Straight Wall	🖟 Undermene	8
Started151925_		Surface	1100	4 :	Gra	el Packed	ed give interval from	-20 47	<u>n -</u>
Completed /1 - 17 1985	F	0	470	-	lf G	wel Fack	ad gwe interval front	7. T. TO	<u>u</u>
From To	Description s	nd color of for	metion	8)	CABIR	G, BLAN	K FIPE, AND WELL SCREE	EN DATA:	
(fi.) (fi.)		material		+-	Nen	Shee	f. Planic, etc.	Setting (ft.)	Gage
0 - 3 TWS	il				er Used	Pari	., Slotted, etc. ren lägf., if commercial	From To	- Casing, Screen
3 - 40 CAlie	10			62		Sto		470	15%
40-220 564 220-280 Red	Clay								
180 - 720 Sea	1							<u> </u>	-
20- 170 Red	Clay			-	╁╼			 	
10-400 5AN	 			 _		L	ATA [Rue 319.44(b)]		
100 - 430 (10)	iet -				CHINA	and from	. C .n. w20t	t. No. of Sacks Used	_7_
39 970 300				7			Aue to to	t. No, of Sacks Used	
				\dashv	Cerne	nadby.		Service, I	
				┥_					
] 10			IMPLETION urlace Stab Inecalled (Rule 3	10 44(+)]	
				4			other Used [Rule 319,44(d)]		
			D'Approved Alternative Procedure Used [Fluis 319.71]						
				۲,,)-W43	FER LEV	EC:		
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				_		intic level Interiors flo		Date	
1.5	1					KERS:	Туре	Depth	
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(Use reverse side if necessary)			\dashv	-	har h to ourse	o bowls, cylinder, jst. etc., _		,h.	
(SE MATER QUALITY)	A de such as such a			仜					
Did you knowlingly pensustr	eary strett whi	ch contained or	nderinable:	1	() W	ELLTER			
Water? Type BN	^			-		ype Test:	□ Pump □ BAiler		imated
Type of weter?	Depth	of strate		-	٧	ield:	gorn with	ft. drawdown after	'= f
Was a chemical analysis made			nder my supe	rvision)	and th	ust each a	nd sil of the statements have	in are true to the best o	1 my
knowledge and belief.	understand the	if tilling to con	UDINE IZAME	i tium s	2 11111			rAviBiatiqu duğışab\ğil	
COMPANY NAME DOWN							Ko	<u></u>	r/= 1
ADDRESS P. A. BO	(551 (AFD)	9	Sh	One (City)	NU	ille	(State)	(Zip)	<u>70 (</u>
	DOL WELL			(Signad		(Regi	stered Driller Taplices)	For TWC use only 3	-6
Places strach electric log, chamic			information,	, if avail	able.			Well No	
		TE	XAS WAT	ER CO	MMIS	SION C	OPY		

TWC-0392 (Rev. 06-19-88)

31-62-106

STATE OF TEXAS PLUGGING REPORT for Tracking #160782

Owner:

AZ TEX DAIRY INC

Owner Well #: No Data

Address:

PO BOX 159

DUBLIN, TX 76446

Grid #: Latitude: 31-62-1

Well Location:

1133 CR 347

DUBLIN, TX 76446

Longitude:

32° 06' 20.21" N

Well County:

098° 22' 22.89" W

Erath

Elevation:

No Data

Well Type:

Withdrawal of Water

Drilling Information

Company: UNKNOWN

Date Drilled:

No Data

Driller:

UNKNOWN

License Number:

UNKNOWN

Borehole:

Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
4	0	50

Plugging Information

Date Plugged:

6/26/2016

Plugger: FRED LUECK SR

Plug Method:

Dla (in.) 4

Tremmle pipe bentonite from bottom to 2 feet from surface, cement top 2 feet

Casing Left in Well:

0

Top (ft.)	Bottom (ft.)

Top (ft.)	Bottom (ft.)	Description (number of sacks & material)
0	50	Unknown 10 Bags/Sacks

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:

Landowner Plugged

PO BOX 159

50

DUBLIN, TX 76446

Driller Name:

FRED LUECK SR

License Number:

N/A

Comments:

No Data

W-7

STATE OF TEXAS WELL REPORT for Tracking #91596

Owner:

FRED LUECK

Owner Well #:

No Data

Address:

1133 CR 347

Grid #:

31-62-1

Well Location:

DUBLIN, TX 76446

Latitude:

32° 06' 15" N

Well County:

No Data Erath

Longitude:

098° 21' 59" W

Elevation:

No Data

GPS Brand Used:

GARMIN

Type of Work:

New Well

Proposed Use:

Irrigation

Drilling Date:

Started: 7/6/2006

Completed: 7/7/2006

Diameter of Hole:

Diameter: 11 in From Surface To 450 ft

Drilling Method:

Air Rotary

Borehole Completion:

Gravel Packed From: 320 ft to 450 ft

Gravel Pack Size:

Annular Seal Data:

1st Interval: From 0 ft to 25 ft with 24 (#sacks and material) 2nd Interval: From 310 ft to 320 ft with 4 (#sacks and material)

3rd Interval: No Data

Method Used: CONVENTIONAL Cemented By: COMPANY

Distance to Septic Field or other Concentrated Contamination: No Data

Distance to Property Line: No Data Method of Verification: No Data Approved by Variance: No Data

Surface Completion:

Alternative Procedure Used

Water Level:

Static level: 320 ft. below land surface on 7/7/2006

Artesian flow: No Data

Packers:

No Data

Plugging Info:

Casing or Cement/Bentonite left in well: No Data

Type Of Pump:

No Data

Well Tests:

Estimated

Yield: 60 GPM with 5 ft drawdown after .25 hour

Water Quality:

Type of Water: No Data Depth of Strata: No Data

Chemical Analysis Made: No Data

Did the driller knowingly penetrate any strata which contained undesirable

constituents: No

Certification Data:

The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and

resubmittal.

Company Information:

BENNETT WATER WELL DRILLING, INC.

7300 W. HWY 377 **TOLAR, TX 76476**

Driller License Number:

4805

Licensed Well Driller Signature:

JEFF BENNETT

Registered Driller Apprentice Signature:

No Data

Apprentice Registration Number:

No Data

Comments:

No Data

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking #91596) on your written request.

Texas Department of Licensing & Regulation P.O. Box 12157 Austin, TX 78711 (512) 463-7880

Dia. New/Used

8-5/8 NEW STEEL 0 - 390

DESC. & COLOR OF FORMATION MATERIAL

CASING, BLANK PIPE & WELL SCREEN DATA

Type

Setting From/To

From (ft) To (ft) Description

0 - 10 CLAY 10 - 28 LIME

28 - 45 SHALE

45 - 85 SAND

85 - 145 SHALE

145 - 260 LIME

260 - 300 SHALE

300 - 320 CLAY

320 - 420 SAND TAN

420 - 450 CLAY RED



December 29, 2008

To Whom It May Concern

RE: Certification of well plugging

This letter is to certify that Well #8, as depicted on the attached map, was plugged in 1990 by Wright Irrigation of DeLeon, Texas. The well was dug out and the casing cut at approximately 8 feet below the ground surface. The casing was filled with concrete and the area was backfilled with dirt.

I, Fred Lueck, Sr., as owner of the well and land, attest that the above information is true and correct to the best of my knowledge.

Signed:

Fred Luck St

Aztex Dairy, Inc.

Date: 12-29-08

 \bigcirc



06/05/90

To Whom it May Concern:

The unused water well on Mr. Fred Lueck, was capped on May 24th, 1990; as approved method in the Texas Water Commission Pamplet C-89-02 page 10.

P Wight

ΑW

CC/Fred Lueck



STATE OF TEXAS WELL REPORT for Tracking #67513

Owner:

FRED LUECK

Owner Well #: No Data

Address:

P.O. BOX 159

Grid #: **DUBLIN, TX 76446**

Latitude:

31-62-1

Well Location:

No Data

32° 05' 41" N

Longitude:

098° 21' 26" W

Well County:

Erath

Elevation:

No Data

Type of Work: New Well

Proposed Use:

Domestic

Drilling Start Date: 7/26/2005

Drilling End Date: 7/26/2005

Borehole:

Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
7.875	0	390

Drilling Method:

Air Rotary

Borehole Completion:

Filter Packed

Filter Pack Intervals:

280 300 Gravel	Top Depth (ft.)	Bottom Depth (ft.)	Filter Material	Size
200 350 Glavei	280	390	Gravel	

Annular Seal Data:

 Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
 0	25	10
270	280	2

Seal Method: CONVENTIONAL

Distance to Property Line (ft.): 90

Sealed By: COMPANY

Distance to Septic Field or other

concentrated contamination (ft.): No Data

Distance to Septic Tank (ft.): No Data

Method of Verification: MEASURED

Surface Completion:

Surface Sleeve Installed

Water Level:

280 ft. below land surface on 2005-07-26

Measurement Method: Unknown

Packers:

No Data

Type of Pump:

No Data

Well Tests:

Estimated

Yield: 20 GPM with 5 ft. drawdown after .25 hours

Water Quality:

Strata Depth (ft.)	Water Type
No Data	No Data

Chemical Analysis Made:

Unknown

No

Did the driller knowingly penetrate any strata which

contained injurious constituents?:

Certification Data:

The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information:

BENNETT WATER WELL DRILLING, INC.

7300 W. HWY 377 TOLAR, TX 76476

Driller Name:

JEFF BENNETT

License Number:

4805

Comments:

No Data

Lithology: DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing: BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description	
0	2	CLAY	
2	6	LIME	
6	15	CLAY	
15	80	SHALE	
80	145	SAND TAN	
145	210	LIME	
210	280	SHALE	
280	380	SAND TAN	
380	390	CLAY RED	

Dia. (in.) New/Used Type Setting From/To (ft.)					
4-1/2 NEW SDR-17 0 - 350					
4-1/2 NEW SCREEN 350 - 390 .020					

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation P.O. Box 12157 Austin, TX 78711 (512) 334-5540



STATE OF TEXAS PLUGGING REPORT for Tracking #41331

Owner:

Aztex Dairy

Owner Well #: No Data

Address:

Box 159

Grid #:

31-62-1

Dublin, TX 76446

Latitude:

32° 06' 45" N

Well Location:

1133 CR 347

Dublin, TX 76446

Longitude:

098° 21' 55" W

Well County:

Erath

Elevation:

No Data

Well Type:

Withdrawal of Water

Drilling Information

Company: No Data

Date Drilled:

No Data

Driller:

Unknown

License Number:

No Data

Borehole:

Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
4		30

Plugging Information

Date Plugged:

11/22/2005

Plugger: Fred Lueck/Owner

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	30

Top (ft.)	Bottom (ft.)	Description (number of sacks & material)
0	30	5

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:

Landowner Plugged

Box 159

Dublin, TX 76446

Driller Name:

Fred Lueck/Owner

License Number:

N/A

Comments:

No Data

ERALL 4) Type of Well Drill, Pump Installer, or Lurslowner performing the plugging operations must locate and identify the location of the well within a specific grid on a full scale gratical map available from Texas Natural Resource Information Service. The location of the well should be denoted within the grid by placing a corresponding dot in the square to the right. The legal description is optional. 5) Driller מומסלים צואמ 10) Date well plugged 12) Name of Driller/Pump Installer or Well Owner performing the plugging License No. JUNER Tremmie pipe bentonite from bottom to 2 feet from From surface, cement top 2 feet. Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, coment top 2 feet. Large diameter well filled with clay material from top to bottom. CG161419-11. DZWadwady Organia a water a tanta a ta l cordify 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 failer: to complete items I through 13 will result in the report(s) being returned for completion and resubmitted. Company or individually Name (type or print) State Tie > City Address

TOLR FORM MONWAY

White - TDLR

Yellow - Owner

Pink - Driller/Pump Installet

STATE OF TEXAS WELL REPORT for Tracking #655427

Owner:

Mike McDowell

Owner Well #: Well #2

Address:

PO Box 2

Dublin, TX 76446

Grid #:

31-62-1

Well Location:

560 CR 347

Latitude:

32° 06' 22.33" N

Dublin, TX 76446

Longitude:

098° 21' 56.08" W

Well County:

Erath

Elevation:

No Data

Type of Work: New Well

Proposed Use:

Irrigation

Drilling Start Date: 12/12/2023

Drilling End Date: 12/12/2023

Borehole:

Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
12	0	5
9	5	500

Drilling Method:

Air Rotary

Borehole Completion:

Filter Packed

Filter Pack Intervals:

Top Depth (ft.)	Bottom Depth (ft.)	Filter Material	Size
237	487	Sand	12/20

Annular Seal Data:

Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
0	4	Cement 2 Bags/Sacks
 4	237	Bentonite 12 Bags/Sacks

Seal Method: Tremie

Distance to Property Line (ft.): 50+

Sealed By: Driller

Distance to Septic Field or other

concentrated contamination (ft.): 100+

Distance to Septic Tank (ft.): 100+

Method of Verification: Customer Verified

Surface Completion:

Surface Sleeve Installed

Surface Completion by Driller

Water Level:

387 ft. below land surface on 2023-12-12

Measurement Method: Pressure Gauge

Packers:

No Data

Type of Pump:

Submersible

Pump Depth (ft.): 462

Well Tests:

Jetted

Yield: 20-30 GPM with Unkown ft, drawdown after 1 hours

Water Quality:

Strata Depth (ft.)	Water Type
270 - 479	2nd Trinity

Chemical Analysis Made: No

Did the driller knowingly penetrate any strata which

contained injurious constituents?:

Certification Data:

The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: Ass

Associated Well Services, Inc.

PO Box 16

Stephenville, TX 76401

Driller Name:

Curtis Sanders

License Number:

No

60404

Comments:

No Data

Lithology: DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	1	Topsoil
1	2	Black Clay
2	40	Yellow Caliche
40	46	Gray Clay, Shale, Limestone
46	65	Blue & Gray Sandy Clay, Streaks of Limestone
65	70	Red & Blue Clay
70	130	Blue Sandy Clay, Sand, Sandstone
130	270	Gray Clay, Shale, Limestone
270	285	Blue Sandy Clay, Sand, Sandstone
285	295	Red & Blue Clay
295	362	Blue Sandy Clay, Sand, Sandstone
362	417	Blue & Tan Sandy Clay, Sand, Gravel, Streaks of Sandstone
417	423	Red & Blue Clay
423	438	Blue & Tan Sandy Clay, Sand, Gravel, Sandstone
438	458	Red & Blue Clay

Casing: BLANK PIPE & WELL SCREEN DATA

Dla (in.)	Туре	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
5	Blank	New Plastic (PVC)		0	387
5	Screen New Plastic (PVC)		SCH 80 0.020	387	487

458		Blue Sandy Clay, San, Gravel, Streaks of Red Clay
479	500	Yellow Clay

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation P.O. Box 12157 Austin, TX 78711 (512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #655426

Owner:

Mike McDowell

Owner Well #: #1

Address:

Grid #:

31-62-1

PO Box 2 Dublin, TX 76446

32° 06' 18.56" N

Well Location:

560 CR 347

Dublin, TX 76446

Longitude:

Latitude:

098° 21' 57.66" W

Well County:

Erath

Elevation:

No Data

Type of Work: New Well

Proposed Use:

Irrigation

Drilling Start Date: 12/11/2023

Drilling End Date: 12/11/2023

Borehole:

Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
12	0	5
9	5	500

Drilling Method:

Air Rotary

Borehole Completion:

Filter Packed

Filter Pack Intervals:

Top Depth (ft.)	Bottom Depth (ft.)	Filter Material	Size
223	473	Sand	12/20

Annular Seal Data:

Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
0	5	Cement 2 Bags/Sacks
5	223	Bentonite 13 Bags/Sacks

Seal Method: Tremie

Distance to Property Line (ft.): 50+

Sealed By: Driller

Distance to Septic Field or other

concentrated contamination (ft.): 100+

Distance to Septic Tank (ft.): 100+

Method of Verification: Customer

Surface Completion:

Surface Sleeve Installed

Surface Completion by Driller

Water Level:

379 ft. below land surface on 2023-12-11

Measurement Method: Pressure Gauge

Packers:

No Data

Type of Pump:

Submersible

Pump Depth (ft.): 441

Well Tests:

Jetted

Yield: 20-30 GPM with Unkown ft. drawdown after 1 hours

Water Quality:

355 - 470	2nd Trinity		
Strata Depth (ft.)	Water Type		

Chemical Analysis Made: No

Did the driller knowingly penetrate any strata which contained injurious constituents?:

No

Certification Data:

The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information:

Associated Well Services, Inc.

PO Box 16

Stephenville, TX 76401

Driller Name:

Curtis Sanders

License Number:

60404

Comments:

No Data

Lithology: DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.) Bottom (ft.) Description 0 1 Topsoi81 4 1 **Black Clay** 4 23 Yellow Caliche 23 45 Gray Clay, Shale, Limestone Blue & Tan Sandy Clay, Sand, 45 119 Streaks of Sandstone 265 119 Gray Clay, Shale, Limestone Blue & Gray Sandy Clay, 265 278 Sand, Sandstone 278 310 Red & Blue Clay Blue Sandy Clay, Sand, Tiny 310 345 Gravel 345 355 Red & Blue Clay Blue & Tan Sandy Clay, Sand, 355 397 Gravel, Streaks of Sandstone 397 403 Red & Blue Clay Blue & Tan Sandy Clay, Sand, 435 403 Gravel, Sandstone Red & Blue Clay, Streaks of 435 459 Sand 459 470 Sand, Sandstone, Gravel 470 500 Yellow Clay

Casing: BLANK PIPE & WELL SCREEN DATA

Dla (in.)	Туре	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
5	Blank	New Plastic (PVC)	SCH 80	0	353
5	Screen	New Plastic (PVC)	SCH 80 0.020	353	413
5	Blank	New Plastic (PVC)	SCH 80	413	433
5	Screen	New Plastic (PVC)	SCH 80 0.020	433	473

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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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



December 30, 2008

Ms. April Hoh, P.G. Water Quality Assessment Team Water Quality Division MC-150 P.O. Box 13087 Austin, Texas 78711-3087

Re:

Well Buffer Exception Request

Aztex Dairy, Inc. (Pending CAFO Individual Permit #04844) - Erath County

Dear Ms. Hoh:

Aztex Dairy, Inc., is an existing animal feeding operation located in Erath County, Texas. The facility has been in operation since the 1980s. The facility has three water wells located within the required buffer zones of existing control facilities.

The operator requests exemption to the required buffer zones per 30 TAC §321.38(c). This exception request provides site-specific documentation showing the protective measures in place for the existing water wells. Wells to be considered in this request include:

- Well #1
- Well #2
- Well #4

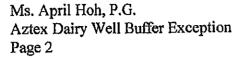
Please see the attached photos of each well. Information on well surface completion and additional protective measures is as follows:

Well #1

This is a supply well located north of the containment area. The well has a concrete surface slab, sealed to the well casing.

Well #2

This is a supply well located north of the containment area. The well has a concrete surface slab, sealed to the well casing.



Well #4

This is a domestic well located south of the containment area. The well is located inside a wellhouse and has a concrete surface slab sealed to the casing.

Backflow devices are present on each well. To ensure that the protective measures are maintained; an inspection checklist has been developed for the facility to use on a regular basis.

The protective measures identified in this request should prevent any adverse impacts to the underlying groundwater formation(s).

Respectfully submitted,

NORMAN H. MULLIN 66107

12-30-08

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

Attachment: Well photos

cc: Aztex Dairy

EAE file



Well #1 - Surface slab sealed to casing. Cracks have been sealed.



Well #2 - Surface slab sealed to casing.



Well #4 - View of interior of well house.





F-8170
Box 1137
702 East South Loop
Stephenville, TX 76401
Office: (254) 968-8721
Fax: (254) 968-8725
www.collierconsulting.com

August 13, 2013

TCEQ CAFO Water Quality Assessment Team ATTN: April Hoh P.O. Box 13087 Austin, Texas 78711-3087

Re: Exception request update to the well buffer zone for Well #1, 2 & 4 Aztex Dairy, Inc. - WQ0004844000

Ms. Hoh:

This letter is an update to the request for a well buffer zone exception for three wells located on Aztex Dairy, Inc. Well #1, 2, & 4 are located within the required buffer distances of the open lot areas. According to the landowner these wells were drilled by a local licensed well driller. Well logs were found for Well #1, but there were none found for Well's #2 and #4. This letter supersedes any and all previous submissions.

Well #1 is located approximately 125 feet north of the open lots in D.A. #2. The well has a four inch steel sleeve and is located on a concrete slab. The surface and slab are both sloping away from the well head. This is a producing well that was drilled by a licensed well driller. This well supplies water for the dairy barn and for trough water for the cattle. Well #1 has a previous submission for a well exception request that was approved in the current permit issued date 12 July 2010.

Well #2 is located approximately 90 feet northwest of the open lots in D.A. #2. The well has a twelve inch steel sleeve and is located on a concrete slab. The surface and slab are both sloping away from the well head. This is a producing well that was drilled by a licensed well driller. This well supplies water for the dairy barn and for trough water for the cattle. Well #2 has a previous submission for a well exception request that was approved in the current permit issued date 12 July 2010.

Capped Well #4 is located south of the open lots in D.A. #3. This is an old well that is not in production. This well is capped and maintained in a well house on a concrete slab. There are plans to plug this well in the future. Well #4 has a previous submission for a well exception request that was approved in the current permit issued date 12 July 2010.

All application of waste will take place in the Land Management Units; therefore it is not possible for any application of waste to be applied near the well. There are no other potential pollutant sources such as pesticides, herbicides or lubricants stored near the water wells.

Aztex Dairy, Inc. Buffer Zone Exception Request



Additional wellhead protective measures include, steel sleeve with a sanitary seal, backflow prevention lines and regular maintenance around wells. These wellhead protective measures will prevent pollutants from entering the groundwater through the wells.

The wells and areas around them will be inspected regularly to ensure contaminants are not running into the well. Any change in conditions of the well will have corrective measures taken.

If there any questions please feel free to contact my office.

Sincerely,

Noel Courts

Geologist

Collier Consulting, Inc.

Approved By:

Jim C. Wyrick

Professional Geose License No. 770

East Texas Environmenta

sciees

TCEQ Permit Number: Major Amendment/Renewal of Current Permit WQ0004844000

Date: August 8, 2013 Photographer: Noel Courts

Photograph: Well #1: Taken of well and well head.









Collier Consulting, Inc. Page 3 of 7

TCEQ Permit Number: Major Amendment/Renewal of Current Permit WQ0004844000

Date: August 8, 2013 Photographer: Noel Courts

Photograph: Well #1: Taken of well and well head looking south toward open lots.









Collier Consulting, Inc. Page 4 of 7



TCEQ Permit Number: Major Amendment/Renewal of Current Permit WQ0004844000

Date: August 8, 2013

Photographer: Noel Courts

Photograph: Well #2: Taken of well and well head looking southeast toward open lots.









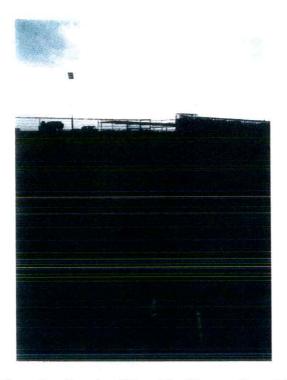
Collier Consulting, Inc. Page 5 of 7

J. 1325

TCEQ Permit Number: Major Amendment/Renewal of Current Permit WQ0004844000

Date: August 8, 2013 Photographer: Noel Courts

Photograph: Well #2: Taken of well and well head looking southeast toward open lots.



Photograph: Well #2: Taken of well and well head looking northwest from open lots.





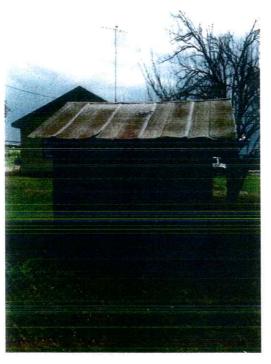


Collier Consulting, Inc. Page 6 of 7

TCEQ Permit Number: Major Amendment/Renewal of Current Permit WQ0004844000

Date: August 8, 2013 Photographer: Noel Courts

Photograph: Capped Well #4: Taken of well house looking northwest toward open lots.









Collier Consulting, Inc. Page 7 of 7

13 he/3









Owner:

AZ TEX DAIRY INC

Owner Well #:

No Data

Grid #:

31-62-1

Address:

PO BOX 159 DUBLIN, TX 76446

Latitude:

Well Location:

1133 CR 347 **DUBLIN, TX 76446**

Longitude:

Well County:

Erath

Elevation:

No Data

Well Type:

Withdrawal of Water

Drilling Information

Company: UNKNOWN

Date Drilled:

No Data

Driller:

UNKNOWN

License Number:

UNKNOWN

Diameter (in.)

Top Depth (ft.)

Bottom Depth (ft.)

Borehole:

4

0

50

Plugging Information

Date Plugged: 6/26/2016

Plugger: FRED LUECK SR

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.)

Top (ft.)

Bottom (ft.)

Description (number of sacks & material)

4

0

50

0

50

Unknown 10 Bags/Sacks

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:

Landowner Plugged

PO BOX 159

DUBLIN, TX 76446

Driller Name:

FRED LUECK SR

License Number:

N/A

Comments:

No Data

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program

P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616

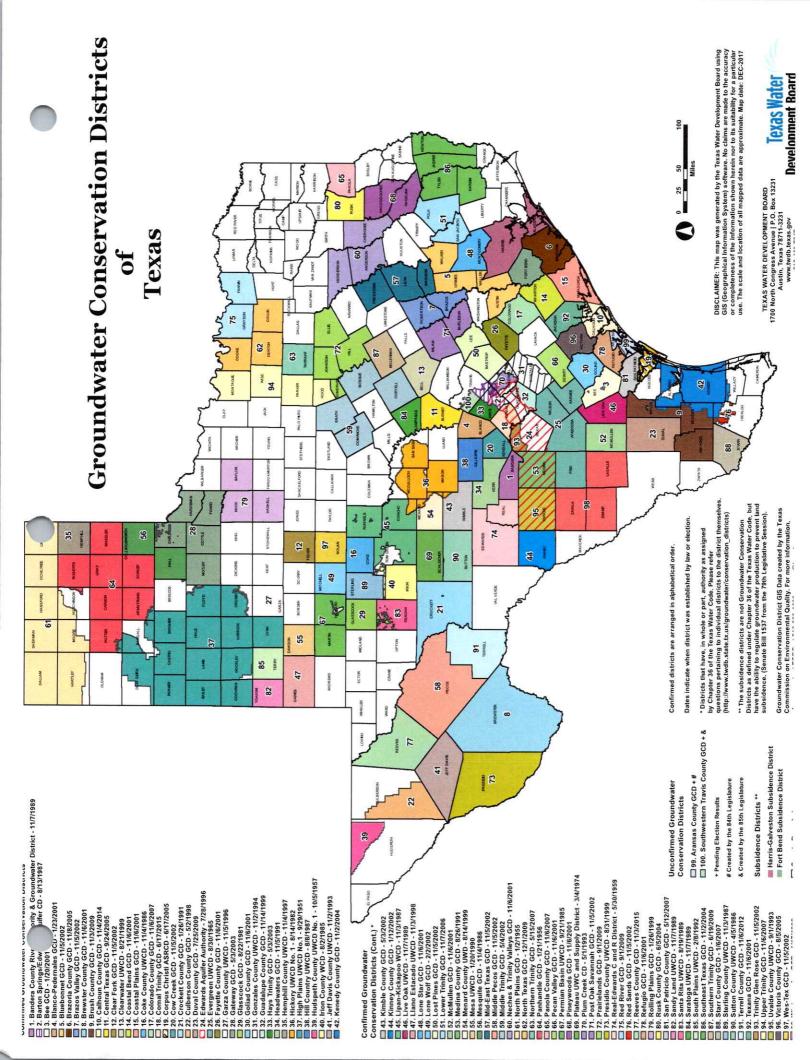
This form must be completed and filed with the department

	Ema	il address: <u>water.</u>				0 days following the g of the well.
	A. WELL			LOCATION DA	TA	
1) OWNER						
Name Dairy	The Address Bo	× 159	City	26/2	State	Zip 76446
2) WELL LOCATION						
County	Physical Address	347	City	oblin	State	Zip 76446
3) Owner's Well No. 4) Type of Well	Long. Mon	nitor 🖵 Inje	Lat.	De-Watering	Grid#	(5) N
Orill, Pump Installer, or Landowns a full scale gridded map available blacing a corresponding dot in the	er performing the plugging ope from Texas Natural Resource l	erations must locate a	nd identify t	he location of the well v	within a specific grid on enoted within the grid by	
	B) HISTORICAL	L DATA ON WE	ELL TO E	EPLUGGED (if	available)	
6) Driller Unknown			License	No. N/A		
7) Drilled Vakas i	8) Diameter of h	ole4**	Inches	9) Total depth of	well_50_ feet.	
		C. CURRENT P	LUGGIN	G DATA		
10) Date well plugged	6 26 16			The property of the property o	ALL REMOVE	
12) Name of Driller/Pump	Installer or Well Owner	performing the pl	lugging		t beside the method o	
License No. N/A	Owner				, p.p.	
13) CASING AND CEMENTING DA CAS IP		NG OPERATIONS.			ie pipe bentonite from urface, cement top 2 f	
DIAMETER (inches)	FROM(feet)	TO (feet)			3/8 bentonite chips w	
				Large d	liameter well filled w ottom.	ith clay material fi
CEMENT/BENT	ONITE PLUG(S) PLA	CES IN WELL			COMMENTS	DAMESTIC
FROM (feet)	TO (feet)	SACK	s			
50	0	10				
	D. VALIDAT	ION OF INFOR	MATION	INCLUDED IN	FORM	
Legatify that I plugged this	well (or the well was n	naged under my s	sunervisio	n) and that all of th	ne statements herein a	re true and correct

I understand that failure to complete items 1 through 13 will result in the report(s) being returned for completion and resubmitted.

Address P.O. Box 159	City	State 1x	Zip 76446
Signature	1	Signature	6126116
Licensed Driller/Pump Installer	Date	Apprentice	Date

Company or individual's Name (type or print)



ARMAGH DAIRY, LLC P.O. Box 2 DUBLIN, TEXAS 76446 ERATH COUNTY

SUBCHAPTER B PERMIT APPLICATION MAJOR AMENDMENT WQ0004844000

SECTION 5: LAND APPLICATION

- NUTRIENT MANAGEMENT PLAN
- NUTRIENT UTILIZATION PLAN
- ANNUAL SOIL SAMPLING ANALYSIS, EFFLUENT, & MANURE



Armagh Dairy, LLC 1133 CR 347 Dublin, Texas 76446 707-696-6696

TCEQ Permit Number:

WQ0004844000

Owner

Mike McDowell P.O. Box 2 Dublin, Texas 76446 707-696-6696

Type of Waste Plan:

Other AFO-CAFO Waste Plan

located in Erath County

Prepared By:

(Signature)

Noel Courts, P.G.

Certified Nutrient Management Specialist

Certificate Number = TX20221

Expiration Date = January 31, 2025

M.E. Lowther Consulting, LLC

P.O. Box 7332

Abilene, Texas 79608

325-692-5878

This plan is based on: 590 -633 Plan V 4.0_5

7/15/24 2:54 PM

EXECUTIVE SUMMARY:
Permit #: WQ0004844000
This Nutrient Management Plan has fields that meet NMP and/or NUP requirements.

Armagh Dairy, LLC is a certified organic dairy. No commercial fertilizer is allowed.

This Dairy produces enough waste to meet the crop needs except for Nitrogen requirements for all LMU's.

In order to maximize crop growth, supplemental Nitrogen needs to be added in accordance with organic dairy rules and regulations.

This Nutrient Management/Utilization Plan meets all state and federal requirements.

LOCATION AND PURPOSE OF THE PLAN

This animal operation is located in **Erath** 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 2024 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 Storage Pond (Not Agitated) . Approximately k - 1799 Dry = 22 head will be confined with the average weight of 1400-1200 lbs pounds. The animals will be confined 24 hours per day for 365 days per year.

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TABLES 1, 2 and 2a Permit #: WQ0004844000

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.

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SOLIDS APPLICATION: (cont) Permit #: WQ0004844000

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 <u>proper amount of supplemental nutrients are applied</u>. Applying a lower rate to the fields with higher soil test P levels will slow down the P buildup and extend their land application life. Phosphorus will also build up more rapidly on pastureland than on hayland or cropland, since very few nutrients are actually removed by grazing animals.

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

EFFLUENT APPLICATION:

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

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

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

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EFFLUENT APPLICATION: (cont)

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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)

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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, Mamure and Effluent Testing". TCEQ sampling rules and testing requirements will be followed on permitted sites.

COLLECTING SOIL SAMPLES FOR ANALYSIS:

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

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

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

Click the county desired.

Click Section IV in the left column under eFOTG

Type: 590 in the Search Menu above eFOTG and click: GO

Click on the desired item under Nutrient Management in the left column

SOIL ANALYSIS:

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

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RECORD KEEPING:

Permit #:

Estimated Annual Excess

WO0004844000

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

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

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

Record of waste leaving the farm or used as feed.

Date	Amount	Hauler or Recipient
		2-1
-		

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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:	Noel Courts, P.G.	Date:	7/15/2024	
Plan Approved by:		Date:		
Producer Signature:	Plan discossal of Mr Millson	Date:	15 ity 21	

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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Pl Index by Field

Table 1 - Estimated Effluent and Solids Quantities Produced

Permit #:

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Avg. Number of Animals

Milk - 1799 Dry = 2299 To

Type of Waste

Dairy Storage Pond (Not Agitated)

Dairy 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* 346

Estimated Tons Solids to be Land Applied Annually (on or off site)* 10,682.5

*From engineering design.

Estimated 1	Nutrient Availab	oilty		Estimated Nutrient Availability				
Effluent					Solids			
		Pounds /	Pounds /			pounds /	pounds /	
	pounds/yr	1000 gal	Acre Inch			yr	ton	
N	7,726	0.82	22.3	**	N	213,656	20.0	**
P2O5	4,135	0.44	11.9		P2O5	241,685	22.6	
K2O	27,983	2.97	80.8		K2O	511,558	47.9	
**	Effluent Values	Based on An	alysis		** Solids	Values Based	on Analysis	s
date	d:	July 10, 2024	L		dated	d: July 1	0, 2024	

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

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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	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	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	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 ^{2l} or

• equal to or greater than 350 ppm in arid areas 21 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/ Removal 4/ Removal 4/		Double the Maximum Annual P Application Not to Exceed 2 times the Annual N Crop Removal
High	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 or soil test P ^{1/} => 500 ppm in nutrient impaired TMDL areas. ^{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/ TMDL watersheds are designated by Texas Commission on Environmental Quality (TCEQ).

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Table 3 -	Crop R	temoval Rates (For Information Only)				Permit #:	WQ	0004844000
				op	Total Est.	Total Est.	Total Est.	
			TCEQ	al Cr ysis o	N	P ₂ O ₅	K ₂ O	
LMU or Field No.	Acres	Crop and P Index Level	Plan Type	Actual Crop Analysis or Default	Removal lbs/Ac/Yr	Removal lbs/Ac/Yr	Removal lbs/Ac/Yr	
1	50.0	Coastal Hay 4 cut, RG mod Graze M	NMP	Default	350	105	311	
2	31.0	Coastal Hay 4 cut, RG mod Graze M	NMP	Default	350	105	311	
3	12.0	Coastal Hay 4 cut, RG mod Graze M	NMP	Default	350	105	311	
4	41.0	Coastal Hay 4 cut, RG mod Graze M	NUP	Default	350	105	311	
5	28.0	Coastal Hay 4 cut, RG mod Graze M	NUP	Default	350	105	311	
6	20.0	Coastal Hay 4 cut, RG mod Graze M	NUP	Default	350	105	311	
7	21.0	Coastal Hay 4 cut, RG mod Graze M	NMP	Default	350	105	311	
8	53.0	Coastal Hay 4 cut, RG mod Graze M	NUP	Default	350	105	311	
9	34.0	Coastal Hay 4 cut, RG mod Graze H	NUP	Default	350	105	311	
10	6.0	Coastal Hay 4 cut, RG mod Graze M	NMP	Default	350	105	311	
11	20.0	Coastal Hay 4 cut, RG mod Graze M	NMP	Default	350	105	311	
12	27.0	Coastal Hay 4 cut, RG mod Graze H	NMP	Default	350	105	311	
13	36.0	Coastal Hay 4 cut, RG mod Graze H	NMP	Default	350	105	311	
				1				
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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able 4 - Ma	ximum S	olids Ap	oplication per Field		Permit #:		WQ0004	844000
Est. Solids Produced Annually (wet tons)	LMU or Field No.	Acres	Crop Management and PI runoff potential	Current Soil Test P Level (ppm)	Max Annual P2O5 lbs/acre	Annual/Biennial	Maximum Solids Allowable Tons/Acre	Maximum Allowabi Application Per field (Tons)
10,682	1							
	2							
	3							
	4	41.0	Coastal Hay 4 cut, RG mod Graze M	339	105	В	9.3	382
	5	28.0	Coastal Hay 4 cut, RG mod Graze M	293	105	В	9.3	261
	6	20.0	Coastal Hay 4 cut, RG mod Graze M	374	105	В	9.3	186
	7	21.0	Coastal Hay 4 cut, RG mod Graze M	146	450	Α	19.9	418
	8	53.0	Coastal Hay 4 cut, RG mod Graze M	323	105	В	9.3	494
	9	34.0	Coastal Hay 4 cut, RG mod Graze H	284	105	В	9.3	317
	10	6.0	Coastal Hay 4 cut, RG mod Graze M	130	450	A	19.9	119
	11	20.0	Coastal Hay 4 cut, RG mod Graze M	68	450	A	19.9	398
	12	27.0	Coastal Hay 4 cut, RG mod Graze H	193	338	A	14.9	403
	13	36.0	Coastal Hay 4 cut, RG mod Graze H	163	338	A	14.9	537
Fotal Solids Application Acres 286								
Application Allowable on-site (tons)								

3513.5 Not Adequate

Solids to be

site (tons)
7,168.9

used

off

Table 5 - Nutrients Applied/Needs at Maximum Solids Rates

Permit #:

WQ0004844000

Nutrients Applied When Application is at	Supplemental Nutrients Needed When Application is at	t
Maximum Rates	Maximum Rates	

LMU / Field # N Lb/ac 1 2	Aximum Rates 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 1						
2		1				
3						
4 186	211	446	255	0	0	0
5 186	211	446	305	0	0	0
6 186	211	446	265	0	0	0
7 398	450	952	100	0	0	0
8 186	211	446	290	0	0	0
9 186	211	446	300	0	0	0
10 398	450	952	130	0	0	0
11 398	450	952	130	0	0	0
12 298	338	714	215	0	0	0
13 298	338	714	225	0	0	0
			1			
1 1						
			1			
					1	

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Table 6 - Planned Solids Application Rates

Table 0 - 1	14	inneu s	Solids Application Rates				Pemm #.	W Q000-	
	de								Planned
	crc	Acres		Current	Annual / Biennial	Max	% of	Planned	Solids per
LMU or Field	nbk			Soil Test	enn	Rate	Maximum	Solids	field
No.	Õ	Acres	Crop Management and PI runoff potential	P ppm	A1 Bi	tons/ac	to apply	tons/ac	(tons)
1									
2									
3									
4		41.0	Coastal Hay 4 cut, RG mod Graze M	339	В	9.3	100	9.3	381.8
5		28.0	Coastal Hay 4 cut, RG mod Graze M	293	В	9.3	100	9.3	260.7
6		20.0	Coastal Hay 4 cut, RG mod Graze M	374	В	9.3	100	9.3	186.2
7		21.0	Coastal Hay 4 cut, RG mod Graze M	146	Α	19.9	100	19.9	417.7
8		53.0	Coastal Hay 4 cut, RG mod Graze M	323	В	9.3	100	9.3	493.5
9		34.0	Coastal Hay 4 cut, RG mod Graze H	284	В	9.3	100	9.3	316.6
10		6.0	Coastal Hay 4 cut, RG mod Graze M	130	A	19.9	100	19.9	119.3
			Coastal Hay 4 cut, RG mod Graze M	68	A	19.9	100	19.9	397.8
11		20.0	Coastal Hay 4 cut, RG mod Graze H			1	100	14.9	402.8
12		27.0	N. T.	193	A	14.9			
13		36.0	Coastal Hay 4 cut, RG mod Graze H	163	A	14.9	100	14.9	537.0
Acres		286.0	Town of much a little and town of American	Will the			acre applic	ation rates	3513.5
1068	52	4	Tons of wet solids produced Annually		11111	The second secon			NO
0	Tons to be used off-site at Max. rates Tons to be used off-site at planned rates 716					7169			

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Permit #: WQ0004844000

Permit #:

WQ0004844000

Table 7 - Nutrients Applied/Needed at Planned Solids Rates

Red cells? Proceed to adjustment page and fix.

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Table 8 - Maximum Effluent Application Per Field

Permit #:

WQ0004844000

Est. Available Effluent (ac inches) 346 Source: Dairy Storage Pond (Not Agitated)	LMU or Field No. 1 2 3 4 5 6 7	Acres 50.0 31.0 12.0	Double crop	Crop Management and PI runoff potential Coastal Hay 4 cut, RG mod Graze M Coastal Hay 4 cut, RG mod Graze M Coastal Hay 4 cut, RG mod Graze M	Current Soil Test P Level (ppm) 158 185 65	Max Annual P ₂ O ₅ (lbs/acre) 289 289 289	A A A Annual/Biennial	Maximum Effluent Allowable (ac in/ac) 24.2 24.2 24.2	Maximum Effluent Allowable / Field (ac in) 1210 750 290
	8 9 10 11 12 13								
Total Effluent Application Acres 93									
Maximum Effluent Application Allowable On-Site (ac in) 2251 Adequate									
Effluent to be used Off-Site (ac in)									

Plan: 590 -633 Plan V 4.0_5

Table 9 - Nutrients Applied/Needed at Maximum Effluent Rates

Permit #:

WQ0004844000

	in the second section and the second section is a second section and the second section is a second section as	plied When Ap Maximum Rate		Supplement	al Nutrients Ne Maximu	eded When Ap m Rates	plication i
eld#	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/

		Maximum Rate	S		Maximu	m 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	540	289	1955	0	0	0	0
2	540	289	1955	0	0	0	0
3	540	289	1955	0	0	0	0
4							
5							
6							
7							
8							
9							
10							
11							
12							
13			:				
	L	1	L	L	L	L	L

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Permit #:

WQ0004844000

Table 10 - Planned Effluent Application Rates

Table	10-11	an	ned Efficient Application Rates			remmt #.		W Q000+64	
		d							Planned
		cro		Current	1 a	Maximum	% of	Planned	Effluent
LMU or		ple		Soil Test	nua inn	Effluent	Maximum	Effluent	/ field
Field No.	Acres	Double crop	Crop Management and PI runoff potential	P ppm	Annual / Biennial	(ac in/ac)	to apply	(ac in/ac)	(Ac. In)
		H							
1	50.0		Coastal Hay 4 cut, RG mod Graze M	158	A	24.2	15.5	3.8	190
2	31.0		Coastal Hay 4 cut, RG mod Graze M	185	A	24.2	15.2	3.7	115
3	12.0		Coastal Hay 4 cut, RG mod Graze M	65	A	24.2	15.0	3.6	43
	12.0			X.5.			50.000	15.43	
4									
5									
6									
3									
7									
8									
9									
10									
11									
12									
13									
1									
1									
1									
1									
1									
		_							
Acres	93.0				Will	the planne			348
		7				use all of	the Efflue	ent?	YES

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

Permit #:

WQ0004844000

Red cells? Proceed to adjustment page and fix.

	Nutrients /	Applied at Plar	nned Rates	Supplemen	tal Nutrients No	eeded at Planr	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	84	45	303	450	0	0	0
2	82	44	297	425	0	0	0
3	81	43	293	445	35	0	0
4							
5							
6							
7							
8							
9							
10							1 1
11							
12							
13		1					
58.0045							
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							1
			1				
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Table 12 - Available Water Capacity to 24 inches(or less) of predominant Permit #: WQ0004844000 soil in fields receiving effluent and Texture of the most restrictive soil layer in the upper 24 inches

Tayer in the uppe			(The second sec		
LMU / Field #	AWC (inches)	Restrictive Texture	LMU / Field #	AWC (inches)	Restrictive Texture
1	3.6	Silty Clay			
2	3.96	Clay			
3	3.96	Clay			
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
1					
			L		

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Table 13 - Non Application Areas by Field

Permit #:

Total 590-633 Field Acres:

WQ0004844000

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

The bound of the	T					Total		FS	FB	RFB	OLEA	Total
1 0.0 0.0 2 0.0 0.0 3 0.0 0.0 4 0.0 0.0 5 0.0 0.0 6 0.0 0.0 7 0.0 0.0 8 0.0 0.0 9 0.0 0.0 10 0.0 0.0 11 0.0 0.0 12 0.0 0.0	LMU/			1		1	LMU/			1		
2 0.0 0.0 3 0.0 0.0 4 0.0 0.0 5 0.0 0.0 6 0.0 0.0 7 0.0 0.0 8 0.0 0.0 9 0.0 0.0 10 0.0 0.0 11 0.0 0.0 12 0.0 0.0				Acres	Acres	Excluded	Field #	Acres	Acres	Acres	Acres	Excluded
3 0.0 0.0 4 0.0 0.0 5 0.0 0.0 6 0.0 0.0 7 0.0 0.0 8 0.0 0.0 9 0.0 0.0 10 0.0 0.0 11 0.0 0.0 12 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 12 0.0 0.0		1										
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 12 0.0 0.0		1										
6	4	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 12 0.0 0.0	5	0.0	0.0									
8 0.0 0.0 9 0.0 0.0 10 0.0 0.0 11 0.0 0.0 12 0.0 0.0	6	0.0										
9 0.0 0.0 10 0.0 0.0 11 0.0 0.0 12 0.0 0.0	1											
10		0.0										
11 0.0 0.0 12 0.0 0.0		0.0										
12 0.0 0.0	10	0.0	0.0									
		0.0										
		0.0	0.0									
	13	0.0	0.0									
							11					
See Application Map for location of buffers Totals 0.0 0.0 0.0 0.0 0.0 Total 500 633 emplication agrees 370.0 Total 500 633 Field Agrees 370.0	See App	olication	Map for	location o			Totals					

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Total 590-633 application acres: 379.0

Waste Utilization and Nutrient Management Data Entries

General Data

Date: 7/15/2024

Farmer Name : Armagh Dairy, LLC

County in which the Land is located : Erath

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 #: WQ0004844000

All other entries on General Page appear on the Cover Page

Animal Information

Plan Year: 2024

Are you receiving waste from another producer? No

Number of animals: 500 Milk - 1799 Dry = 2299 Total

Approximate Weight: 1400-1200 lbs

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

ACRE FEET of effluent to be irrigated*: 28.87

Estimated annual gallons of effluent to be

irrigated/applied annually: 9407231.76

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)*: 7670

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

No

Analysis Information

Effluent Information

Date of Analysis: 7/10/2024

Manure Source: Dairy Storage Pond (Not Agitated)

Nitrogen % From Analysis: 0.0123
Phosphorus % From Analysis: 0.0023
Potassium % From Analysis: 0.0297
Moisture % From Analysis: 99.8

Manure / Solids Information

No

Date of Analysis: 7/10/2024

Manure Source: Dairy Solids

Nitrogen % From Analysis: 1.741
Phosphorus % From Analysis: 0.688
Potassium % From Analysis: 2.779

Moisture % From Analysis: 28.2

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: 590 -633 Plan V 4.0

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Field and Buffer Entries

Permit #:

WQ0004844000

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Plan is based on: 590 -633 Plan V 4.0_5

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 (FR) is expressed in ACRES on this spreadsheet, but as LINEAR FEET on the CPO.

	NOTE: FIEIU	border (F)	b) is expres	ssed in AC	KES on this	s spreadsn	eet, but as LIN	EAR FEET on the CPO.
Field No.	Total LMU or Field Acres	FS	FB	RFB	OLEA	Total Buffer Acres	Actual Application Acres	
1	50					0.0	50.0	
2	31					0.0	31.0	
3	12					0.0	12.0	
4	41					0.0	41.0	
5	28					0.0	28.0	
6	20					0.0	20.0	
7	21					0.0	21.0	
8	53					0.0	53.0	
9	34					0.0	34.0	
10	6					0.0	6.0	
11	20					0.0	20.0	
12	27					0.0	27.0	
13	36					0.0	36.0	

Soil Test, Crop Information and Plant Analysis Data Entries

0001	onal) Use Required	Yield	Air Dry Production	(IDS/ac/yr)																			
WQ0004844000	Plant Analysis & Yield (optional) Use Only When Crop Removal is Required		2	₩ %																			
>	nalysis & len Crop F		í	7 % F																			
Permit #:	Plant A		3	N %																			
	s	ialysi	IA Jusi (N \	() d	z	z	z	Z	Z	Z	z	z	z	Z	Z	Z							
		sp juər	= Effli	S L	ш	ш	ဟ	S	S	S	S	S	S	S	S	S							
Plan is based on: 590 -633 Plan V 4.0_5			Crop/Land-Use and Pindex Runoff Potential	Coastel Hay 4 out DG mod Green M	Coastal Hay 4 cut, RG mod Graze M	Coastal Hay 4 cut, RG mod Graze M	Coastal Hay 4 cut, RG mod Graze M	Coastal Hay 4 cut, RG mod Graze M	Coastal Hay 4 cut, RG mod Graze M	Coastal Hay 4 cut, RG mod Graze M	Coastal Hay 4 cut, RG mod Graze M	Coastal Hay 4 cut, RG mod Graze H	Coastal Hay 4 cut, RG mod Graze M	Coastal Hay 4 cut, RG mod Graze M	Coastal Hay 4 cut, RG mod Graze H	Coastal Hay 4 cut, RG mod Graze H							
590 -633 I			Appl. Area	Acres	31.0	12.0	41.0	28.0	20.0	21.0	53.0	34.0	0.9	20.0	27.0	36.0							
based on:			LMU or	Fleid #	2	9	4	5	9	7	00	6	10	11	12	13							
Plan is l		This	only for Dry	Poultry																			
26 PM		Lime	(enter amt or leave	Diank)																			
7/15/24 2:	Analysis		x ((ppm)	780	617	629	541	845	373	615	443	824	351	936	469							
Printed on: 7/15/24 2:56 PM	Soil Test Analysis		۵ ((ppm)	185	65	339	293	374	146	323	284	130	8.79	193	163							
ц			z	(mdd)	15.994	6.33	49.772	23.732	45.274	20.044	33.023	25.95	6.93	6.158	14.139	7.317							

Solids Application Rate Entries

Solid	ds -	Set the Planned Application Rates				Permit #:	WQ	0004844	1000
106	82	"Wet tons" of solids produced Annually		V	ill the planr	ned rates u	se all of the	Solids?	NO
					Tons to be	used off-s	ite at plann	ed rates	7169
LMU or Field No.	Acres	Crop Management and PI 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	Planned Solids tons/ac	Planned Solids per field (Tons)
1 2									
3	44.0	Control of the Post of Control	220	225	D!!-I	0.2	100.0	0.2	201.0
4 5		Coastal Hay 4 cut, RG mod Graze M Coastal Hay 4 cut, RG mod Graze M	339 293	225 225	Biennial Biennial	9.3 9.3	100.0	9.3 9.3	381.8 260.7
6	20000 00	Coastal Hay 4 cut, RG mod Graze M	374	225	Biennial	9.3	100.0	9.3	186.2
7		Coastal Hay 4 cut, RG mod Graze M	146	225	Annual	19.9	100.0	19.9	417.7
8	3-03-03-03-03	Coastal Hay 4 cut, RG mod Graze M	323	225	Biennial	9.3	100.0	9.3	493.5
9		Coastal Hay 4 cut, RG mod Graze H	284	225	Biennial	9.3	100.0	9.3	316.6
10	-222	Coastal Hay 4 cut, RG mod Graze M	130	225	Annual	19.9	100.0	19.9	119.3
11		Coastal Hay 4 cut, RG mod Graze M	68	225	Annual	19.9	100.0	19.9	397.8
12	27.0	Coastal Hay 4 cut, RG mod Graze H	193	225	Annual	14.9	100.0	14.9	402.8
13	36.0	Coastal Hay 4 cut, RG mod Graze H	163	225	Annual	14.9	100.0	14.9	537.0
							L	l	3513.5

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Effluent Application Rate Entries

WQ0004844000

Effluent - Set the	Planned Application Rates	Permit #:

LMU or Fleld Acres Crop Management and PI runoff potential No. Acres Crop Management and PI runoff potential No. Acres Crop Management and PI runoff potential No. Acres Crop Management and PI runoff potential Pipos Req. Pipos Pipos Req. Pipos P		407000	Gallons of Effluent to be used annually	1		MAGIL About	onned set-		the officent?	
LMU or or pleid No. New						will the pi	anned rate	s use all of	the effluent?	Yes
Filled No. Arres Crop Management and Pl runoff potential 1		346	Acre inches of Effluent to be used annually							
2 31.0 Coastal Hay 4 cut, RG mod Graze M 185 225 Annual 1.0 Coastal Hay 4 cut, RG mod Graze M 65 225 Annual 1.0 Coastal Hay 4 cut, RG mod Graze M 65 225 Annual 1.0 Coastal Hay 4 cut, RG mod Graze M 65 225 Annual 1.0 Coastal Hay 4 cut, RG mod Graze M 65 225 Annual 1.0 Coastal Hay 4 cut, RG mod Graze M 65 225 Annual 1.0 Coastal Hay 4 cut, RG mod Graze M 1.0 Coastal Hay 4 cu	or Field	Acres	Crop Management and PI runoff potential	Soil Test	P2O5	Biennial Application	Effluent Allowable	Maximum Planned to	Effluent	Effluent per field
2 31.0 Coastal Hay 4 cut, RG mod Graze M 185 225 Annual 1.0 Coastal Hay 4 cut, RG mod Graze M 65 225 Annual 1.0 Coastal Hay 4 cut, RG mod Graze M 65 225 Annual 1.0 Coastal Hay 4 cut, RG mod Graze M 65 225 Annual 1.0 Coastal Hay 4 cut, RG mod Graze M 65 225 Annual 1.0 Coastal Hay 4 cut, RG mod Graze M 65 225 Annual 1.0 Coastal Hay 4 cut, RG mod Graze M 1.0 Coastal Hay 4 cu	1		Coastal Hay 4 cut, RG mod Graze M		225	Annual	24.2		3.8	190
3 12.0 Coastal Hay 4 cut, RG mod Graze M 65 228 Annual 242 15.0 3.6 43 43 55 66 7 7 7 7 7 7 7 7			3:				1			
4		100000000000000000000000000000000000000					1			
5 6 7 7 8 9 9 10 111 112 13 13 13 14 15 16 16 16 16 16 16 16 16 16 16 16 16 16	I						2.1.2	2010		
6 7 8 9 9 10 11 112 13 13 13 14 15 16 16 16 16 16 16 16 16 16 16 16 16 16	1 2 1									
7 8 9 10 11 12 13 13 13 14 15 16 16 16 16 16 16 16 16 16 16 16 16 16										
8 9 10 11 11 12 13 13 1										
9 10 11 12 13 13 14 14 14 14 14 14 14 14 14 14 14 14 14	I									
10 11 12 13										
Total Effluent This Page 348										
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								Total Eff	luent This Page	348

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Available Water Capacity Entries

844000	Available	Water Holding Capacity	(AWC) of	24 inches	of the soil	profile (Inches)	3.60	3.96	3.96																			
WQ0004844000		0		AWC of	Fourth	Layer (in/in)							-			-												
		0		₹	ш						L									1						\perp		
Permit #:		24		Depth of	Fourth	Layer (inches)																						
Pe		18		Dep	. <u>P</u>	iic La	0	0	0																			
		0.12) of	5	i) er																						
		0.08	yاد	AWC of	Third	Layer (in/in)																						
4.0 5	ES	18	24" or	o of	ō	er es)								T			ľ	T										
Plan V	ENTRI	14	e top	Depth of	Third	Layer (inches)	28	0	0		l	T		T	T			T	Ť									
Plan is based on: 590-633 Plan V 4.0	EXAMPLE ENTRIES	0.21	Enter Data for the top 24" only	of	pu	<u> </u>	0.18								T					Ī								
on: 5	EXA	0.16	r Data	AWC of	Second	Layer (in/in)	0.12					İ	T	T	T	İ	T	Ť	Ť	T	T							1
basec		14	Ente	of	ַ	(S	00							$\frac{1}{1}$	t				\dagger		t							1
lan is		8		Depth of	Second	Layer (inches)	10	30	30			ŀ		t	t			+	\dagger	\dagger	+							-
		7.2		<u></u>			81.	18	18		-	-		+	+	-	$\frac{1}{1}$	\dagger	\dagger	+								
5		0.12 0		AWC of	First	Layer (in/in)	0.12 0.	0.15 0.	0.15 0.		-	t			ł	İ	1		\dagger		+					1		-
2.56 PI		3 0					0	30 0	30 0		-	1	-		ŀ	-		\dagger	t									1
5/24 2				Depth of	First	Layer (inches)					-	-		+	ł	+		+	+	+	-					-	-	-
. 7/1								0	0		L	-	+	\perp	+	+	1	\downarrow	\downarrow	-	\downarrow	L				\dashv		_
Printed on: 7/15/24 2:56 PM		Texture of the soil layer within	the upper 24	inches of the soil profile that	has the lowest	permeability (Don't Abbreviate)	Silty Clay	Clay	Clay																			
		Tex	the	soil			S				L	-		\downarrow	1	-	_	\downarrow	_		1							
				MI	Fields	receiving	-	2	က																			



Phone: 806.677.0093

800.557.7509

Fax: 806.677.0329

Lab No: 4120	LABORATORY ANALYS	S REPORT	Report Date: 07/10/2024 02:04 pm
Send To: 45280	M E LOWTHER CONSULTING LLC MITCH LOWTHER PO BOX 7332 ABILENE, TX 79608		Casey Johnson Technical Director
Client Name: Sample ID:	EAD	Received: Sampled: Invoice No:	07/05/2024 425937

	Analysis	results	lbs/acre-in	meq/L
NUTRIENTS	7.			
Nitrogen				
Total Nitrogen	123	mg/kg	28	8.8
Organic Nitrogen	46	mg/kg	10	3.3
Ammonium Nitrogen	77.1	mg/kg	17	5.5
Major and Secondary Nutrients				
Phosphorus	23	mg/kg		
Phosphorus as P2O5	53	mg/kg	12	
Potassium	297	mg/kg		7.6
Potassium as K2O	356	mg/kg	81	
OTHER PROPERTIES				
Moisture	99.8	%		
Total Solids	0.2	%	453	
Organic Matter	0.1	%	227	
Ash	< 0.10	%		
C:N Ratio	4.7	ratio		

Phone: 806.677.0093

800.557.7509

Fax: 806.677.0329

Lab No.: 4127	LABO	RATORY ANALYS	IS REPORT	Report Date: 0	7/10/2024 02:04 pm
Send To: 45280	M E LOWTHE MITCH LOWI PO BOX 7332 ABILENE, TX	2			ey Johnson nical Director
Results For: Sample ID:	MAD		Received: Sampled: Invoice No:	07/05/2024 425937	
				Total content	Estimated available first year*
			Analysis (as rec'd)	lbs per ton (as rec'd)	lbs per ton (as rec'd)
NUTRIENTS					
<u>Nitrogen</u> Total Nitro Organic Ni Ammoniun	trogen	% % %	1.741 1.644 0.097	34.8 32.9 1.9	14.0 12.1 1.9
	condary Nutrients				
Phosphoru Phosphoru Potassium Potassium	is as P2O5	% % % %	0.688 1.575 2.779 3.335	31.5 66.7	28.4 66.7
OTHER PROPERT	TIES				
Moisture Total Solid		% % % ratio	28.2 71.8 46.1 25.7 15.4	1436 922 514	

^{*} Assumes 37% 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.

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

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

Armagh Dairy LLC

not provided

Client address:

Client Name:

TCEQ COC# 055702 Standard Sample Report



TCEQ REGION 4 - STE)

ICEO/client Sample Sample Coll		refeeled		CLCL					
Double Smothers			Collector	3	Date	Sample	Sample opened	Sample Ground	Process
cies)	Date:	ı	лате:	Region #	Received	Type:	Date	Date	Tech
0-6 10/4/2023	10/4/2023		Chris Whitefield	4	10/10/2023	soil	10/10/2023	10/24/2023	a F
6-24 10/4/2023	10/4/2023		Chris Mhitofield	•	40.40.000			202	į .
				*	10/10/2023	SO	10/10/2023	10/24/2023	Ē
0-6 9/28/2023	9/28/2023		Chris Whitefield	4	10/10/2023	Soil	10/10/2023	10/24/2023	ē
B-24	5002/86/0		Chair Marian	•		;		07071170	<u> </u>
5	SICOLOGO			4	10/10/2023	soil	10/10/2023	10/24/2023	d H
55702-07 0-2 9/28/2023	9/28/2023		Chris Whitefield	4	10/40/2022	ioe	407407000	0000170007	, í
c				٢	01101010	5	10/10/2023	10/24/2023	7
Z-0 8/Z8/Z0Z3	9/28/2023		Chris Whitefield	4	10/10/2023	SOI	10/10/2023	10/24/2023	Q F
6.04	00000000		2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	•	:			2121112121	3
	0140/4040		Chris Writerield	4	10/10/2023	Soil	10/10/2023	10/24/2023	ПР

Methods and Sample Preparation:

Processing - SWFTL0097R0.SOP Receiving of samples

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. 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 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

Analytical Methods:

SOIL PH AND CONDUCTIVITY - SWFTL0015R1_SOP Soil pH 2:1 Dl water:soil

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.

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. NO3-N EXTRACTION - SWFTL0014R5.SOP/NO3-N ANALYSIS - SWFTL0089R1.SOP

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 Soil P. K. Ca. Mg. S and Na -- Mehlich III by ICP.

		z		mdc	mdd	mdd	Ĕ	E	шаа	Ę
		Nitrate-N	units	ā	ā.	. .	: 8	. .	. 2	. 5
		Nitrate-N		2.786	1.696	15.994	4.715	49.722	30.155	13.2
		Conductivity	units	dS/M	M/Sp	M/Sp	M/Sp	dS/M	dS/M	M/Sp
16-Nov-23	055702	Conductivity		0.273	0.344	0.355	0.367	0.353	0.304	0.19
Print Date:	TCEQ COC# 055702	늄	units	NA	¥	¥	δ.	A A	¥	¥
	•			8.28	8.19	7.87	8.07	7.51	7.86	8.01
246		된								
Report ID: 055702a-45246	tandard Sample Report	TCEQ/client	Sample ID:	55702-01	55702-02	55702-03	55702-04	55702-07	55702-08	55702-09
Report ID:	Standard Sar	Laboratory ID:		13212	13213	13214	13215	13216	13217	13218

Laboratory ID:	Hď	표	Conductivity	Conductivity	Nitrate-N	Nitrate-N
		nults		nuits		units
Detection Limit	0.01	na	0.001	M/Sp	0.01	mdd
Reporting Limit	0.1	na	0.001	dS/M	1	mdd

accialcity ic.		priconductivity of	wry prep	pH Analysis	lysis	Conductivity	tivity	Nitate-N Extract	extract	Nitrate-N Analysis	\naivsis
	Sample ID:	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
13212	55702-01	11/3/2023	DEC	11/6/2023	DEC	11/6/2023	DEC	11/6/2023	FWR	11/7/2023	M.
13213	55702-02	11/3/2023	DEC	11/6/2023	DEC	11/6/2023	DEC	11/6/2023	FMR	11/7/2023	<u> </u>
13214	55702-03	11/3/2023		11/6/2023	OEC	11/6/2023	DEC	11/6/2023	FMR	11/7/2023	M.
13215	55702-04	11/3/2023		11/6/2023	DEC	11/6/2023	DEC	11/6/2023	FMR	11/7/2023	M.
13216	55702-07	11/3/2023	DEC	11/6/2023	DEC	11/6/2023	DEC	11/6/2023	FAR	11/7/2023	2
13217	55702-08	11/3/2023	OEC	11/6/2023	DEC	11/6/2023	DEC	11/6/2023	FMR	11772023	; ≥
13218	55702-09	11/3/2023	DEC	11/6/2023	OEC	11/6/2023	DEC	11/6/2023	FWR	11/7/2023	; ≥

Report ID: 055702a-45246

Print Date: 16-Nov-23

Quality Control Report

TCEQ COC# 055702

Laboratory ID:		표	표	Conducitity	Conducitity	Nitrate-N	Nitrate-N	Nifrate-N
			units	conc.	units	5000	Sign I	% recovery
13219	10963	5.8	B	0.256	M/Sp	6.566	BGG	/o recovery
13220	10964	5.9	na	0.254	M/SP	6.383	1	
	Mean IC	5.845	na	0.255	W/S/W	G.7745	lidd i	
13220spike	Spiked sample		,		j '	24.45		1
	IC lower	5.760	133	0.238	M/OF	n c	udd i	82.5
	IC Upper	5.990	2	0.301	W/SD	7 20		
	blk207	;	Ŋa	0	W/Sp	2.972	E E	

)				i			
Laboratory ID:	玉	표	Conducitity	Conducitity	Nitrate-N	Nitrate-N	
		units	conc.	units	COUC	, simil	
Detection Limit	0.01	na	0.001	M/Sp	500		
Reporting I imit	Č	ŝ	7000		5	nind	
The second second	3	<u> </u>	U.U	dS/M	_	waa	

		Analysis	Tech		⋚	141	245	M.
	Midneth	INICALE-IN ANALYSIS	Date		11/7/2023	44777000	11114043	11/7/2023
	Extract	י מאר	Tech	Ę	Ϋ́	EMD		FMR
	Nitate-N Extra		Date	44/8/2000	11/0/2023	11/6/2023		11/6/2023
	tivity		, ecn	CHC	1	DEC		DEC
	Conductiv	Ç	Date	11/6/2023		11/6/2023	44 (0,000	11/0/2023
	lysis	Torh		OHC OHC		CHO CHO CHO CHO CHO CHO CHO CHO CHO CHO	נ	3
	pH Analysi	Date		11/6/2023	44 1010000	1/0/2023	11/8/2023	10000
	vity prep	Tech	200	C C C	0	2	DHC	
	phyconancii	Date	44/2/2000	11/3/2023	11/2/2022	2000	11/3/2023	
- Obereten: 10:	במסתומותו א ונה.		10082	2000	10964		blk207	

		Mehlich III Mehlich III Mehlich III Mehlich III Mehlich III Mehlich III Mehlich III Mehlich III	Ca units Mg conc. Mg units S conc. S units Na conc. Na units	mdd
		Mehlich	Nacor	31.8
		Mehlich III	S units	ppm 31.8
		Mehlich III	S conc.	ppm 69.4
		Mehlich III	Mg units	шdd
		Mehlich III	Mg conc.	546
		Mehlich III	Ca units	ppm 546
		Mehlich III	K units Ca conc.	
		Mehlich III	K units	шdd
Print Date: 16-Nov-23	055702	Mehlich III	K conc.	541
Print Date:	CEQ COC# 055702	Mehiich III Mehiich III Mehiich III	P units K conc.	ppm 541
	Ţ		P conc.	293
Report ID: 055702b-45246	ole Report	Laboratory ID: TCEQ/client	Sample ID:	55702-10
Report ID:	Standard Sample Report	Laboratory ID:		13221

Laboratory ID:	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehiich III	Mehlich III	Mehiich III	Mehlich III Mehlich III Mehlich III	Mehlich III	Mehlich III	Mehlich III
	P conc.	P units K conc.	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.		S units		Na units
Detection Limit	0.2147	mdd	0.1332	mdd	0.6338	шdd	0.1215	шdd	. 0.0118	wdd	0.0847	mdd
Reporting Limit	₩.	mdd	-	mdd		шаа	•	maa	₹~	<u> </u>	•	waa

Mehlich III	Anal. Tech	J.F.
Mehlich III N	Anal.Date A	11/3/2023
Mehlich III	Extract Tech	FMR
Mehlich III	Extract Date	11/2/2023
TCEQ/client	Sample ID:	55702-10
Laboratory ID:		13221

Report ID: 055702b-45246 Print Date: 16-Nov-23 Quality Control Report TCEQ COC# 055702

Laboratory ID:		Mehlich III	Mehlich III Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehitch III	Mehlich III	Mehlich III		Mehlich III	Mehlich III
		P conc.	P units	K conc.	K units	Ca conc.	Ca units	Macone	Maconc	Saco		No con or	Ale contract
13239	10965	47.9	mdd	317	maa	2349	muu	37.6	200 8	220	2	יאם כחוני.	Na cilità
13240	1006	73.0		3			1	5		37.75		46.2	Edd
120	200	D.	HIQ.	٦,	H.dd.	2349	mad	375	maa	37.2		46.2	Ē
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	ç	· ;		>	I Idd	>	E dd	0	mdd	0		0	maa
	Crower	44.9	Mdd	284.0	mdd	1930,0	maa	304.0	800	28.0		c	
	CUpper	54.1	800	230.0					1	2		22.0	Eldd
	1	-	i.	0.00	ındd	2440.0	Edd	390.0	mda	47.2		55.0	muu
	blK207	0.0463	100 100	<0.0×		16.67	1		•				1

- Parent	P. C. C. C.											
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ر	P conc.	P conc. / P units	K conc.	K units	Carcone	Caunits	Macone	Macono	0000	offer 0	At the second	
Datasian Line	11,700	1		ľ			en Booting	in Son	3 2010.		Na conc.	Na cinits
Detection Limit	0.2147	띮셦	0.1332	mdd	0.6338	maa	0.1215	200	0.0112	2000	27000	
Deporting I imit	*	1	•	. 1				į	2	<u>-</u>	400.0	Erdd
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												1

Mehtteh III	Anal. Tech	JLP	J.P	라
Mehlich III	Anal.Date	11/3/2023	11/3/2023	11/3/2023
Mehlich III	Extract Date Extract Tech Anal.Date	FMR	FMR	FMR
Mehlich III Mehlich III	Extract Date	11/2/2023	11/2/2023	11/2/2023
Laboratory ID:		10965	, 10966	blk207

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

16-Nov-23 Print Date:

055703a-45246

Report ID:

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

Armagh Dairy LLC Client address: Client Name:

not provided

TCEQ COC# 055703 Standard Sample Report

55703-01 2-6 55703-01 2-6 55703-02 6-24 55703-03 0-2 55703-04 2-6 55703-05 6-24	Sample Coll.		(2,50				
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		A VIII I EI EI EI C	4	10/10/2023	Soil	10/10/2023	10/24/2023	Ē
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13231 55703-10 2-6 9/28	9/28/2023 Chris	Chris Whitefield	·	07407000		000000000		: ¦

Methods and Sample Preparation:

Processing - SWFTL0097R0.SOP Receiving of samples

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. 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

Analytical Methods:

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

Schoffeld, 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. 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 Mehlich-3 soil test extractant a modification of Mehlich-2 extractant. Commun. Soil Sci. Plant Anal. 15(12):1409-1416 Soil P. K. Ca. Mg. S and Na -- Mehlich III by ICP

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		Nitrato M	imite	CHING OF THE PARTY	<u>.</u>	mad d	шдд	mdd	maa		liidd i	Hidd	mdd	шdd	mdd
		NitrateN		14.313		5.850	45.274	33.472	15.133	20 044	10.01	10.000	51.342	33.023	15.513
		Conductivity	units	M/Sp	1500	MACO	MS/M	W/SD	M/Sp	M/Sp	W.C.		M/CD	dS/W	dS/M
16-Nov-23	055703	Conductivity	•	0.242	0 244	0.276	200	0.404	0.245	0.122	60.0	0.235		0.528	0.139
Print Date:	TCEQ COC# 055703	Ha	units	¥	Ą	Y Z	NA	Ç ş	₹	ΝA	Ą	ΑΝ	Ϋ́Ν	£ ;	¥
	Ī			7.85	8.08	7.46	7.72		-	7.63	7.85	7.78	7.81	: ;	g.,
246		표													
Report ID: 055703a-45246	landard Sample Report	TCEQ/client	Sample ID:	55703-01	55703-02	55703-03	55703-04	55703-05	20-20-	55703-06	55703-07	55703-08	55703-09	CF700 40	01-£07ee
Report ID:	Standard Sal	Laboratory ID:		13222	13223	13224	13225	13228		13227	13228	13229	13230	FEGE. /	(موما

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Nitrate-N		0.01	1
Conductivity	1807	M/CD	dS/M
Conductivity	200	3	0.001
Hd units		<u> </u>	na
Hď	0.01		
Laboratory ID:	Detection Limit	Donothing Limit	reporting Limit

Laboratory ID:	TCEQ/client	pH/Conductivity n	with pren	Similary Ha	ojen.						
	!		- L	2 2 2	7818	Conductivity	EVILY TWILY	Nitate-N Extract	stract	Mitrofo-M Anglunia	ojusta d
	Sample ID:	Date	Tech	Date	Tog	100	, F				ialysis
13222	55703-01	11/3/2023	0	44.00000		Dalle	lecu	Date	Tech	Date	Tech
4000		- IIOKOKO	ט ט	52023011	OEC OEC	11/6/2023	OHC OHC	11/6/2023	EME	4477/2022	141
13223	55703-02	11/3/2023	CHC	11/6/2023	נו נו	00000			É	11112023	^^
13224	EE709 00	44/0/0/04	1 1	0707/011	ב ב ב	17/0/2023	DEC	11/6/2023	FMR	11/7/2023	M.
		110/2023	ביי	11/6/2023	000	11/6/2023	CHC	11/6/2023		44 77 77 74	; ;
13225	55703-04	11/3/2023	C C	44/8/2022	Ĺ		1	110/2023	Y 55.	11///2023	₹
43228	EE 100 01	14.00000	֓֞֝֜֝֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֓֓֓֓֓֡֓֡֓֡	110/2023	2	11/6/2023	<u> </u>	11/6/2023	FMR	11772023	WA/
ואיירו	CO-CO/CC	17/3/2023	ည္ယ	11/6/2023	CHO	11/6/2023	1	00000	1		5
13227	55703-06	11/3/2023	CHC	44 101000	1 1	200	2	11/0/2023	F.W.R.	11/7/2023	≩
7,000		2000	2	11/0/2023	CH CH CH	11/6/2023	CHC CHC	11/6/2023	EMD	11770000	n a c
13228	20-60/69	11/3/2023	OHO CHO	11/6/2023	CHC	44/8/2002	i c			1112023	2
13229	55703-08	11/3/2023	ה ה	44.00000	}	110/2023	ב ה	11/6/2023	FMR	11/7/2023	۸۲
1		7777	ב ני	11/0/2023	DEC DEC	11/6/2023	C C	11/6/2023		44.0000	
13230	55703-09	11/3/2023) 	11/6/2023	מ	44.0000) (707071	Z I	11/1/2023	<u>×</u>
13234	55703 40	44/2/0000	L		נו נו	11/0/2023	1 1 1 1	11/6/2023	FMR	11/7/2023	≱.
	21.00	1 113/2023	נים	11/6/2023	S S S S	11/6/2023	OHO CHO	11/8/2023	970	7477	; ;
)		2		2

Report ID: 055703a-45246

Print Date: 16-Nov-23

Quality Control Report

TCEQ COC# 055703

Laboratory ID:		핊	Ŧ	Conducitity		Nitrate-N	Nitrate-N	Nitrate-N
			nuits	COUC.		COLIC	stinu	
13239	10965		na	0.254	W/Sp	6.025	2000	/a records
13240	10966	5.9	Па	0,253	M/SP	5.975		
	Mean IC		П	0.2535	dS/M	9	Had	
13240spike	Spiked sample		•	,	,	4.9		82 &
	IC lower	5.760	БП	0.238	dS/M	5.0		
	IC Upper		ם	0.301	M/Sp	7.3	HQQ	
	blk207	•	na	0	M/Sp	279.2		

Laboratory ID:	抵	표	Conducitity	Conducitity	Nitrate-N	Nitrate-N
		units	conc.	units	conc.	units
Detection Limit	0.01	EL	0.001	dS/M	0.01	maa
Reporting Limit	0.1	an Ta	0.001	dS/M	-	
						1111

Laboratory IU:	pH/Conducti	wity prep	pH Anal	lysis	Conductivit	ivity	Nitate-N Extract	Stract	Nitrate-N Analysis	naivsis
	Date	Tech	Date	Tech	Date	Tech	Oate o	To	Cheft	Took
1000	2000001						2 mar	3	Care	3
5	11/3/2023	သ	11/6/2023	DEC CHC	11/6/2023	C.F.C	11/6/2023	CIVE	4417/2000	n.
0000	00000000					1	07070		570711	?
282	11/3/2023	C C C	11/6/2023	OEC OEC	11/6/2023	CHC	11/8/2023	CMD	447770035	ייאטן
200713	0000010177	C				1			11/12/12/3	^
URZU/	11/3/2023	ב ב	11/6/2023	CHC CHC	11/6/2023	כ ני	11/R/2023	CIVID	441710000	11.47
							110000		11.02023	>^^

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

Report ID: 055704a-45246 16-Nov-23 Print Date:

Texas A&M Agril ife Extension Service Soil, Water and Forage Testing Laboratory

108 Soil Testing Laboratory, 2478 TAMU College Station, TX 77843-2478

979-862-4955

Armagh Dairy LLC Client Name;

Client address:

not provided

TCEQ COC# 055704 Standard Sample Report

	7						
Process	TP -	7LP	7.LP	TLP	7.LP	11.P	TLP
Sample Ground	10/24/2023	10/24/2023	10/24/2023	10/24/2023	10/24/2023	10/24/2023	10/24/2023
Sample opened	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023
Sample Tune:	soil						
Date	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023
TCEQ.	4	4	4	4	4	4	4
Collector Name:	Chris Whitefield	Chris Whitefield	Chris Whitefield	Chris Whitefield	Chris Whitefield	Chris Whitefield	Chris Whitefield
Sample Coll. Dafe:	9/28/2023	9/28/2023	9/28/2023	9/28/2023	10/4/2023	10/4/2023	10/4/2023
Sample Denth (inches)	6-24	0-2	2-6	6-24	0-5	2-6	6-24
TCEO/client	55704-01	55704-02	55704-03	55704-04	55704-08	55704-09	55704-10
Laboratory ID:	13232	13233	13234	13235	13236	13237	13238

Methods and Sample Preparation:

Processing - SWFTL0097R0.SOP

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. 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 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 Receiving of samples

Analytical Methods:

SOIL PH AND CONDUCTIVITY - SWFTL,0015R1,SOP Soil pH 2:1 DI water:soil

Schofield, R.K. and A.W. Taylor. 1955. The measurement of soil p.H. 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 KCl Extractable with Cd-Reduction Analyses

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. NO3-N EXTRACTION - SWFTL0014R5.SOP/NO3-N ANALYSIS - SWFTL0089R1.SOP

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

		Nitrate-N	units	maa	######################################		ii da	ii dd		mdd mdd
		Nitrate-N		11.514	25.95	20.457	11.17	4.58	2.328	1.357
		Conductivity	units	M/Sp	WSP	MS/M	dS/M	dS/M	W/Sp	W/Sp
16-Nov-23	055704	Conductivity		0.535	0.295	0.104	0.141	0.231	0.162	0.501
Print Date:	TCEQ COC# 055704	Hd	units	NA	NA	Ν	AN	NA	Ą	N
				7.89	7.59	7.92	8.09	7.9	8.11	8.31
15246	1	표								
Report ID: 055704a-45246	mple Repor	TCEQ/client	Sample ID:	55704-01	55704-02	55704-03	55704-04	55704-08	55704-09	55704-10
Report ID:	Standard Sample Report	Laboratory ID:		13232	13233	13234	13235	13236	13237	13238

-CI violations	7	7	المثير بتكور بالمصور			
	ī	5	COLUMNICANITÀ	Conductivity	Nitrate	Nitrate-N
		units		units		units
Detection Limit	0.01	па	0.001	WSp	0.01	mad
Reporting Limit	0.1	na	0.001	M/Sp	-	

Laboratory ID:	CEC/clent	pH/Conducti	wity prep	pH Analysis	lysis	Conductivity	tivity	Nitate-N Extract	-xtract	Nitrata-M Analysis	natueie
	Sample ID:	Date	Tech	Date	Tech	O	, F	4	1		20.1
40000	55704.04	2000000				Care	1221	Date	tecn	Date	ec.
7070	10-40/cc	11/3/2023	i i	11/6/2023		11/6/2023	DEC	11/6/2023	EMB	11(7)2023	144
13233	55704-02	11/3/2023	ה ה	44/8/2002	ב ב	44.00				2027	2
			1	6707/0/1	2 2	11/6/2023	DEC	11/6/2023	E E	11/7/2023	₹.
13234	55704-03	11/3/2023	OEC C	11/6/2023	CHC CHC	11/6/2023	C 11	44/2/2009	Ş	14.7	
12226	20101	0000,0,77			í	2070	3	110/2023	Y W	11///2023	ξ
10600	40-40/00	17/3/2023) 	11/6/2023	<u> </u>	11/6/2023	DEC	11/6/2023	EMB	11/7/2023	14/
13236	55704-08	11/3/2023	CHC	44/8/2002	Ĺ				Í	22020	*
10007)	וומלמלים	2	11/6/2023	DEC DEC	11/6/2023	E E	11/7/2023	₹
/6761	32/04-08	11/3/2023		11/6/2023		11/6/2023	DHC	11/6/2023	QMS	447710000	14.1
13238	55704-10	4472/2022	נ נ	00000077) I			11112023	2
)	21	110/2023	ב מ	11/6/2023	DEC DEC	11/6/2023	DEC	11/6/2023	FMR	11/7/2023	Χ̈́

Report ID: 055704a-45246

Print Date: 16-Nov-23

Quality Control Report

TCEQ COC# 055704

Laboratory ID:		Ħ	돒	Conducitity	Conducitity	Nitrate-N	Nitrate-N	Nitrate-N
			units	COUC.	units	conc.	units	% recovery
13239	10965	5.9	na	0.254	M/Sp	6.025	Waa	7
13240	10966	5,9	g	0.253	dS/M	5.975		
	Mean IC	5.86	g	0.2535	M/Sp	9		
13240spike	Spiked sample					4.9		82.5
	IC lower	5.760	g	0.238	M/Sp	5.0	E GO	
	IC Upper	5.990	na	0.301	M/Sp	7.3	E EGG	
,	blk207	,	na	0	M/Sp	-2.972		

Laboratory ID:	돐	五	Conducitity	Conducitity	Nitrate-N	Nitrate-N
		units	conc.	units	conc.	units
Detection Limit	0.01	Па	0.001	M/Sp	0.01	maa
Reporting Limit	0.1	na	0.001	M/Sp	-	шdd

Laboratory ID:	pH/Conducti	ivity prep	pH Analy	llysis	Conductivity	tivity	Nitate-N Extract	Extract	Nitrate-N Analysis	Analysis
	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
10965	11/3/2023	DEC	11/6/2023	낊	11/6/2023	DEC	11/6/2023	EWE	11/7/2023	130
10966	11/3/2023	DEC	11/6/2023	SEC	11/6/2023	i E	11/B/2023		44770000	<u> </u>
blk207	11/3/2023	DEC	11/6/2023	OHO CHO	11/6/2023	3 17	11/6/2023		11/1/2023	۸۲ ا
						֭֝֞֞֝֝֞֜֝֝֓֜֜֝֞֜֜֜֝֓֓֓֓֞֜֜֜֜֜֓֓֓֓֜֜֜֜֜֓֓֡֓֜֜֡֡֓֜֜֜֡֓֡֓֡֓֜֡֡֡	110,5050		11/1/2023	2

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

055705a-45246 16-Nov-23 Print Date: Report ID:

> 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

Armagh Dairy LLC not provided Client Name:

Client address:

TCEQ COC# 055705 Standard Sample Report

SS		_	_	_	_	_
Process Tech.	두	ΉT	딥	7.T.P	7LP	4 F
Sample Ground Date	10/24/2023	10/24/2023	10/24/2023	10/24/2023	10/24/2023	10/24/2023
Sample opened Date	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023
Sample Type:	Soil	soil	soil	soil	soil	soii
Date Received	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023
TCEQ Region #	4	4	4	4	4	4
Collector Name:	Chris Whitefield	Chris Whitefield	Chris Whitefield	Chris Whitefield	Chris Whitefield	Chris Whitefield
Sample Coll. Date:	10/4/2023	10/4/2023	10/4/2023	10/4/2023	10/4/2023	10/4/2023
Sample Depth (inches)	0-2	2-6	6-24	0-5	5-6	6-24
TCEQ/client Sample ID:	55705-01	55705-02	55705-03	55705-04	55705-05	55705-06
Laboratory ID:	13241	13242	13243	13244	13245	13246

Methods and Sample Preparation:

Processing - SWFTL0097R0.SOP Receiving of samples

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 puiverized 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 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 then transferred to the laboratory sample cups and while additional sample was stored.

Analytical Methods:

SOIL PH AND CONDUCTIVITY - SWFTL.0015R1.SOP Soil pH 2:1 DI water:soil

Schofield, R.K. and A.W. Taylor. 1955. The measurement of soil ptf. 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 Soll Analysis: Part 2. Agronomy Monogr. 9. 2nd ed. ASA and SSSA, Madison, WI.

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

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 Z. Agronomy Monogr. 9. 2nd ed. ASA and SSSA, Madison, WI.

Soil P. K. Ca. Mg. Sand 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

	Nitrate-N	units	maa	:: da				шdd	
	Nitrate-N		14.139	4.362	2 337	7.347	3.451	1.705	
	Conductivity	units	M/Sp	MSb MSb	dS/M	M/Sp	M/Sp	M/Sp	
16-Nov-23 155705	Conductivity		0.319	0.151	0,106	0.079	0.075	0.109	
Print Date: 16-N	Ha.	units	AN	N A	NA	AN	AN	NA A	
			7.99	8.09	8.15	7.76	7.96	7.96	
3246	곮								
Report ID: 055705a-45246 Indard Sample Report	TCEQ/cilent	Sample ID:	55705-01	55705-02	55705-03	55705-04	55705-05	55705-06	
Report ID: Standard Sa	Laboratory ID:		13241	13242	13243	13244	13245	13246	

Obernéen Jose		:				
Laboratory ID:	Ē.	Ē	Conductivity	Conductivity	Nitrate-N	Nitrate-N
		units		nnits		ımik
Detection Limit	0.01	na	0.001	dS/M	0.04	2000
Deporting 1 imit	•				5	hpin
	1.0	ВП	0.001	dS/M	-	maa

	matvsis	ŀ	ech	Νſ	WI.	;	Š	11.47	2	Αſ	DAZ	200	
	Nitrate-N Analysis	i d	Date	11/7/2023	11/7/2023	7.4	11///2023	11/7/2023	71112000	11/7/2023	14770003	1111111123	
	extract	100	160	FMR	FMR	£	T.	FMR	, !	FMR	EMB		
	Nitate-N Extract	5	רמוב	11/6/2023	11/6/2023	44/0/000	110/2023	11/6/2023		11/6/2023	11/6/2023		
	tivity	Toch	1001	DEC	DEC	Ü	2	OHO OHO		i i	DEC		
	Conductivity	Date	44,01000	17/6/2023	11/6/2023	11/6/2023	2070	11/6/2023	44 (0,000	11/0/2023	11/6/2023		
	ysis	Tech	2	ם ט	DEC	DEC		ပ မ မ	C III	ט ט	OHC C		
	pH Analysis	Date	11/8/2009	11012020	11/6/2023	11/6/2023	200000	1.1/0/2023	11/6/2003	0.70.70	11/6/2023		
	•	Tech	다. 다.) (DEC.	DEC DEC	נו נו	מט	CHC	1 1	DEC		
ahill ondire	שהשהתחלו	Date	11/3/2023	44/0/0000	11/3/2023	11/3/2023	44/3/2022	2222011	11/3/2023		11/3/2023		
TCEO/client		Sample ID:	55705-01	50 20232	20-00-00	55705-03	55705.04		55705-05	00 10512	90-60/66		
Laboratory ID:			13241	12272	2 CO C	13243	13244		13245	49948	C#261 (•••	į

Report ID: 055705a-45246

Print Date: 16-Nov-23

Quality Control Report

TCEQ COC# 055705

Laboratory ID:		핊	Ŧ	Conducitity	Conducitity	Nitrate-N	Nitrate-N	Nitrate-N
			units	conc	units	COLIC.	units	% recovery
13259	10967		Па	0.256	M/Sp	5.43	maa	
13260	10968	5.9	폍	0.256	M/Sp	5.673	. Wdd	
	Mean IC		g	0.256	dS/M	5,5515	wad.	
13260spike	Spiked sample		•	•	•	4.7	Шаа	91.2
	IC fower	5.760	na	0.238	M/Sp	5.0		!
	IC Upper		na	0.301	W/Sp	7.3		
	blk208	,	na	0	M/Sp	-3.348	mda	

Laboratory ID:	五	Hd	Conducitity	Conducitity	Nitrate-N	Nitrate-N
		nuits	conc.	units	conc.	units
Detection Limit	0.01	Па	0,001	dS/M	0.01	шdd
Reporting Limit	0.1	E	0.001	dS/M	*-	mdd

pH/Conduct	tivity prep	pH Analysi	lysis	Conductivi	ivity	Nitate-N Extract	Extract	Nitrate-N Analysis	nalysis
Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
1/3/2023	DEC	11/6/2023	DEC	11/6/2023) 임	11/6/2023	HAR.	11/7/2023	N.
1/3/2023	DEC	11/6/2023	DEC	11/6/2023		11/6/2023	FWR	11/7/2023	<u> </u>
11/3/2023	DEC	11/6/2023	DEC	11/6/2023	DEC	11/6/2023	FMR	11/7/2023	M

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Report ID: 055705a-45246 Print Date: 16-Nov-23 Vality Control Report TCEQ COC# 055705

Laboratory ID:		Mehlich III	Mehlich III Mehlich III	Mehlich III	Mehiich III	Mehlich III	Mehlich III						
		P conc.	P units	K conc.		Ca conc.	Ca units	Ma conc.	Macone	Scone	S et al.	Na con	Month offi
13259	10967	50.2	mdd	315		2313	шаа	366	muu	37.3	STEED OF	A3 4	SIND DI
13260	10968	50.2	mdd	315	шфф	2313	шаа	366		37.3		7 5	
	Mean IC	0	<u>m</u> dd	0	mdd	0	шаа	o	Edd	; c		- - - -	
	IC Lower	44.9	mdd	284.0	udd .	1930.0	E 00	304.0		28.0		2 6	urdd
	IC Upper	54.1	mdd	330.0	udd	2440.0	mad	390.0	ii da	47.2		25.50	Elidd d
	blk208	<0.006641	ррт	<0.0235	mda	<0.0265		<0.00 0>	E 6	70 0404		0000	

	14. C. P L. 155	B &										
Meniich	≡	sporatory IU: Menitor III Menitor III Menitor III	Menitch III	Mehitch III	Mehlich III	Mehiich III	Mehlich III	Mehlich III Mehlich III		Mehlich III	Mehlich III	Mehlich III
P conc.	_ 1	Punits K conc.	K conc.	K units	Са сопс.	Ca units	Mg conc.	Ma conc.		Sign S:	Na conc	No unite
0.2147	47	undd	0.1332	mad	0.6338	E GO	0.1215	muu.	0.0448			יום תוויי
•		: ;	•	:)	1	2	1100	3000	E d
-		ppm	_	mdd	1	mdd	τ-	mdd	4	шаа	-	

Mehlich III	Anal. Tech	JLP	J.	<u></u>
Mehlich III	Anal.Date	11/3/2023	11/3/2023	11/3/2023
Mehlich III	Extract Date Extract Tech	FMR	FMR	FMR
Mehlich III Mehlich III	Extract Date	11/2/2023	11/2/2023	11/2/2023
Laboratory ID:		10967	10968	blk208

	Mehlich III Na units	uidd widd widd widd widd
	Mehiich III Na conc.	31.2 54.8 156 11.2 20.9 44.8
	Mehlich III S units	udd udd udd udd udd
	Mehlich III S conc.	69.7 86.3 117 72.9 73.4 79.6
	Mehlich III Mg units	udd udd udd
•	Mehlich III Mg conc.	763 745 392 446 389 309
	Mehlich III Ca units	wdd wdd wdd wdd
	Mehlich III Ca conc.	9436 11536 17280 10524 11584
	Mehlich III Kunits	udd udd udd udd udd
Print Date: 16-Nov-23 CC COC# 055705	Mehlich III K conc.	936 978 443 302 184
Print Date:	1 Mehlich III Mehlich III Punits Konc.	udd udd udd udd udd
ĭ	Mehlich III P coric.	193 66.2 4.49 163 37.0
Report ID: 055705a-45246 dard Sample Report	TCEO/client	55705-01 55705-02 55705-03 55705-04 55705-05
Report ID:	aboratory ID: TCEQ/clie	13241 13242 13243 13244 13245

Laboratory ID:	Mehlich III	Mehlich III	Mehiich III	Mehlich III Mehlich III	Mehlich III	Mehlich III	Mehlich !!!					
	P conc.	P units K conc.	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S сопс.	S units	Na conc.	Na units
stection Limit	0.2147	mdd	0.1332	mdd	0.6338	шdd	0.1215	udd	0.0118	шаа	0.0847	шdd
sporting Limit	-	шдд	-	mdd	-	mdd	_	шdd	-	шdd	-	mdd

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aboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample 1D:	Extract Date	Extract Tech	Anal.Date	Anal. Tech
	55705-01	11/2/2023	FMR	11/3/2023	JLP
	55705-02	11/2/2023	FMR	11/3/2023	JLP
	55705-03	11/2/2023	FMR	11/3/2023	JLP
	55705-04	11/2/2023	FMR	11/3/2023	JLP
	55705-05	11/2/2023	FMR	11/3/2023	J.P
	55705-06	11/2/2023	FMR	11/3/2023	d'h

Report ID: 055704a-45246 Print Date: 16-Nov-23 rality Control Report TCEQ COC# 055704

sboratory ID:		Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehiich III	Mehlich III	Menlich III	Mehlich III	Mehlich III
		P conc.	D.	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conc.	Na units
13239	10965	47.9	mdd	317	mdd	2349	mdd	375	mdd	37.2	mdd	46.2	mdd
13240	10966	47.9	шdd	317	шdd	2349	mdd	375	шdd	37.2	шфф	46.2	mdd
	Mean IC	0	mdd	0	mdd	0	mdd	0	mdd	0	mdd	0	mdd
	IC Lower	44.9	mdd	284.0	шdd	1930.0	mdd	304.0	mdd	28.0	шdd	33.0	mdd
	IC Upper	54.1	mdd	330.0	шdd	2440.0	mdd	390.0	mdd	47.2	шdd	55.0	mdd
	blk207	<0.0463	mdd	<0.491	mdd	<1.35	mdd	<0.364	mdd	<0.005923	mdd	0.294	mdd

Exporatory ID: Mehilch III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	dehiich III Mehiich III Mehiich III Mehiich III Mehiich III Mehiich III Mehiich 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 conc. Ca units Mg conc.	Mg conc.	Mg conc.	S conc.	S units Na conc.	conc.	Na units
etection Limit	0.2147	wdd	0.1332	mdd	0.6338	шdd	0.1215	mdd	0.0118	0,0118 ppm 0.	0.0847	mdd
eporting Limit	-	mdd		mdd	-	mdd	-	mdd	-	шdd	-	mdd

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aboratory ID:	aboratory ID: Mehlich III Mehlich III Mehlich III	Mehlich (()	Mehlich III	Mehlich III
	Extract Date	Extract Date Extract Tech Anal.Date		Anal. Tech
10965	11/2/2023	FMR	11/3/2023	JLP
10966	11/2/2023	FMR	11/3/2023	JLP
blk207	11/2/2023	EMR	11/3/2023	JLP

i 1

	Mehlich III	udd udd udd udd
	Mehlich III	42.1 13.3 21.6 48.2 160 456
	Mehlich III	udd udd udd udd udd udd udd udd
	Mehilich III	179 119 140 81.1 94.4
	Mehlich III	udd udd udd udd udd
	Mehiich III	386 412 387 267 480 418 266
	Mehitch III Ca units	udd wdd wdd wdd udd udd
	Mehlich III Ca conc.	14713 13677 18024 22158 11722 14054
	Mehlich III Kunits	udd udd udd udd
16-Nov-23 055704	Mehlich III K conc.	433 443 310 139 351 112
Print Date: 16-Nov-23 TCEQ COC# 055704	Mehlich III Mehlich III P units K conc.	udd udd udd udd
TC	Mehlich III P conc.	33.5 284 125 12.1 67.8 12.6
Report ID: 055704a-45246 dard Sample Report	TCEQ/client	55704-01 55704-02 55704-03 55704-04 55704-08 55704-10
. Report ID: 055704a-tandard Sample Report	Laboratory ID:	13232 13233 13234 13235 13236 13237

C	A R . T. Phys. 1 . 100	_	R. d 6-10 . C. 111									
Laboratory ID:	Menich III	Menich III	Menach III	Meniich III	Mehlich III	Mehiich III	Mehiich III	Mehiich III	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.	Sunits	Na conc.	Na units
etection Limit	0.2147	шdd	0.1332	шdd	0.6338	mdd	0.1215	шdd	0.0118	шфф	0.0847	mad
eporting Limit	~	thda		mdd	-	mdd	-	mdd	1	mdd		. udd

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Mehlich III	Anal, lech	ብጉ የ	J.P	JLP	JLP	JLP	JLP	J.P
Mehlich III	Anat, Date	11/3/2023	11/3/2023	11/3/2023	11/3/2023	11/3/2023	11/3/2023	11/3/2023
ľ		FMR						
Mehiich III	Extract Date	11/2/2023	11/2/2023	11/2/2023	11/2/2023	11/2/2023	11/2/2023	11/2/2023
TCEQ/client	Sample 1D:	55704-01	55704-02	55704-03	55704-04	55704-08	55704-09	55704-10
Laboratory ID:		13232	13233	13234	, 13235	. 13236	13237	13238

 Report ID: 055703a-45246
 Print Date: 16-Nov-23

 Ality Control Report
 TCEQ COC# 055703

												111 - 11 - 11 - 11 1 1 1 1 1 1 1 1 1 1	Marking III
9		Mohiich Ill	Mehlich III		Mehlich III	Mehlich III	Mehiich III	Mehlich III	Mehlich III	Mehlich III	Menich III	Menico III	Menica
oratory I.C.			Dimite	Kenne	Kunits	Са сопс.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conc.	Na units
		٦ دوالۍ		-				1		2.60	200	7 A P	muu
13230	10965	47.9	mad	317	Edd	2349	ם	3/2	mdd	3. 50		40.5	= M
9000	99001	47.0		317	шаа	2349	шаа	375	mdd	37.2	mdd	46.2	mdd
13240	0080	? (1	; c				c		c	מסנגו	0	maa
	Mean IC	o	mdd	>		>	- M	,	i L	• ;		' (: 1
	IC. Lower	44.9	шаа	284.0	mdd	1930.0	mdd	304.0	шdd	28.0	mdd	33.0	nudd
	7 C	7		330.0	maa.	2440.0	шаа	390.0	mdd	47.2	шdd	55.0	шdd
	addo o	<u>.</u> !	: 1	ç		10.		V0.264		<0.005923	200	0.294	maa
	blk207	<0.0463	ELIDIO	<0.491	mdd	CC.12	3100	100.0	SIIIdd A	.0.0000E0			

											, , , , , , , ,	111 -1-11-1-11
Foratory ID: Mehlich III Mehlich III Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehiich III	Mehirch III	Meniich III	Meniich III
	D CODE	P units K conc.	K conc.	K units	Ca conc.	Ca units	Mg conc.	Мд сопс.	S conc.	S units	Na conc.	Na units
	3	2							07700	-	CV0000	
tection 1 imit 0.2147	0.2147	C) CO	0.1332	щаа	0.6338	mdd	0.1215	E dd	0.0118	Hidd	0.004	= 1 2 2
		•	,		*	200	•		_	mud	_	EL CO
porting Limit	•	Elda	_	IIIdd		100						

iboratory ID:	Mehilch III Mehilch III	Mehlich III	Mehlich III	Mehlich III
•	Extract Date	Extract Date Extract Tech Anal.Date	Anal.Date	Anal. Tech
10965	11/2/2023	FMR	11/3/2023	J.P
10966	11/2/2023	FMR	11/3/2023	-
HK207	11/2/2023	FMR	11/3/2023	급

Report ID: 033703a-43246 dard Sample Report	_	Print Date: 16-Nov CCEQ COC# 055703	16-Nov-23 055703									
Me	Mehilch III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehitch III	Mehlich III
ը.	P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Ma units	S conc.	Sunits	Na conc	National
142		mdd	377	mad	9899	maa	463	man	78.4	HE C	51.1	
17.1		mdd	227	. mon	15163		337		108		707	1
374		wood.	845		7195	nidd d	937	uidd	120	Шďd	100	mdd
194			749		8533		677	udd	1.7	mdd	26.7	Шdd
ç	•	1	2 0	1	0000	Lidd	7/0	Hdd d	/o./	mdd	52.3	шdd
, N	•	mdd	380	mdd	12784	mdd	470	mdd	98.4	Шаа	264	шаа
7		mdd	373	mad	18755	מממ	373		140		707	
153		שממ	372	. HOG	11745		352		2.0		10.7	1
216			543		00/00		700	11111	7.50	ppu	- 0	E dd
		1	2 5	1111	000		Q :	Eurdd	00.0	шdd	44.2	шdd
Ž.	•	mdd	613	mdd	10927	шdd	480	mdd	1 8	mdd	66.1	Шaa
2	ıĊ	шаа	285	Had	18551	-	242	1	407		177	

Mehlich III Mehlich III Mehlich III		0 0847		mod ,	
Mehlich III	Mq conc.			Mad	
Mehlich III	Mg conc.	0.1215		_	
Mehiich III	Ca units	maa	:	mdd.	
Mehlich III	Са сопс.	0.6338	•	,	
Mehlich III	K units	mdd		uidd	
Mehlich III	K conc.	0.1332	•	-	
Mehlich III	P units	mdd	1	Hidd	
Mehlich III	P conc.	0.2147	7	-	
_aboratory ID:		tection Limit	sied Latitor	אמוווה ביוווו	

-aboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehlich III
	Sample ID:	Extract Date	Extract Tech	Anal Date	Anal. Tech
13222	55703-01	11/2/2023	FMR	11/3/2023	JLP
13223	55703-02	11/2/2023	FMR	11/3/2023	ALP.
13224	55703-03	11/2/2023	FMR	11/3/2023	J.P
13225	55703-04	11/2/2023	FMR	11/3/2023	J.P
13226	55703-05	11/2/2023	FMR	11/3/2023	린
13227	55703-06	11/2/2023	FMR	11/3/2023	- A
13228	55703-07	11/2/2023	FMR	11/3/2023] -
13229	55703-08	11/2/2023	FMR	11/3/2023	급
13230	55703-09	11/2/2023	FMR	11/3/2023	J.
13231	55703-10	11/2/2023	FMR	11/3/2023	7

Print Date: 16-Nov-23 , Report ID: 055702b-45246

Quality Control Renort

Juality Control Report	ol Keport			CEQ COC# 055702	055702			
Laboratory ID:		Ħ	Hd	Conducitity	Conducitity	Nitrate-N	Nitrate-N	Nitrate-N
			units	conc.	units	conc.	units	% recovery
13239	10965	5.9	na	0.254	dS/M	6.025	E GO	
13240	10966	5.9	Ē	0.253	dS/M	5.975	waa	
	Mean IC	5.86	па	0.2535	M/Sp	Ф	E COO	
13240spike	Spiked sample			1		4.9	. Had	82.5
	IC lower	5.760	na	0.238	M/SP	5.0	uaa	•
(IC Upper	5.990	na	0.301	M/Sp	7.3	. aa	
į	blk207	•	па	0	M/Sp	-2.972	Had d	

Laboratory ID:	표.	표	Conducitity	Conducitity	Nitrate-N	Nitrate-N
		units	conc.	nnits	CONG.	units
Detection Limit	0.01	na	0.001	M/Sb	0.01	mdd
Reporting Limit	0.1	na	0.001	M/Sp	-	шаа

Laboratory ID:	pH/Conducti	vity prep	pH Analysi	lysis	Conductivity	ivity	Nitate-N Extract	Extract	Nitrate-N Analysis	Analysis
	Date	Tech	Date	Tech	Date	Tech	Date	Tech	Date	Tech
10965	11/3/2023	DEC	11/6/2023	DEC	11/6/2023	DEC	11/6/2023	EMB	11/7/2023	1001
10966	11/3/2023	DEC DEC	11/6/2023	DEC	11/6/2023	DEC	11/6/2023	<u> </u>	11/7/2023	<u> </u>
blk207	11/3/2023	DEC	11/6/2023	CHC	11/6/2023	, E	11/6/2023		44770000	<u> </u>
					2000	2	110/2020	בוצוב	11//2023	2

	Nitrate-N	units	шdd
	Nitrate-N		23.732
	Conductivity	units	W/Sp
Print Date: 16-Nov-23 EQ COC# 055702	Conductivity Conductivity Nitrate-N		0.369
Print Date: 16-No ICEQ COC# 055702	Hd	units	AN A
•	x		7.59
Report ID: 055702b-45246 Itandard Sample Report	TCEQ/client p	Sample ID:	55702-10
Report ID: standard Sar	aboratory ID: TCEQ/client		13221

표	Ħ	Conductivity Conductivity	Conductivity	Nitrate-N	Nitrate-N
	units		units		units
0.01	na	0.001	M/Sp	0.01	шdd
0.1	เกล	0.001	M/Sp	**	шаа

Analysis	Tech	š
Nitrate-N Analysi	Date	11/7/2023
Extract	Tech	FMR
Nitate-N Extrac	Date	11/6/2023
tivity	Tech	DEC
Conductivi	Date	11/6/2023
lysis	Tech	DEC
pH Analysis	Date	11/6/2023
vity prep	Tech	DEC
pH/Conducti	Date	11/3/2023
TCEQ/client	Sample ID:	55702-10
Laboratory ID:		13221

eport for Samples analyzed Under Contract Number. 582-10-99518

055702b-45246 16-Nov-23 Report ID: Print Date:

exas A&M AgriLife Extension Service Soil, Water and Forage Testing Laboratory 08 Soil Testing Laboratory, 2478 TAMU

college Station, TX 77843-2478

79-862-4955

Xient address: Sient Name:

Armagh Dairy LLC

not provided

TCEQ COC# 055702 Standard Sample Report

Γ		
Process	Tech.	TLP
Sample opened Sample Ground	Date	10/24/2023
Sample opened	Date	10/10/2023
Sample	Type:	soil
Dafe	Received	10/10/2023
TCEO	Region #	4
Collector	Name:	Chris Whitefield
Sample Coll.	Date:	9/28/2023
Sample	Depth (inches)	0-2
TCEO/client	Sample ID:	55702-10
P. Orafory ID:	EGRANALI IE.	13221

Methods and Sample Preparation:

Processing - SWFTL0097R0.SOP

drying oven and pulverized with an Agvise soil pulzerized fitted with a shaking Zmm 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. 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 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 Receiving of samples

Analytical Methods:

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

SOIL PH AND CONDUCTIVITY - SWFTL 0015RL SOP Schofield, R.K. and A.W. Taylor. 1955. The measurement of soil p.H. Soil Sci. Soc. Am. Proc. 19:164-167.

Soil Conductivity 2:1 DI Water:Soll

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, W.I.

Soil Nitrate-N KCI Extractable with Cd-Reduction Analyses.

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, Wr. NO3-N EXTRACTION - SWFTL0014R5.SOP/NO3-N ANALYSIS - SWFTL0089R1.SOP

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: 16-Nov-23 TCEQ COC# 055702

Laboratory ID:		Mehlich III	Mehlich III	Mehlich III	Mehiich III	Mehlich III	Mehiich III	Mehlich III	Mehlich III	Mehlich III	Mehlich 11	Mehlich III	Mehlich III
		P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Nа сопс.	Na units
13219	10963	48.8	uudd	327	mdd	2347	mdd	365	mdd	39.3	шdd	52.8	udd
13220	10964	48.1	шфф	312	mdd	2220	mdd	348	mdd	37.9	udd	51.4	mdd
	Mean IC	0	mdd	o	шdd	0	mdd	0	urdd	0	mdd	0	udd
	IC Lower	44.9	шаа	284.0	mdd	1930.0	mdd	304.0	шdd	28.0	udd	33.0	шаа
	IC Upper	54.1	mdd	330.0	mdd	2440.0	mdd	390.0	шdd	47.2	udd	55.0	. шaa
	blk207	<0.0463	mdd	<0.491	mdd	<1.35	mdd	<0.364	шаа	<0.005923	шаа	0.294	Eaa
(_a													
)													
Laboratory ID:	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehlich III	Mehiich III	Mehiich 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	
Detection Limit	0.2147	mdd	0.1332	шdd	0.6338	шфф	0.1215	шdd	0.0118	шdd	0.0847	шdd	

mdd mdd

mdd mdd

. wdd

mqq

wdd wdd

Detection Limit Reporting Limit

Mehlich III	Anal. Tech	JLP	JLP	ЛР
Mehlich III	Anal, Date	11/3/2023	11/3/2023	11/3/2023
Mehlich III Mehlich III	Extract Date Extract Tech	FMR	FMR	FMR
Mehlich III	Extract Date	11/2/2023	11/2/2023	11/2/2023
Laboratory ID:		10963	IC964	blk207

()

	Mehlich III	Na units	шdd	mdd	шdd	шdd	mdd	шdd	mdd
	Mehlich III	Na conc.	69.3	121	67.1	155	21.1	ո 26.2	58.6
	Mehlich III	S units	mdd	шdd	шфф	Щdd	mdd	шда	mdd
	Mehlich III	S conc.	75.3	108	69.0	104	86.6	79.2	143
	Mehlich III	Mg units	mdd	mdd	mdd	шdd	mdd	mdd	w dd
	Mehlich III	Mg conc.	844	591	637	393	588	460	324
	Mehlich III	ø						mdd	
	Mehlich III	Ca conc.	8620	14788	8290	15435	9096	10244	21247
	Mehlich III	K units	шdd	mdd	шdd	mdd	шдд	mdd	шdd
16-Nov-23 055702	-	K conc.	1186	899	780	304	629	525	277
Print Date: 16-Nov- CEQ COC# 055702	Mehlich III	P units	mdd	mdd	mdd	udd	mdd	mdd	шdd
	Mehlich III	P conc.	158	19.8	185	14.7	339	163	10.9
Report ID: 055702a-45246 indard Sample Report	TCEQ/client	Sample ID:	55702-01	55702-02	55702-03	55702-04	55702-07	55702-08	55702-09
Report ID: 055702a-	Laboratory ID:		13212	13213	13214	13215	13216	13217	13218

						11. 11. 11.	30-4-11-4-11	Martifet (1)	14.5.11.11	4	III dollan	Mohitoh III
Laboratory ID:	Mehlich III	Mehlich III	Wehlich III Mehlich III	Menlich III	Menico III	Meniich III Meniich III	Meniich iii	Meniich III	1 Merillor III M			
•	P conc.	P units	K conc.	K units	Ca conc.	Ca units	Mg conc.	Mg conc.	S conc.	S units	Na conc.	Na units
etection Limit	0.2147	mdd	ppm 0.1332		0.6338	udd	0.1215	шdd	0.0118	mdd	0.0847	шdd
eporting Limit	-	mdd	-	mdd	_	mdd	-	wdd	-	mdd	-	mdd

Laboratory ID:	TCEQ/client	Mehlich III	Mehlich III	Mehlich III	Mehilch III
•	Sample ID:	Extract Date	Extract Tech	Anal.Date	Anal. Tech
13212	55702-01	11/2/2023	FMR	11/3/2023	JLP
13213	55702-02	11/2/2023	FMR	11/3/2023	JLP
13214	55702-03	11/2/2023	FMR	11/3/2023	JLP
. 13215	55702-04	11/2/2023	FMR	11/3/2023	JLP
13216	55702-07	11/2/2023	FMR	11/3/2023	ЗĽР
13217	55702-08	11/2/2023	FMR	11/3/2023	JL
13218	55702-09	11/2/2023	FMR	11/3/2023	JLP

<u> </u>			·				,	,	,									`		•
55703	Permit #: 以 844		70	REMARKS	15 (24)	(15-01) 51	6 (0-2)	(2-4)	(17-9) 0)	17 (0-2)	17 (2-4)	17 (6-24)	(2-0) 81	(2-2) &)		deg. C				Goldenrod-Collector Copy
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ARMAGH DAIRY, LLC P.O. Box 2 DUBLIN, TEXAS 76446 ERATH COUNTY

SUBCHAPTER B PERMIT APPLICATION MAJOR AMENDMENT WQ0004844000

SECTION 6: ODOR CONTROL PLAN & PPP SIGNATURE PAGE

- ODOR CONTROL PLAN
- ▼ TCEQ FORM 00760 PPP SIGNATURE PAGE



ODOR CONTROL PLAN AND CERTIFICATION

ARMAGH DAIRY, LLC P.O. BOX 2 DUBLIN, TEXAS 76446 ERATH COUNTY, TEXAS

> REPORT FOR: MIKE MCDOWELL



NOEL COURTS, P.G. TX LICENSE NO. 11241 FL LICENSE NO. PG3091/LA LICENSE NO. 754



M.E. LOWTHER CONSULTING, LLC FIRM #50659

ENVIRONMENTAL MANAGEMENT CONSULTANTS

GENERAL REMARKS

This plan is designed to address odors that may come from that activities associated with this facility, which includes but is not limited to open lots, animal housing, retention control structures, solid waste storage areas, and any type of waste separating devices at the site location. Odors may be less noticeable during dry, calm days and tend to be their strongest during the cleaning of the open lots, during manure application, and during the irrigation of wastewater to the Land Management Units (LMU's). It is the intention of Armagh Dairy, LLC to limit the odors to the absolute minimum.

PRACTICES SUGGESTED FOR AN ODOR CONTROL PLAN FOR ARMAGH DAIRY, LLC

- 1. Open lots will be scraped and waste removed when needed. Solid waste will be removed by a company or other contract equipment. Procedures to best reduce odors during the operation will be considered when cleaning and the timing of cleaning and scraping. Manure / compost will be stored at the facility will be stacked and piled in tall, cone-shaped stacks or win-rowed to reduce surface exposure and reduce the availability of moisture. Manure / compost will be stockpiled within the open lots or processed within the berms of the drainage area(s).
- 2. Dead animals will be collected within 24 hours and removed by a contractor within 72 hours, or may be composted on site using approved practices and guidelines of the TCEQ, NRCS, and EPA.
- 3. Irrigation application will be conducted during periods when wind velocity and humidity are at its lowest to reduce any odors to neighboring properties. Irrigation will be monitored by an employee or by management trained in the application of wastewater guidelines of TCEQ regarding waste disposal. Available schooling will be attended to increase familiarity with technology or practices when they occur.
- 4. Lounging areas in the open lots have been constructed and will be maintained to minimize ponding and pooling of liquids caused by storm events or the overflow of watering devices. Regular maintenance of watering devices is important as well to reduce the unnecessary addition of moisture to waste.
- 5. Clean out of the retention control structure(s) (RCS's) will be done according to the designed cleanout schedule. Timing, weather conditions, and technique are all factors that will be considered prior to clean out of sludge.
- 6. In an effort to reduce air-bound particulate that facility will add moisture to feed when needed to reduce nuisances caused by this facility. Controlling the speed of farm vehicles will help reduce the dust generated at the facility.



Conclusions

The subject property is located in the Dublin, Texas and is requesting a permit for 2,299 head of dairy cattle in which 500 are milking cattle. Armagh Dairy, LLC would urge anyone who lives in the vicinity of the facility, to notify management when a problem develops so the source can be identified and controlled.

CERTIFICATION

The undersigned hereby certifies that:

The proposed plan, with implemented and maintained best management practices, will prevent any adverse impacts from odors to neighboring facilities and the affects of those odors.

Written & Certified By:

NOEL COURTS

GEOLOGY
11241

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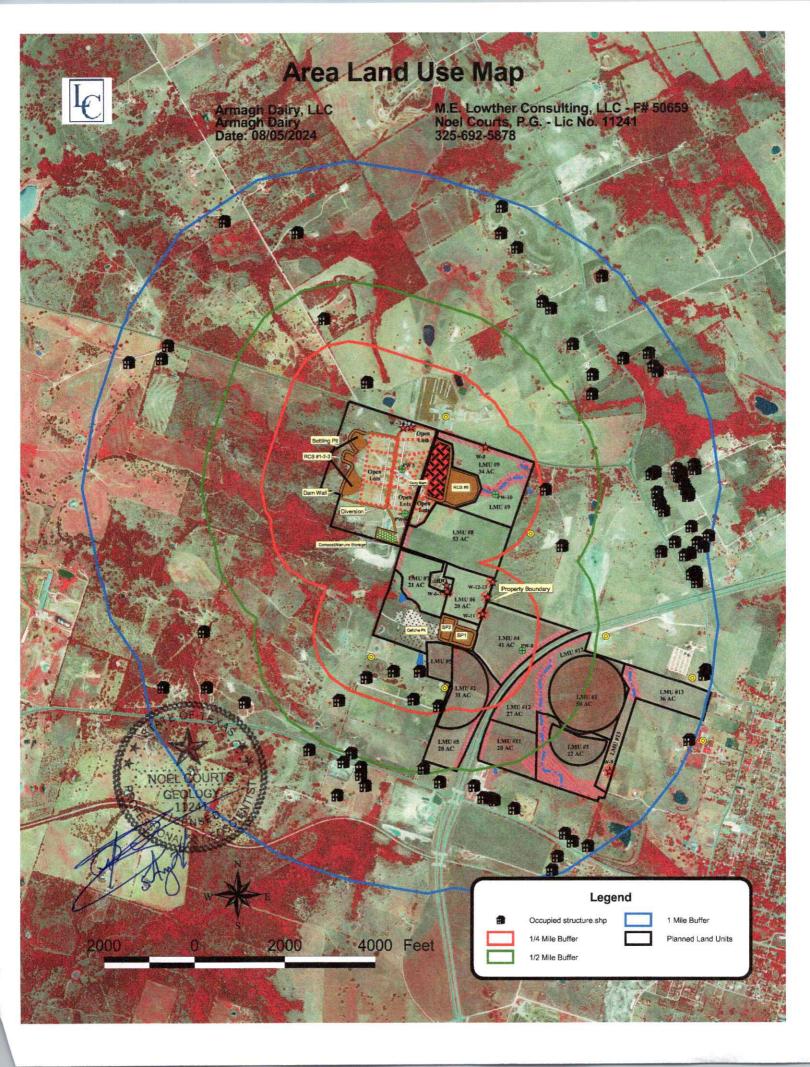
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Noel Courts, P.G. License No. 11241 Date

ATTACHMENTS

Maps





Application to Amend Permit No. WQ0004844000 -Armagh Dairy LLC (CN605607654)

Yahoo Mail/Inbox



Abesha Michael <abesha.michael@tceq.texas.gov>
To: Noel Courts <manureisgood@yahoo.com>
Cc: Erwin Madrid <erwin.madrid@tceq.texas.gov>

Nov 6 at 9:41 AM

Good morning,

I apologize for oversighting this issue and bring it to your attention now. Your attention to the following item is required before we can declare the application administratively completed:



Section 9, item E5, Bilingual Notice Requirement, on page 7 of the application: Thank you for addressing these items, E1- E4. However, item E5 is indicated as N/A. if the answer is yes to 1, 2, 3, or 4, public notice in an alternative language is required. Please indicate the alternate language as Spanish or more..



Section 9, item E6, CAFO Plain Language Summary Template (PLS), on page 7 of the application. We are unable to locate the PLS English and Spanish. Please submit the PLS in both languages.



Section 9, item F, Public Involvement Plan (PIP), on page 7 of the application, on page 7 of the application. We are unable to locate the PIP. Please submit a completed PIP form.

Thank you,



Abesha H. Michael
Applications Review & Processing Team
Water Quality Division Support Section
Water Quality Division, MC 148
PO Box 13087
Austin, Texas 78711

Phone: o: 512-239-4912; c: 346-802-8446 Email: abesha.michael@tceq.texas.gov

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

E. Bilingual Notice Requirement

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

1. Is a bilingual education program required by the Texas Education Code at the nearest elementary or middle school to the facility or proposed facility?

Yes ⋈ No □

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

2. Are the students who attend either the elementary school or the middle school enrolled in a bilingual education program at that school?

Yes
No
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? <u>Spanish</u>
- 6. Complete the <u>CAFO Plain Language Summary Template</u> (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 <u>CAFO Plain Language Summary Template</u> (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: Armagh Dairy
- B. If this is an existing permitted site, provide the Regulated Entity Number (RN) issued to this site? RN 100796101
- C. Site Address/Location:

If the site has a physical address such as 12100 Park 35 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.

TCEQ -00728 Individual Permit Application for a Concentrated Animal Feeding Operation (10/24/2022) Page 2

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: Armagh Dairy, LLC
- 2. Enter Customer Number: CN605607654
- 3. Name of facility: Armagh Dairy
- 4. Enter Regulated Entity Number: RN100796101
- 5. Provide your permit Number: WQ0004844000
- 6. Facility Business: This facility currently contains 2,299 Total Head in which 999 head are milking cattle in confinement. The facility has 13 Land Management Units (LMUs); LMU #1 50 ac, LMU #2 31 ac, LMU #3 12 ac, LMU #4 42 ac, LMU #5 28 ac, LMU #6 22 ac, LMU #7 21 ac, LMU #8 53 ac, LMU #9 34 ac, LMU #10 14 ac, LMU #11 20 ac, LMU #12 27 ac, LMU #13 36 ac. There are five Retention Control Structure(s) (RCS) on site; RCS #1-2-3 is 59.41 ac-ft, RCS #4 is 81.29 ac-ft, RCS #6 is 49.77 ac-ft, Surge Pond #1 is 27.31 ac-ft and Surge Pond #2 is 23.21 ac-ft. There are seven water wells located on the facility as well as four plugged wells. The facility is located in the drainage area of the Leon River Below Proctor Lake. Leon River Below Leon Reservoir, North Bosque River in Segment No. 1221, 1223, and 1226
- 7. Facility Location: 560 Country Road 347, Dublin, Texas 76446
- 8. Application Type: Major Amendment Permit Application for CAFO, TCEQ 00728, TIP for CAFO, TCEQ 00760
- 9. Description of your request: Change from Jersey to All breed of milking Cow Weights, Change from 999 milking to 500 Milking, reduction of extra wash water to Waterbalance in DA 1, addition of wells 12 & 13 in LMU #6, reduction in overall application acreage specifically LMU #4 from 42 ac to 41 ac, LMU #6 from 22 ac to 20 ac, LMU #10 from 14 ac to 6 ac, RCS #4 will be an Evaporative pond with TCEQ evaporative permit.
- 10. Potential pollutant sources at the facility include (list the pollutant sources): Manure, Wastewater, Dust, lubricants, Feed, Fuel Storage, Medicines, Cleaning Chemicals
- 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): Manure will be stored within the drainage area of RCS #1-2-3 and RCS #6. Wastewater will be stored in RCS's until properly irrigated through center pivot irrigation systems. Manure will be hauled offsite or land applied for beneficial use in accordance with the Nutrient Management Plan. RCS #1-2-3, RCS #6, and Surge Ponds #1 will be designed to store and maintain the minimum treatment, open lot sludge and 25yr-24hr rainfall volumes. All other cleaners, lubricants, fuels and medicines will be maintained and all manufacturers' directions followed. Dead cows will be composted within the drainage area of the RCS.

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.

PLANTILLA DE IDIOMA ESPAÑOL PARA SOLICITUDES DE PERMISO CAFO

El siguiente resumen se proporciona para esta solicitud de permiso de calidad del agua pendiente que está siendo revisada por la Comisión de Calidad Ambiental de Texas según lo requerido por el Plan de Participación Pública y el Plan de Acceso al Idioma de la TCEQ. La información proporcionada en este resumen puede cambiar durante la revisión técnica de la solicitud y no es una representación federal exigible de la solicitud de permiso.

- 1. Nombre del Solicitante: Armagh Dairy, LLC
- 2. Introduzca el Número de Cliente: CN605607654
- 3. Nombre de la Instalación: Armagh Dairy
- 4. Introduzca el Número de Entidad Regulada: RN100796101
- 5. Proporcione su Número de Permiso: WQ0004844000
- 6. Negocio de Instalación: Esta instalación cuenta actualmente con 2.299 cabezas totales, de las cuales 999 cabezas están ordeñando ganado en confinamiento. La instalación cuenta con 13 Unidades de Manejo de Tierras (UML); LMU #1 50 ac, LMU #2 31 ac, LMU #3 12 ac, LMU #4 42 ac, LMU #5 28 ac, LMU #6 22 ac, LMU #7 21 ac, LMU #8 53 ac, LMU #9 34 ac, LMU #10 14 ac, LMU #11 20 ac, LMU #12 27 ac, LMU #13 36 ac. Hay cinco Estructura(s) de Control de Retención (RCS) en el sitio; El RCS #1-2-3 es de 59.41 ac-ft, el RCS #4 es de 81.29 ac-ft, el RCS #6 es de 49.77 ac-ft, el Surge Pond #1 es de 27.31 ac-ft y el Surge Pond #2 es de 23.21 ac-ft. Hay siete pozos de agua ubicados en la instalación, así como cuatro pozos taponados. La instalación está ubicada en el área de drenaje del río León debajo del lago Proctor. Río León por debajo del embalse de León, río Bosque Norte en los segmentos Nº 1221, 1223 y 1226.
- 7. Ubicación de la Instalación: 560 Country Road 347, Dublin, Texas 76446
- 8. Tipo de Solicitud: Solicitud de Permiso de Enmienda Mayor para CAFO, TCEQ 00728, TIP para CAFO, TCEQ 00760
- 9. Descripción de su solicitud: Cambio de Jersey a Todas las razas de peso de vacas de ordeño, cambio de 999 ordeño a 500 ordeño, reducción de agua de lavado adicional a Waterbalance en DA 1, adición de pozos 12 y 13 en LMU # 6, reducción en la superficie total de aplicación específicamente LMU # 4 de 42 ac a 41 ac, LMU # 6 de 22 ac a 20 ac, LMU # 10 de 14 ac a 6 ac, RCS # 4 será un estanque evaporativo con permiso de evaporación TCEQ.
- 10. Las fuentes potenciales de contaminantes en la instalación incluyen (liste las fuentes contaminantes): estiércol, aguas residuales, polvo, lubricantes, piensos, almacenamiento de combustible, medicamentos, productos químicos de limpieza
- 11. Las siguientes mejores prácticas de gestión se implementarán en el sitio para gestionar los contaminantes de las fuentes contaminantes listadas (describa las mejores prácticas de gestión que se utilizan): El estiércol se almacenará dentro del área de drenaje de RCS # 1-2-3 y RCS # 6. Las aguas residuales se almacenarán en RCS hasta que se rieguen adecuadamente a través de sistemas de riego de pivote central. El estiércol se transportará

fuera del sitio o se aplicará la tierra para uso beneficioso de acuerdo con el Plan de Manejo de Nutrientes. RCS # 1-2-3, RCS # 6 y los estanques de oleada # 1 y # 2 estarán diseñados para almacenar y mantener el tratamiento mínimo, los lodos de lote abierto y los volúmenes de lluvia de 25 años a 24 horas. Todos los demás limpiadores, lubricantes, combustibles y medicamentos se mantendrán y se seguirán todas las instrucciones del fabricante. Las vacas muertas se compostarán dentro del área de drenaje del RCS.

A menos que se limite lo contrario, el estiércol, los lodos o las aguas residuales no se descargarán de una unidad de gestión de la tierra (LMU, por sus siglas en inglés) o una estructura de control de retención (RCS, por sus siglas en inglés) hacia o adyacente al agua en el estado de una CAFO, excepto como resultado de cualquiera de las siguientes condiciones:

- 1) una descarga de estiércol, lodos o aguas residuales que el permisionario no pueda prevenir o controlar razonablemente como resultado de una condición catastrófica que no sea un evento de lluvia;
- 2) desbordamiento de estiércol, lodo o aguas residuales de un RCS como resultado de un evento de lluvia crónico/catastrófico; o
- 3) una descarga de lluvia crónica/catastrófica de una LMU que ocurre porque el permisionario toma medidas para desaguar el RCS si el RCS está en peligro de desbordamiento inminente.



Texas Commission on Environmental Quality

Public Involvement Plan Form for Permit and Registration Applications

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

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

Section 1. Preliminary Screening
New Permit or Registration Application New Activity - modification, registration, amendment, facility, etc. (see instructions)
Terr Activity modification, registration, amendment, ratinty, 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, <u>and</u>
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.
Not located in any of the geographical locations, not considered to have significant public interest.

Section 3. Application Information
Type of Application (check all that apply):
Air Initial Federal Amendment Standard Permit Title V
Waste Municipal Solid Waste Industrial and Hazardous Waste Scrap Tire Radioactive Material Licensing Underground Injection Control
Water Quality
Texas Pollutant Discharge Elimination System (TPDES)
Texas Land Application Permit (TLAP)
State Only Concentrated Animal Feeding Operation (CAFO)
Water Treatment Plant Residuals Disposal Permit
Class _i 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
Provide a brief description of planned activities.

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.
Dublin
(City)
Erath
(County)
(Census Tract) Please indicate which of these three is the level used for gathering the following information.
City County Census Tract
(a) Percent of people over 25 years of age who at least graduated from high school
(b) Per capita income for population near the specified location
(c) Percent of minority population and percent of population by race within the specified location
(d) Percent of Linguistically Isolated Households by language within the specified location
(e) Languages commonly spoken in area by percentage
(f) Community and/or Stakeholder Groups
(g) Historic public interest or involvement

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? Yes No
(b) If yes, do you intend at this time to provide public outreach other than what is required by rule?
Y _i es 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 X No
(e) If a public meeting is held, will a translator be provided if requested?
Yes No
(f) Hard copies of the application will be available at the following (check all that apply):
TCEQ Regional Office TCEQ Central Office
Public Place (specify)
Section 7. Voluntary Submittal
For applicants voluntarily providing this Public Involvement Plan, who are not subject to formal public participation requirements.
Will you provide notice of this application, including notice in alternative languages? Yes No What types of notice will be provided?
Publish in alternative language newspaper
Posted on Commissioner's Integrated Database Website
Mailed by TCEQ's Office of the Chief Clerk
Other (specify)

Jon Niermann, Chairman
Bobby Janecka, Commissioner
Catarina R. Gonzales, Commissioner
Kelly Keel, Executive Director



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 20, 2024

Mr. Noel Courts, P.G. Environmental Manager M.E. Lowther Consulting, LLC P.O. Box 7332 Abilene, Texas 79608

RE:

Application Amend Permit No.: WQ0004844000 (EPA I.D. No. TX0121452)

Applicant Name: Armagh Dairy LLC (CN605607654)

Site Name: Armagh Dairy (RN100796101)

Type of Application: Major amendment with renewal

VIA EMAIL

Dear Mr. Courts:

We have received the application for the above referenced permit, and it is currently under review. Your attention to the following item(s) are requested before we can declare the application administratively complete. Please submit responses to the following items via email.

- 1. Thank you for submitting an application for Major Amendment for Concentrated Animal Feeding Operation (CAFO). However, the form you used is outdated, it is from TCEQ-00728 07/20/2019). Please complete and submit the whole new application using form TCEQ-00728 07/20/2022) for the administrative and technical report including the worksheets.
- ✓2. Section 12, Item B on page 7 of the application: Please email a separate cross-referenced mailing list and mailing labels in a Microsoft word format with response to this letter.

The following is a portion of the NORI which contains information relevant to your application. Please read it carefully and indicate if it contains any errors or omissions. The complete notice will be sent to you once the application is declared administratively complete.

APPLICATION. Armagh Dairy LLC, P.O. Box 2, Dublin, Texas 76446, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Wastewater Permit No. WQ0004844000 (TX0121452) for a Concentrated Animal Feeding Operation (CAFO) to authorize the change from Jersey to All breed of milking Cow Weights, change from 999 milking to 500 Milking, reduction of extra wash water to Waterbalance in DA 1, addition of wells in LMU #6, reduction in overall application acreage, RCS #4 will be an Evaporative pond with TCEO evaporative permit. The facility is located at Located on the south side of Farm-to-Market Road 2156, approximately 1 mile west of the intersection of Farm-to-Market Road 2156 and Farm-to-Market Road 219, near the city of Dublin, in Erath County, Texas 76446. TCEQ received this application on September 11, 2024. The permit application will be available for viewing and copying at TCEO - Region 4 Office, 580 W. Lingleville Road, Suite D, Stephenville, Texas prior to the date this notice is

Mr. Noel Courts, P.G. Page 2 September 20, 2024 Permit No. WQ0004844000

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=-98.373333,32.112777&level=18

Further information may also be obtained from Armagh Dairy LLC at the address stated above or by calling Mr. Mike McDowell, Owner, at 707-696-6696.

3. The application indicates that public notices in Spanish are required. After confirming the portion of the NORI above does not contain any errors or omissions, please use the attached template to translate the NORI into Spanish. Only the first and last paragraphs are unique to this application and require translation. Please provide the translated Spanish NORI in a Microsoft Word document.

Please submit the complete response, addressed to my attention by September 20, 2024. If you should have any questions, please do not hesitate to contact me by phone at (512) 239-4912 or by email at abesha.michael@tceq.texas.gov.

Sincerely,

Abesha Michael

Abasha Michael

Applications Review and Processing Team (MC148)

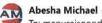
Water Quality Division

Texas Commission of Environmental Quality

Enclosure(s)

Application to Amend Permit No. WQ0004844000 - Notice of Deficiency Letter

Yahoo Mail/Inbox



Abesha Michael <abesha.michael@tceq.texas.gov> To: manureisgood@yahoo.com <manureisgood@yahoo.com> Sep 20 at 2:10 PM

Dear Mr. Courts:

The attached Notice of Deficiency letter sent on September 20, 2024, requests additional information needed to declare the application administratively complete. Please send the complete response to my attention by October 4, 2024.

2 Files 483kB



WQ0004844000-NOD1.PDF



CAFO - Spanish-SB709-amend-NORI-template-(11-2015).docx



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

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

Are you requesting a waiver from e-reporting requirements?

☐ Yes, Indicate the type of waiver below.

☐ Temporary Waiver

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

☐ No, you must submit your application electronically through TCEO ePermits system (STEERS)

at https://www3.tceq.texas.gov/steers/index.cfm. Check How to Apply through STEERS.

If an also transis a various various various tip granted, the Applicant (a) analysis a various vario

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

Note:

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

State Only CAFOs are exempt from this requirement.



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

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

SECTION 1. APPLICATION FEE

Minor Amendment - \$150.00	
Renewal - \$315.00	
New or Major Amendment - \$350	.00

Mailed Check/Money Order Number: 1620

Check/Money Order Amount: 350.00

Name Printed on Check: Mitchell E Lowther Consulting, LLC

EPAY Voucher Number:

Copy of Payment Voucher enclosed? Yes □

SECTION 2. TYPE OF APPLICATION

A.	Coverage:	State Only	TPDES	\boxtimes

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

C. Application Type: New ☐ Major Amendment ⊠

Renewal ⊠ Minor Amendment □

- D. For amendments, describe the proposed changes: Change from Jersey to All breed of milking Cow Weights, Change from 999 milking to 500 Milking, reduction of extra wash water to Waterbalance in DA 1, addition of wells in LMU #6, reduction in overall application acreage, RCS #4 will be an Evaporative pond with TCEQ evaporative permit.
- E. For existing permits:

What is the permit number? WQ0004844000

What is the EPA I.D. Number? TX 0121452

SECTION 3. FACILITY OWNER (APPLICANT) INFORMATION

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

Armagh Dairy, LLC

B.	If the applicant is an existing TCEQ customer, provide the Customer Number (CN) issued to				
	this entity? CN 605607654				
C.	What is the contact information for the owner?				
	Mailing Address: P.O. Box 2				
	City, State and Zip Code: <u>Dublin, Texas 76446</u>				
	Phone Number: <u>707-696-6696</u> Fax Number: <u>N/A</u>				
	E-mail Address: farmstead@armaghcreamery.com				
D.	Indicate the type of customer:				
	Individual				
	Limited Partnership				
出	General Partnership				
	Trust ☐ City Government Sole Proprietorship (D.B.A.) ☐ Other Government				
	General Partnership Trust Sole Proprietorship (D.B.A.) County Government City Government Other Government Other, specify: LLC				
	Estate				
E.	If the customer type is individual, complete Attachment 1.				
F.	Is this customer an independent entity?				
	Yes				
G.	Number of employees:				
	\square 0-20 \square 21-100 \square 101-250 \square 251-500 \square 501 or higher				
H.	For Corporations and Limited Partnerships:				
	What is the Tax Identification Number issued by the State Comptroller:				
	What is the Charter Filing Number issued by the Texas Secretary of State:				
SE	CTION 4. CO-APPLICANT INFORMATION				
Co	emplete this section only if another person or entity is required to apply as a co-permittee.				
	What is the legal name of the co-applicant?				
1	What is the legar name of the co applicant.				
В.	If the applicant is an existing TCEQ customer, provide the Customer Number (CN) issued to this entity? CN				
C.	What is the contact information for the co-applicant?				
	Mailing Address:				
	City, State and Zip Code:				
	Phone Number: Fax Number:				

	E-mail Address:
D.	Indicate the type of customer:
	☐ Individual ☐ Federal Government ☐ Limited Partnership ☐ County Government ☐ General Partnership ☐ State Government ☐ Trust ☐ City Government ☐ Sole Proprietorship (D.B.A.) ☐ Other Government ☐ Corporation ☐ Other, specify: ☐ ☐ ☐ Estate
E.	If the customer type is individual, complete Attachment 1.
F.	Is this customer an independent entity?
	Yes Do government, subsidiary, or part of a larger corporation
G.	Number of employees: □ 0-20 □ 21-100 □ 101-250 □ 251-500 □ 501 or higher
H	For Corporations and Limited Partnerships:
	What is the Tax Identification Number issued by the State Comptroller:
	What is the Charter Filing Number issued by the Texas Secretary of State:
SE	CCTION 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: Noel Courts, P.G.
	Title: Environmental Manager Credentials: Professional Geoscientist
	Company Name: M.E. Lowther Consulting, LLC
	Mailing Address: P.O. Box 7332

SECTION 6. PERMIT CONTACT INFORMATION

E-mail Address: manureisgood@yahoo.com

City, State and Zip Code: Abilene, Texas 79608

Phone Number: <u>325-692-5878</u> Fax Number: <u>325-692-1293</u>

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

A. Prefix (Mr., Ms., Miss): <u>Mr.</u>		
Permit Contact First and Last Name: Mike McDowell		
Title: Owner Credentials:		
Company Name: <u>Armagh Dairy, LLC</u>		
Mailing Address: P.O. Box 2		
City, State and Zip Code: <u>Dublin, Texas 76446</u>		
Phone Number: 707-696-6696 Fax Number: N/A E-mail Address:		
farmstead@armaghcreamery.com		
B. Prefix (Mr., Ms., Miss): Mr.		
Permit Contact First and Last Name: Noel Courts, P.G.		
Title: Environmental Manager Credentials: Professional Geoscientist		
Company Name: M.E. Lowther Consulting, LLC		
Mailing Address: P.O. Box 7332		
City, State and Zip Code: Abilene, Texas 79608		
Phone Number: 325-692-5878 Fax Number: 325-692-1293 E-mail Address:		
manureisgood@yahoo.com		
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)		
Mike McDowell		
No, complete this section		
Prefix (Mr., Ms., Miss):		
First and Last Name:		
Title: Credentials:		
Company Name:		
Mailing Address:		
City, State and Zip Code:		
Phone Number: Fax Number: E-mail		
Address:		

SECTION 8. LANDOWNER INFORMATION

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

Landowner Name: Armagh Dairy, LLC

B. Landowner of the land management units (LMUs)

Landowner Name: Armagh Dairy, LLC

SECTION 9. PUBLIC NOTICE INFORMATION

A.	Individual responsible for publishing the notices in the newspaper
	Prefix (Mr., Ms., Miss): Mr. First and Last Name: Mitchell Lowther
	Title: Consultant Credentials:
	Company Name: M.E. Lowther Consulting, LLC
	Mailing Address: P.O. Box 7332
	City, State and Zip Code: Abilene, Texas 79608
	Phone Number: <u>325-692-5878</u> Fax Number: <u>325-692-1293</u> E-mail Address:
	mlowther001@hotmail.com
В.	Method for receiving the notice package for the Notice of Receipt and Intent
	E-mail:
	Fax Number:
	Regular Mail:
	Mailing Address: P.O. Box 7332
	City, State and Zip Code: Abilene, Texas 79608
C.	Contact person to be listed in the notice
	Prefix (Mr., Ms., Miss): Mr.
	First and Last Name: Mike McDowell
	Title: Owner Credentials:
	Company Name: <u>Armagh Dairy, LLC</u>
	Phone Number: <u>707-696-6696</u>
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: <u>TCEQ - Region 4 Office</u>
	Physical Address of Building: <u>580 W. Lingleville Rd.</u> , Suite D
	City: <u>Stephenville</u> County: <u>Erath</u>
	Phone Number: <u>254-552-1900</u>

E. Bilingual Notice Requirement

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

1. Is a bilingual education program required by the Texas Education Code at the nearest elementary or middle school to the facility or proposed facility? Yes ☑ No □
(If No , alternative language notice publication is not required; skip to Section 10. Regulated Entity (Site) Information.)
2. Are the students who attend either the elementary school or the middle school enrolled in a bilingual education program at that school? Yes \boxtimes No \square
3. Do the students at these schools attend a bilingual education program at another location? Yes \square No \boxtimes
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? N/A
- 6. Complete the <u>CAFO Plain Language Summary Template</u> (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 <u>CAFO Plain Language Summary Template</u> (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: Armagh Dairy
- **B.** If this is an existing permitted site, provide the Regulated Entity Number (RN) issued to this site? RN 100796101
- C. Site Address/Location:

If the site has a physical address such as 12100 Park 35 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.

	Street Number and Name: <u>560 CR 347</u>
	City, State and Zip Code: <u>Dublin, Texas 76446</u>
	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>Erath</u>
E.	Latitude: <u>32.112777 N</u> Longitude: <u>98.373333 W</u>
F.	Animal 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: 2,299 which 999 are milking
	Proposed Maximum Number of Animals: 2,299 which 500 are milking
H.	What is the total LMU acreage? 379
SE	CTION 11. MISCELLANEOUS INFORMATION
Α.	Did any person who was formerly employed by the TCEQ represent your company and get paid for service regarding this application? Yes $\ \ \ \ \ \ \ \ \ \ \ \ \ $
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 \Box No \boxtimes
D.	Is any permanent school fund land affected by this application? Yes ☐ No ☒
	If yes, provide the location and foreseeable impacts and effects this application has on the land(s).
E.	Delinquent Fees and Penalties:
	Do you owe fees to the TCEQ? Yes \(\bigcup \) No \(\bigcup \)
	Do you owe any penalties to the TCEQ? Yes 🔲 No 🗵

Item 1: Physical Address of Project or Site:

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
 - \boxtimes 4 sets of mailing labels
- **D.** Landowner data source. Provide the source of the landowners' names and mailing addresses.

HCAD

SECTION 13. ATTACHMENTS

A. All applications

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

B. New, Major amendment, or Renewal

Completed Technical Information Packet (TCEQ-00760).

C. New and Major amendment

• Public Involvement Plan Form (TCEQ-20960)

D. Minor Amendment

Attach the following items if applicable:

- Current vicinity map, site map, runoff control map, and LMU map
- RCS design calculations
- Nutrient Management Plan or Land application rate calculations
- Other technical documents affected by the proposed amendment

Attachment 1 Individual Information

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

Prefix (Mr., Ms., Miss): Mr.
Full Legal Name, including middle name: <u>Mike McDowell</u>
Driver's License or State Identification Number: XXXXXXXX
State that Issued the License or Identification Number: <u>Texas</u>
Date of Birth: XX/XX/XXXX
Mailing Address: P.O. Box 2
City, State and Zip Code: <u>Dublin, Texas 76446</u>
Phone Number: 707-696-6696 Fax Number:
E-mail Address:

For TCEQ Use Only	
Customer Number Regulated Entity Number Permit Number	
Permit Number	

TCEO USE ONLY

Application type:	□ Renewal	☐ Major Amendment Admin Complete Date:	☐ Minor Amendment	□ New
County:		Admin Complete Date:		
Agency Receiving	SPIF: 🗆 Texas	Historical Commission	🗆 U.S. Fish and Wil	dlife
☐ Texas Parks and Wildlife		☐ Army Corps of E	ngineers	

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

This form is required for all TPDES applications

- 1. Applicant: Armagh Dairy, LLC
- 2. Permit Number: WQ0004844000 EPA ID Number: TX012452
- 3. Address of the project (location description that includes street/highway, city/vicinity, and county). 560 CR 347, Dublin, Texas 76446
- 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: Noel Courts, P.G.

Company Name: M.E. Lowther Consulting, LLC

Mailing Address: P.O. Box 7332

City, State, and Zip Code: Abilene, Texas 79608

Phone Number: 325-692-5878 Fax Number: 325-692-1293

- 5. County where the facility is located: Erath
- 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. Leon River Below Proctor Lake, Leon River Below Leon Reservoir, North Bosque River Segment No. 1221, 1223, 1226 of the Brazos River Basin
- 8. Provide a 7.5-minute USGS quadrangle map with the project boundaries plotted and a general location map showing the project area. (This map is required in addition to the map in the administrative report.)
- 9. Provide photographs of any structures 50 years or older on the property.

es yo	our 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): N/A

12. Describe existing disturbances, vegetation & land use (plowing, other ground disturbances): Aeration of hayland and no-till of winter pasture

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

- 13. List construction dates of any buildings or structures on the property: N/A
- 14. Provide a brief history of the property, and name of the architect/builder, if known: N/A

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

- 15. List each Retention Control Structure and its required capacity (Acre Feet). RCS #1-2-3 59.41 ac-ft, RCS #6 49.77 ac-ft, Surge Pond #1 27.31 ac-ft, Surge Pond #2 23.21 ac-ft
- 16. Provide the location and number of acres where wastewater and manure are land applied: LMU #1 50 Ac, LMU #2 31 Ac, LMU #3 12 Ac, LMU #4 41 Ac, LMU #5 28 Ac, LMU #6 20 Ac, LMU #7 21 Ac, LMU #8 53 Ac, LMU #9 34 Ac, LMU #10 6 Ac, LMU #11 20 Ac, LMU #12 27 AC, LMU #13 36 Ac
- 17. List the maximum number of head to be permitted. 2,299 of which 500 are milking



TPDES Permit No. WQ0004844000 This Permit supersedes and replaces Permit No. WQ0004844000 issued on October 6, 2022 [For TCEQ use only EPA ID No. TX0121452]

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

TPDES PERMIT FOR CONCENTRATED ANIMAL FEEDING OPERATIONS

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

I. Permittee:

A. Owner: Armagh Dairy, LLC

B. Business Name: Armagh Dairy

C. Owner Address: P.O. Box 2, Dublin, Texas 76446

II. Type of Permit: Major Amendment / Air & Water Quality

III. Nature of Business Producing Waste: Concentrated Animal Feeding Operation (CAFO): Dairy Cattle; SIC No. 0241

IV. General Description and Location of Waste Disposal System:

Maximum Capacity: 2,299 total head, of which 999 head are milking

Site Plan: See Attachment A

Retention Control Structures (RCSs) total required capacities without freeboard (Acre-Feet): RCS #1, #2 & #3 – 59.41, RCS #6 – 49.77, Surge Pond #1 – 27.31, Surge Pond #2 – 23.21; RCS #1, #2 and #3 act as one single RCS. Surge Pond #1 & #2 act in-series

Land Management Units (LMUs) (Acres): LMU #1 - 50, LMU #2 - 31, LMU #3 - 12, LMU #4 - 41, LMU #5 - 28, LMU #6 - 20, LMU #7 - 21, LMU #8 - 53, LMU #9 - 34, LMU #10 - 6, LMU #11 - 20, LMU #12 - 27, LMU #13 - 36; See Attachment B for locations

Terms of the Nutrient Management Plan (NMP): See Attachments E and F

Location: The facility is located at 560 County Road 347, Dublin, Erath County, Texas. Latitude: 32.112777° N Longitude: 98.373333° W. See Attachment C

Drainage Basin: The facility is located in the drainage area of the Leon River Below Proctor Lake in Segment 1221, Leon River Below Leon Reservoir in Segment 1223, and the North Bosque River in Segment 1226 of the Brazos River Basin

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

ISSUED DATE:	
	For the Commission

V. Rule and Statute Applicability

- **A. Definitions.** All definitions in Chapter 26 of the Texas Water Code, 30 Texas Administrative Code (TAC) Chapters 305 and 321, Subchapter B shall apply to this permit and are incorporated by reference.
- B. Amendments, renewals, transfers, corrections, revocation, and suspension of permit. The requirements in 30 TAC Chapter 305, Subchapter D apply to this permit.

VI. Permit Applicability and Coverage

- **A. Discharge Authorization**. No discharge is authorized by this permit except as allowed by the provisions in this permit and 40 Code of Federal Regulations Chapter 412, which is adopted by reference in 30 TAC Chapter 305.541.
- **B. Application Applicability**. The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.
- **C. Air Quality Authorization**. The permittee shall comply with the requirements listed in Section VII.D. of this permit and shall:
 - 1. maintain a minimum treatment capacity of 4.96 acre-feet in RCS #1;
 - 2. identify the maximum sludge volume and the minimum treatment volume on the permanent pond marker in RCS #1, 2, and 3;
 - 3. maintain a copy of the odor control plan in the Pollution Prevention Plan; and
 - 4. include a stage storage table for the treatment pond in the RCS Management Plan.

VII. Pollution Prevention Plan (PPP) Requirements

A. Technical Requirements

- 1. PPP General Requirements.
 - (a) The permittee shall update and implement a PPP for this facility upon issuance of this permit. The PPP shall:
 - (1) be prepared in accordance with good engineering practices;
 - (2) include measures necessary to limit the discharge of pollutants to surface water in the state;
 - (3) describe and ensure the implementation of practices which are to be used to assure compliance with the limitations and conditions of this permit;
 - (4) include all information listed in Section VII.A.;
 - (5) identify specific individual(s) who is/are responsible for development, implementation, operation, maintenance, inspections, recordkeeping, and revision of the PPP. The activities and responsibilities of the pollution prevention personnel shall address all aspects of the facility's PPP;
 - (6) be signed by the permittee or other signatory authority in accordance with 30 TAC §305.44 (relating to Signatories to Applications); and
 - (7) be retained on-site.
 - (b) The permittee shall amend the PPP:
 - (1) before any change in the number or configuration of LMUs;
 - (2) before any increase in the maximum number of animals and/or the maximum number of milking cows;

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

accordance with label instructions. There shall be no disposal of pesticides, solvents or heavy metals, or of spills or residues from storage or application equipment or containers, into RCSs. Incidental amounts of such substances entering a RCS as a result of stormwater transport of properly applied chemicals is not a violation of this permit.

- 2. Discharge Restrictions and Monitoring Requirements.
 - (a) Discharge Restrictions. Wastewater may be discharged to water in the state from a properly designed (25-year frequency 10-day duration (25 year/10 day)), constructed, operated and maintained RCS whenever chronic or catastrophic rainfall, or catastrophic conditions cause an overflow. There shall be no effluent limitations on discharges from RCSs which meet the above criteria.
 - (b) Monitoring Requirements. The permittee shall sample all discharges from the RCS(s) and LMU(s). The effluent shall be analyzed by a National Environmental Laboratory Accreditation Conference (NELAC) accredited lab for the parameters shown in Table 1.

Table 1: Monitoring Requirements

Parameter	Sample Type	Sample Frequency
5 Day Biochemical Oxygen Demand (BOD ₅)	Grab	1/day¹
Escherichia coli	Grab	1/day¹
Total Dissolved Solids (TDS)	Grab	1/day¹
Total Suspended Solids (TSS)	Grab	1/day¹
Nitrate (N)	Grab	1/day¹
Total Phosphorus	Grab	1/day¹
Ammonia Nitrogen	Grab	1/day¹
Pesticides ²	Grab	1/day¹

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

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

- (c) If the permittee is unable to collect samples due to climatic conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.), the permittee shall document why discharge samples could not be collected. Once dangerous conditions have passed, the permittee shall conduct the required sampling.
- 3. RCS Design and Construction.
 - (a) RCS Certifications
 - (1) The permittee shall ensure that the design and completed construction of the RCS(s) is certified by a licensed Texas Professional Engineer prior to use. The certification shall be signed and sealed in accordance with the Texas Board of Professional Engineers requirements.

(2) Documentation of liner and capacity certifications must be completed for each RCS prior to use and kept on-site in the PPP. Table 2 below shows the current RCS liner and capacity certifications.

Table 2: Current Liner and Capacity Certifications

RCS Name	Liner	Capacity	Certified Capacity
	Certification Date	Certification Date	(Acre-Feet)
RCS #1	November 10, 1989	September 16, 1999	34.141
RCS #2	November 10, 1989	September 16, 1999	4.464
RCS #3	November 10, 1989	September 16, 1999	20.806
RCS #6	October 09, 1989	September 16, 1999	49.77
Surge Pond 1	August 22, 2005	March 14, 2011	27.31
Surge Pond 2	March 11, 2011	March 14, 2011	23.21
Collection Basin	November 20, 2008	Not Ap	plicable

Former RCS #4 has been removed from the permit.

- (b) Design and Construction Standards. The permittee shall ensure that each RCS is designed and constructed in accordance with the technical standards developed by the NRCS, American Society of Agricultural and Biological Engineers, American Society of Civil Engineers, or American Society of Testing Materials that are in effect at the time of construction. Where site-specific variations are warranted, a licensed Texas Professional Engineer must document these variations and their appropriateness to the design.
- (c) RCS Drainage Area.
 - (1) The permittee shall describe in the PPP and implement measures that will be used to minimize entry of uncontaminated stormwater into the RCS(s).
 - (2) Stormwater must be diverted, as indicated in Attachment A Site Map from contact with feedlots and holding pens, and manure and/or process wastewater storage systems. In cases where it is not feasible to divert stormwater from the production area, the retention structures shall include adequate storage capacity for the additional stormwater. Stormwater includes rain falling on the roofs of facilities, runoff from adjacent land, or other sources.
 - (3) The permittee shall maintain the drainage area to minimize ponding or puddling of water outside the RCS(s).
- (d) RCS Sizing.
 - (1) The design plan must include documentation describing the sources of information, assumptions and calculations used in determining the appropriate volume capacity and structural features of each RCS, including embankment and liners.
 - (2) Design Rainfall Event. Each RCS authorized under this permit shall be designed and constructed to meet or exceed the margin of safety, equivalent to the volume of runoff and direct precipitation from the 25 year/10 day rainfall event. The design rainfall event for this CAFO is 11.9 inches.

- (3) Any RCS capacity that is greater than the minimum capacity required by this permit may be allocated to additional sludge storage volume, which will increase the design sludge cleanout interval for the RCS. The new sludge cleanout interval will be identified in the RCS management plan maintained in the PPP, the stage storage tables will accurately reflect the new volumes, and the pond markers will visually identify the new volume levels.
- (e) Irrigation Equipment Design. The permittee shall ensure that the irrigation system design is capable of removing wastewater from the RCS(s) on a regular schedule. Equipment capable of dewatering the RCS(s) shall be available and operational whenever needed to restore the operating capacity required by the RCS management plan.
- (f) Embankment Design and Construction. The RCS(s) have a depth of water impounded against the embankment at the spillway elevation of three feet or more, therefore the RCS(s) are considered to be designed with an embankment. The PPP shall include a description of the design specifications for the RCS embankments. The following design specifications are required for all new construction and/or the modified portions of existing RCSs.
 - (1) Soil Requirements. Soils used in the embankment shall be free of foreign material such as rocks larger than four (4) inches, trash, brush, and fallen trees.
 - (2) Embankment Lifts. The embankment shall be constructed in lifts or layers no more than eight (8) inches compacted to six (6) inches thick at a minimum compaction effort of 95 per cent (%) Standard Proctor Density (ASTM D698) at -1% to +3% of optimum moisture content.
 - (3) Stabilize Embankment Walls. All embankment walls shall be stabilized to prevent erosion or deterioration.
 - (4) Compaction Testing. Embankment construction must be accompanied by certified compaction tests including in place density and moisture in accordance with the American Society of Testing Materials (ASTM) D1556, D2167 or D2937 for density and D2216, D4643, D4944 or D4959 for moisture, or D6938 for moisture and density or equivalent testing standards. Compaction tests will provide support for the liner certification performed by a licensed Texas Professional Engineer as meeting a permeability no greater than 1 ×10-7 centimeters per second (cm/sec) over a thickness of 18 inches or its equivalency in other materials, and not to exceed a specific discharge through the liner of 1.1 × 10-6 cm/sec with a water level at spillway depth.
 - (5) Spillway or Equivalent Protection. The new or modified RCS(s), which are constructed with embankments, shall be constructed with a spillway or other outflow device properly sized according to NRCS design and specifications to protect the integrity of the embankment.
 - (6) Embankment Protection. The new or modified RCS(s) must have a minimum of two (2) vertical feet of materials equivalent to those used at the time of design and construction between the top of the embankment and the structure's spillway. RCS(s) without spillways must have a minimum of two (2) vertical feet between the top of the embankment and the required storage capacity.

- (g) RCS Liner Requirements. For all new construction and for all structural modifications of existing RCS(s), the RCS must have a liner consistent with one of the following:
 - (1) In-situ Material. In-situ material is undisturbed, in-place, native soil material. In-situ materials must at least meet the minimum criteria for hydraulic conductivity and thickness and specific discharge as described in Section VII.A.3(g)(2) of this permit. Samples shall be collected and analyzed in accordance with Section VII.A.3(g)(3) of this permit. This documentation must be certified by a licensed Texas Professional Engineer or licensed Texas Professional Geoscientist.
 - (2) Constructed or Installed Liner.
 - (i) Constructed or installed liners must be designed by a licensed Texas Professional Engineer. The liner must be constructed in accordance with the design and certified as such by a licensed Texas Professional Engineer. Compaction tests and post construction sampling and analyses, conducted in accordance with Sections VII.A.3(f)(4) and VII.A.3(g)(3) of this permit, will provide support for the liner certification.
 - (ii) Liners shall be designed and constructed to have hydraulic conductivities no greater than 1 × 10⁻⁷ centimeters per second (cm/sec), with a thickness of 18 inches or its equivalency in other materials, and not to exceed a specific discharge through the liner of 1.1 × 10⁻⁶ cm/sec with a water level at spillway depth.
 - (iii) Constructed or installed liners must be designed and constructed to meet the soil requirements, lift requirements, and compaction testing requirements as listed in Section VII.A.3(f)(1), (2) and (4) of this permit.
 - (3) Liner Sampling and Analyses
 - (i) The licensed Texas Professional Engineer or licensed Texas Professional Geoscientist shall use best professional practices to ensure that corings or other liner samples will be appropriately plugged with material that also meets liner requirements of this subsection.
 - (ii) Samples shall be collected in accordance with ASTM D1587 or other method approved by the Executive Director. For each RCS, a minimum of two core samples collected from the bottom of the RCS and a minimum of at least one core sample from each sidewall shall be collected. Additional samples may be necessary based on the best professional judgment of the licensed Professional Engineer. Distribution of the samples shall be representative of liner characteristics, and proportional to the surface area of the sidewalls and floor. Documentation shall be provided identifying the sample locations with respect to the RCS liner.
 - (iii) Undisturbed samples shall be analyzed for hydraulic conductivity in accordance with ASTM D5084 or other method approved by the Executive Director.
 - (4) Leak Detection System. If notified by the Executive Director that significant potential exists for the adverse impact of water in the state or

drinking water from leakage of a RCS, the permittee shall install a leak detection system or monitoring well(s) in accordance with that notice. Documentation of compliance with the notification must be kept with the PPP, as well as copies of all sampling data.

- 4. Special Considerations for Existing RCS(s). An existing RCS that has been properly maintained without any modifications and has no apparent structural problems or leakage is considered to be properly designed with respect to the embankment design and construction and liner requirements of this permit, provided that any required documentation was completed in accordance with the requirements at the time of construction. If no documentation exists, the RCS must be certified by a licensed Texas Professional Engineer as providing protection equivalent to the requirements of this permit.
- 5. Operation and Maintenance of RCSs.
 - (a) The permittee must operate and maintain a margin of safety in the RCS(s) to contain the volume of runoff and direct precipitation from the 25 year/10 day rainfall event.
 - (b) The permittee shall implement a RCS management plan incorporating the margin of safety developed by a licensed Texas Professional Engineer. The management plan shall become a component of the PPP, shall be developed for each RCS, and must describe or include:
 - (1) RCS management controls appropriate for the CAFO and the methods and procedures for implementing such controls;
 - (2) the methods and procedures for proper operation and maintenance of each RCS consistent with the system design;
 - (3) the appropriateness and priorities of any controls reflecting the identified sources of pollutants at the facility;
 - (4) a stage/storage table for each RCS with minimum depth increments of one-foot, including the storage volume provided at each depth;
 - (5) a second table or sketch that includes increments of water level ranges for volumes of total design storage, including the storage volume provided at each specified depth (or water level) and the type of storage designated by that depth; and
 - (6) the planned end of month storage volume anticipated for each RCS for each month of the year and the corresponding operating depth expected at the end of each month of the year, based on the design assumptions.
 - (c) The wastewater level in the RCS shall be maintained at or below the maximum operating level expected during that month, according to the design of the RCS. When rainfall volumes exceed average rainfall data used in design calculations planned end of month storage volumes may encroach into the design storm event storage provided that documentation is available to support that the design parameters have been exceeded and that the RCS is otherwise being managed according to the RCS management plan criteria. In circumstances where the RCS has a water level exceeding the expected end of the month depth, the permittee shall document in the PPP why the level of water in the structure is not at or below the expected depth. Also, if the water level in the RCS encroaches into the storage volume reserved for the design rainfall event, the permittee must document, in the PPP, the conditions that resulted in this occurrence. As soon as irrigation is feasible and not prohibited by Section

- VII.A.8(f) and (g), the permittee shall irrigate until the RCS water level is at or below the maximum operating level expected during that month.
- (d) Imminent Overflow. If a RCS is in danger of imminent overflow from chronic or catastrophic rainfall or catastrophic conditions, the permittee shall take reasonable steps to irrigate wastewater to the LMU(s) only to the extent necessary to prevent overflow from the RCS. If irrigation results in a discharge from a LMU, the permittee shall collect samples from the drainage pathway at the point of the discharge from the edge of the LMU where the discharge occurs, analyze the samples for the parameters listed in Section VII.A.2.(b), and provide the appropriate notifications as required by Section VIII.B of this permit and 30 TAC §321.44.
- (e) Permanent Pond Marker. The permittee shall install and maintain a permanent pond marker (measuring device) in the RCS(s), visible from the top of the levee to show the following:
 - (1) the volume for the design rainfall event;
 - (2) one-foot increments beginning from the predetermined minimum treatment volume of the RCS, or the bottom of the RCS for those without treatment volume, to the top of the embankment or spillway; and
 - (3) design volume levels for maximum sludge accumulation and operating volume (calculated process generated wastewater plus rainfall runoff minus evaporation) must be identifiable on the marker.
- (f) Rain Gauge. A rain gauge capable of measuring the design rainfall event shall be kept on-site and properly maintained.
- (g) Sludge Removal. The permittee shall monitor sludge accumulation and depth, based upon the design sludge storage volume in the RCS. (See Special Provision X.E for additional requirements related to sludge monitoring.) Sludge shall be removed from the RCS(s) in accordance with the design schedule for cleanout in the RCS Management Plan to prevent the accumulation of sludge from exceeding the designed sludge volume of the structure. Removal of sludge shall be conducted during favorable wind conditions that carry odors away from nearby receptors. Sludge may only be beneficially utilized by land application to a LMU if in accordance with a nutrient management plan or disposed of in accordance with Section VII.A.8(e) of this permit. A sludge sample must be collected and analyzed in accordance with Section VII.A.9(a) prior to each clean out.
- (h) Liner Protection and Maintenance. The permittee shall maintain the liner to inhibit infiltration of wastewater. Liners must be protected from animals by fences or other protective devices. No tree shall be allowed to grow such that the root zone would intrude or compromise the structure of the liner or embankment. Any mechanical or structural damage to the liner shall be evaluated by a licensed Texas Professional Engineer within thirty (30) days of the damage.
- (i) Closure Requirements. A closure plan must be developed when a RCS will no longer be used and/or when the CAFO ceases or plans to cease operation. The closure plan shall be submitted to the appropriate regional office and the CAFO Permits Team of the Water Quality Division in Austin (MC-150) within ninety (90) days of when operation of the CAFO or the RCS terminates. The closure plan for the RCS must, at a minimum, be developed using standards contained

in the NRCS Practice Standard Code 360 (Closures of Waste Impoundments), as amended, and using the guidelines contained in the Texas AgriLife Extension/ NRCS publication #B-6122 (Closure of Lagoons and Earthen Manure Storage Structures), as amended. The permittee shall maintain or renew its existing authorization and maintain compliance with the requirements of this permit until the facility has been closed.

- 6. General Operating Requirements.
 - (a) Flush/Scrape Systems. Flush/scrape systems shall be flushed/scraped in accordance with design criteria in the application.
 - (b) Pen Maintenance. The permittee shall maintain earthen pens to ensure good drainage, minimize ponding, and minimize the entrance of uncontaminated storm water to the RCSs.
 - (c) Carcass Disposal. Carcasses shall be collected within twenty four (24) hours of death and properly disposed of within three days of death in accordance with Texas Water Code, Chapter 26; Texas Health and Safety Code, Chapter 361; and 30 TAC Chapter 335 (relating to Industrial Solid Waste and Municipal Hazardous Waste) unless otherwise provided for by the commission. Animals must not be disposed of in any liquid manure or process wastewater system. Disposal of diseased animals shall also be conducted in a manner that prevents a public health hazard in accordance with Texas Agriculture Code, §161.004, and 4 TAC §31.3, §58.31(b), and §59.12. The collection area for carcasses shall be addressed in the potential pollutant sources section of the PPP with the management practices to prevent contamination of surface or groundwater, control access, and minimize odor.
 - (d) Manure and Sludge Storage
 - (1) Manure and sludge storage capacity requirements shall be based on manure and sludge production, land availability, and the NRCS Field Office Technical Guide (Part 651, Chapter 10) or equivalent standards.
 - (2) When manure is stockpiled, it shall be stored in a well-drained area, and the top and sides of stockpiles shall be adequately sloped to ensure proper drainage and prevent ponding of water. Runoff from manure or sludge storage piles must be retained on-site. If the manure or sludge areas are not roofed or covered with impermeable material, protected from external rainfall, or bermed to protect from runoff during the design rainfall event, the manure or sludge areas must be located within the drainage area of a RCS and accounted for in the design calculations of the RCS.
 - (3) Manure or sludge stored for more than thirty (30) days must be stored within the drainage area of a RCS or stored in a manner (i.e. storage shed, bermed area, tarp covered area, etc.) that otherwise prevents contaminated storm water runoff from leaving the storage area. All storage sites and structures located outside the drainage area shall be designated on the site map. Storage for more than thirty (30) days is prohibited in the 100–year floodplain.
 - (4) Temporary storage of manure or sludge shall not exceed thirty (30) days and is allowed only in a LMU or a RCS drainage area. Temporary storage of manure and sludge in the 100-year floodplain, near water courses or near recharge features may be allowed if protected by berms or other structures to prevent inundation or damage that may occur.

- (e) Composting. Composting on-site shall be performed in accordance with 30 TAC Chapter 332 (relating to Composting). The permittee may compost waste generated on-site, including manure, sludge, bedding, feed and dead animals. The permittee may add agricultural products to provide an additional carbon source or bulking agent to aid in the composting process. If the compost areas are not roofed or covered with impermeable material, protected from external rainfall, or bermed to protect from runoff in the case of the design rainfall event, the compost areas must be located within the drainage of an RCS and must be shown on the site plan and accounted for in the design calculations of the RCS.
- 7. Site Specific Conservation Practice.
 - (a) Well Protection Requirements
 - (1) The permittee shall not locate or operate a new RCS, holding pen, or LMU within the following buffer zones:
 - (i) public water supply wells 500 feet;
 - (ii) wells used exclusively for private water supply 150 feet; or
 - (iii) wells used exclusively for agriculture irrigation 100 feet.
 - (2) Irrigation of wastewater directly over a well head will require a structure protective of the wellhead that will prevent contact from irrigated wastewater.
 - (3) Construction of any new water wells must be done by a licensed water well driller.
 - (4) All abandoned and unuseable wells shall be plugged according to 16 TAC §76.104.
 - (5) The permittee may continue the operation and use of any existing holding pens and RCSs located within the required well buffer zones provided they are in accordance with the facility's approved recharge feature evaluation and certification. Buffer zone variance documentation must be kept onsite and made available to TCEQ personnel upon request. A Well Buffer Exception request for Well #1 and Well #2 was submitted to and approved by the TCEQ Water Quality Assessment Team. Permittee shall implement the requirements of the Well Buffer Exception approval by TCEQ. Table 3 below shows the status of all wells on the facility and the best management practices (BMPs) used to protect them.

Table 3: Well Status and Best Management Practices

Well Number*	Status	BMPs
1	Producing	Concrete surface slab sealed to the well casing
2	Producing	Concrete surface slab sealed to the well casing
PW3	Non-Producing	Plugged
CW4	Non-Producing	Plugged
5	Producing	Maintain 150 ft buffer
6	Producing	Maintain 150 ft buffer
7	Producing	Maintain 150 ft buffer

Well Number*	Status	BMPs
PW8	Non-Producing	Plugged
9	Producing	Maintain 150 ft buffer
PW10	Non-Producing	Plugged
11	Producing	Maintain 150 ft buffer
12	Producing	Maintain 150 ft buffer
13	Producing	Maintain 150 ft buffer

^{*}Well Numbers correspond with Attachment D

(b) Soil Limitations. The permittee shall implement the BMPs on Table 4 for the specified soil series.

Table 4: Soil Limitations and Best Management Practices

Soil Series	Potential Limitations	BMPs*
and Map ID		
BdC: Bolar Denton; Pd: Purves-Dugout	Flooding	Permanent vegetation; High crop residue; Land application at
HfD2: Hico-Fairy	High infiltration rate	agronomic rate
PcB & PcC: Purves	Shallow; Slow permeability	
DeB: Denton; HoB: Slidell	Very slow permeability	Permanent vegetation; Land application at agronomic rate

^{*}or an equivalent protective measure identified in an NRCS Practice Standard.

(c) Pollutant Sources and Management. The permittee shall implement the BMPs on Table 5 for handling dead animals and pesticides.

Table 5: Pollutant Sources and Best Management Practices

Potential Pollutant Source	BMPs*		
Dead Animals	Collect within 24 hours of death and remove within three days of death by a third-party rendering service, or compost in accordance with Section VII.A.6(e) of this permit		
Pesticides/Parlor Chemicals	Store under roof		
	Handle and dispose according to label directions		

^{*}or an alternative BMP as allowed by 30 TAC 321 Subchapter B or an equivalent protective measure identified in an NRCS Practice Standard.

8. Land Application.

(a) Nutrient Management Plan (NMP) Required. The certified NMP submitted in the permit application shall be implemented upon issuance of this permit. The plan shall be updated as appropriate or at a minimum of annually according to NRCS Practice Standard Code 590. The permittee shall make available to the Executive Director, upon request, a copy of the site specific NMP and documentation of the implementation.

- (1) For Terms of the NMP see Attachments E and F.
- (2) The following changes to the terms of the NMP are substantial:
 - (i) Increase in animal headcount;
 - (ii) Increase in LMU acreage or a change in LMU location;
 - (iii) Change in crop and yield goal (not listed in Attachment F);
- (3) Substantial and Non-Substantial Change to the terms of the NMP.
 - (i) Any changes (substantial or non- substantial) to the NMP, other than the Annual Recalculation of Application Rates outlined in Attachment E, must be submitted to the Executive Director for review, and may be subject to public comment;
 - (ii) If the Executive Director determines that the changes to the NMP are not substantial, the revised NMP will be made publicly available and included in the permit record; and
 - (iii) If the Executive Director determines that the changes to the NMP are substantial, the information provided by the permittee will be subject to a major amendment process as set in 30 TAC §§305.61-305.72.
- (b) Comprehensive Nutrient Management Plan (CNMP) required. The permittee must continue to operate under a CNMP certified by the Texas State Soil and Water Conservation Board.
- (c) Critical Phosphorus Level
 - (1) When results of the annual soil analysis show a phosphorus level in the soil of more than 200 ppm but not more than 500 ppm in Zone 1 depth (0-6 inch incorporated; 0-2 or 2-6 inch if not incorporated) for a particular LMU or if ordered by the commission to do so in order to protect the quality of water in the state, then the permittee shall:
 - (i) file with the Executive Director a new or amended nutrient utilization plan (NUP) with a phosphorus reduction component based on crop removal that is certified as acceptable by a person described in (3) below; or
 - (ii) show that the level is supported by a NUP that is certified as acceptable by a person described in (3) below.
 - (2) The permittee shall cease land application of compost, manure, sludge and wastewater to the affected area until the NUP has been approved by the TCEQ. After a NUP is approved, the permittee shall land apply in accordance with the NUP until soil phosphorus is reduced below the critical phosphorus level of 200 ppm extractable phosphorus. Thereafter, the permittee shall implement the requirements of the nutrient management plan.
 - (3) NUP. A NUP is a NMP, based on NRCS Practice Standard Code 590, which utilizes a crop removal application rate. The NUP, based on crop removal, must be developed and certified by one of the following individuals or entities:
 - (i) an employee of the NRCS;
 - (ii) a nutrient management specialist certified by the NRCS;
 - (iii) the Texas State Soil and Water Conservation Board;
 - (iv) the Texas AgriLife Extension;
 - (v) an agronomist or soil scientist on full-time staff at an accredited university located in the State of Texas; or

- (vi) a Certified Professional Agronomist certified by the American Society of Agronomy, a Certified Professional Soil Scientist certified by the Soil Science Society of America, or a licensed Texas Professional Geoscientist-soil scientist after approval by the Executive Director based on a determination by the Executive Director that another person or entity identified in this paragraph cannot develop the plan in a timely manner.
- (4) When results of the annual soil analysis for extractable phosphorus indicate a level greater than 500 ppm in Zone 1 depth (0-6 inch incorporated; 0-2 or 2-6 inch if not incorporated), the permittee shall file with the Executive Director a new or amended NUP with a phosphorus reduction component, based on crop removal, that is certified as acceptable by a person described in (3) above. After the new or amended NUP is approved, the permittee shall land apply in accordance with the NUP until soil phosphorus is reduced below 500 ppm extractable phosphorus.
- (5) If the permittee is required to have a NUP with a phosphorus reduction component based on crop removal, and if the results of tests performed on composite soil samples collected 12 months or more after the plan is filed do not show a reduction in phosphorus concentration in Zone 1 depth (0-6 inch incorporated; 0-2 or 2-6 inch if not incorporated), then the permittee is subject to enforcement action at the discretion of the Executive Director.
- (d) Buffer Requirements. The permittee shall meet the following buffer requirements for each LMU:
 - (1) Water in the State. The permittee shall not apply compost, manure, sludge and wastewater within the buffer distances as noted on Attachment B and Special Provision X.D. Vegetative buffers shall be maintained in accordance with NRCS Field Office Technical Guidance. The permittee shall maintain the filter strip (according to NRCS Code 393) between the vegetative buffer and the land application area. If the land application area is cropland, the permittee shall install and maintain contour buffer strips (according to NRCS Code 332) within the land application area in addition to the buffer distances required by this permit.
 - (2) Water Wells. The permittee shall comply with the well protection requirements listed in Section VII.A.7.(a).
- (e) Exported wastewater, sludge, and/or manure. Wastewater, sludge, and/or manure removed from the operation shall be disposed of by:
 - (1) delivery to a composting facility authorized by the Executive Director;
 - (2) delivery to a permitted landfill located outside of the major sole source impairment zone;
 - (3) beneficial use by land application to land located outside of the major sole source impairment zone;
 - (4) put to another beneficial use approved by the Executive Director;
 - (5) providing wastewater, sludge, and/or manure to operators of third-party fields, i.e. areas of land in the major sole source impairment zone not owned, operated, controlled, rented, or leased by the CAFO owner or operator, that have been identified in the PPP.

- (i) There must be a written contract between the permittee and the recipient that includes, but is not limited to, the following provisions:
 - (A) All transferred wastewater, sludge, and/or manure shall be beneficially applied to third-party fields identified in the PPP in accordance with the applicable requirements in 30 TAC §321.36 and §321.40 at an agronomic rate based on soil test phosphorus. The requirements for development or implementation of a nutrient management plan or nutrient utilization plan, under 30 TAC §321.40, do not apply to third-party fields.
 - (B) Manure and sludge must be incorporated on cultivated fields within forty-eight (48) hours after land application.
 - (C) Land application rates shall not exceed the crop nitrogen requirement when the soil phosphorus concentration in Zone 1 depth (o-6 inch if incorporated; o-2 or 2-6 inch if not incorporated) is less than or equal to 50 ppm phosphorus.
 - (D) Land application rates shall not exceed two times the phosphorus crop removal rate, and not to exceed the crop nitrogen requirement, when soil phosphorus concentration in Zone 1 depth (0-6 inch if incorporated; 0-2 or 2-6 inch if not incorporated) is greater than 50 ppm phosphorus and less than or equal to 150 ppm phosphorus.
 - (E) Land application rates shall not exceed one times the phosphorus crop removal rate, and not to exceed the crop nitrogen requirement, when soil phosphorus concentration in Zone 1 depth (0-6 inch if incorporated; 0-2 or 2-6 inch if not incorporated) is greater than 150 ppm phosphorus and less than 200 ppm phosphorus.
 - (F) Before commencing manure, wastewater, compost, and/or sludge application to third-party fields, at least one representative soil sample from each third-party field must be collected by a certified nutrient management specialist and analyzed in accordance with 30 TAC §321.36. Third-party fields which have had wastewater, sludge, compost, and/or manure applied during the preceding year must be sampled annually by a certified nutrient management specialist and the samples analyzed in accordance with 30 TAC §321.36. For third-party fields that have not received wastewater, sludge, compost, and/or manure during the preceding year, initial sampling must be completed before re-starting land application to the third-party field.
 - (G) A copy of the annual soil analyses shall be provided to the permittee within sixty (60) days of the date the samples were taken.
 - (H) Temporary storage of wastewater, sludge, and/or manure is prohibited on third-party fields.
- (ii) The permittee is prohibited from delivering wastewater, sludge, and/or manure to an operator of a third-party field once the soil test phosphorus analysis shows a level equal to or greater than 200 ppm

- or after becoming aware that the third-party operator is not following appropriate provisions of 30 TAC §321.36, §321.40 and/or the contract.
- (iii) The permittee will be subject to enforcement action for violations of the land application requirements on any third-party field under contract.
- (iv) The permittee shall submit records to the appropriate regional office quarterly that contain the name, locations, and amounts of wastewater, sludge, and/or manure transferred to operators of third-party fields.
- (f) Irrigation Operating Requirements.
 - (1) Minimize Ponding. Irrigation practices shall be managed so as to minimize ponding or puddling of wastewater on the site, prevent tailwater discharges to water in the state, and prevent the occurrence of nuisance conditions.
 - (2) Discharge Prohibited
 - (i) The drainage of compost, manure, sludge and wastewater is prohibited from the LMU(s), unless authorized under Section VII.A.5(d).
 - (ii) Where compost, manure, sludge and wastewater is applied in accordance with the nutrient management plan and/or NUP, precipitation-related runoff from the LMU(s) under the control of the permittee is authorized.
 - (iii) If a discharge from the irrigation system is documented as a violation, the permittee may be required by the Executive Director to install an automatic emergency shut-down or alarm system to notify the permittee of system problems.
 - (3) Backflow Prevention. If the permittee introduces wastewater or chemicals to water well heads for the purpose of irrigation, then backflow prevention devices shall be installed according to 16 TAC Chapter 76 (related to Water Well Drillers and Water Well Pump Installers).
- (g) Nighttime Application.
 - (1) Land application at night shall only be allowed if there is no occupied residence(s) within one quarter (0.25) of a mile from the outer boundary of the actual area receiving compost, manure, sludge and wastewater application. In areas with an occupied residence within one quarter (0.25) of a mile from the outer boundary of the actual area receiving compost, manure, sludge and wastewater application, application shall only be allowed from one (1) hour after sunrise until one (1) hour before sunset, unless the current occupant of such residences have, in writing, agreed to specified nighttime applications.
 - (2) Land application of compost, manure, sludge and wastewater is prohibited between 12 a.m. and 4 a.m. during normal operating conditions.
- 9. Sampling and Testing.
 - (a) Manure and Wastewater. The permittee shall collect and analyze at least one representative sample of wastewater and one representative sample of manure

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

- (b) Soils
 - (1) Initial Sampling. Before commencing compost, manure, sludge and wastewater application to the LMU(s), the permittee shall have at least one representative soil sample from each LMU, collected and analyzed according to the following procedures.
 - (2) Annual Sampling. The TCEQ or its designee shall have soil samples collected annually for each current and historical LMU.
 - (3) Sampling Procedures. Sampling procedures shall employ accepted techniques of soil science for obtaining representative samples and analytical results, and be consistent with approved methods described in the Executive Director's guidance entitled "Soil Sampling for Concentrated Animal Feeding Operations (CAFOs) (RG-408)."
 - (i) Soil samples must be collected by one of the following persons:
 - (A) the NRCS:
 - (B) a certified nutrient management specialist;
 - (C) the Texas State Soil and Water Conservation Board;
 - (D) the Texas AgriLife Extension; or
 - (E) an agronomist or soil scientist on full-time staff at an accredited university located in the State of Texas.
 - (ii) Samples shall be collected and analyzed within the same forty-five (45) day time frame each year, except when crop rotations or inclement weather require a change in the sampling time. The reason for a change in sampling timeframe shall be documented in the PPP.
 - (iii) Obtain one composite sample for each soil depth zone per uniform soil type (soils with the same characteristics and texture) within each LMU.
 - (iv) Composite samples shall be comprised of 10 15 randomly sampled cores obtained from each of the following soil depth zones:
 - (A) Zone 1: 0-6 inches (where the manure, sludge, or compost is physically incorporated or injected directly into the soil) or 0-2 inches (where the manure and sludge are not incorporated into the soil). Wastewater is considered to be incorporated upon land application if it is less than two percent (2%) solids. If a 0-2 inch sample is required, then an additional sample from the 2-6 inch soil depth zone shall be obtained in accordance with the provisions of this section; and
 - (B) Zone 2: 6-24 inches.
 - (4) Laboratory Analysis. Samples shall be analyzed by a soil testing laboratory. Physical and chemical parameters and analytical procedures for laboratory analysis of soil samples shall include the following:
 - (i) nitrate reported as nitrogen in ppm;
 - (ii) phosphorus (extractable, ppm) using Mehlich III with Inductively Coupled Plasma (ICP);
 - (iii) potassium (extractable, ppm);
 - (iv) sodium (extractable, ppm);
 - (v) magnesium (extractable, ppm);

- (vi) calcium (extractable, ppm);
- (vii) soluble salts (ppm) or electrical conductivity (dS/m) determined from extract of 2:1 (v/v) water/soil mixture; and

(viii) soil water pH (soil:water, 1:2 ratio).

- 10. Preventative Maintenance Program.
 - (a) Facility Inspections
 - (1) General Requirements
 - (i) Inspections shall include visual inspections and equipment testing to determine conditions that could cause breakdowns or failures resulting in discharge of pollutants to water in the state or the creation of a nuisance condition.
 - (ii) The permittee shall draft a report, to be maintained in the PPP, to document the date of inspections, observations and actions taken in response to deficiencies identified during the inspection. The permittee shall correct all the deficiencies within thirty (30) days or shall document the factors preventing immediate correction.
 - (2) Daily Inspections. The permittee shall conduct daily inspections on all water lines, including drinking water and cooling water lines, which are located within the drainage area of a RCS.
 - (3) Weekly Inspections. The permittee shall conduct weekly inspections on:
 - all control facilities, including RCSs, storm water diversion devices, runoff diversion structures, control devices for management of potential pollutant sources, and devices channeling contaminated storm water to RCSs; and
 - (ii) equipment used for land application of compost, manure, sludge and wastewater.
 - (4) Monthly Inspections. The permittee shall conduct monthly inspections on:
 - (i) mortality management systems, including collection areas; and
 - (ii) disposal and storage of toxic pollutants, including pesticide containers.
 - (5) Annual Site Inspection.
 - (i) The permittee shall annually conduct a complete site inspection of the production area and the LMU(s).
 - (ii) The inspection shall verify that:
 - (A) the description of potential pollutant sources is accurate;
 - (B) the site plan/map has been updated or otherwise modified to reflect current conditions; and
 - (C) the controls outlined in the PPP to reduce pollutants and avoid nuisance conditions are being implemented and are adequate.
 - (b) Five Year Evaluation. Once every five years the permittee shall have a licensed Texas Professional Engineer review the existing engineering documentation, complete a site evaluation of the structural controls, review existing liner and RCS capacity documentation, and complete and certify a report of their findings. The report must be kept in the PPP.
- 11. Management Documentation. The permittee shall maintain the following records in the PPP:

- (a) a copy of the administratively complete and technically complete individual water quality permit application and the written authorization issued by the commission or Executive Director;
- (b) a copy of the approved recharge feature certification and appropriate updates;
- (c) a copy of the comprehensive nutrient management plan, nutrient management plan, nutrient utilization plan and appropriate updates to these plans, if required;
- (d) the RCS liner certification(s);
- (e) any written agreement with a landowner which documents the allowance of nighttime application of compost, manure, sludge and wastewater;
- (f) documentation of employee and operator training, including verification of the date, time of attendance, and completion of training;
- (g) the RCS management plan;
- (h) the capacity of each RCS as certified by a licensed Texas Professional Engineer; and
- (i) a copy of all third-party field contracts.

B. General Requirements

- 1. The permittee shall not construct any component of the production area in any stream, river, lake, wetland, or playa (except as defined by and in accordance with the Texas Water Code §26.048).
- 2. Animals confined on the CAFO shall be restricted from coming into direct contact with surface water in the state through the use of fences or other controls.
- 3. The permittee shall prevent the discharge of pesticide contaminated waters into water in the state. All wastes from dipping vats, pest and parasite control units, and other facilities used for the application of potentially hazardous or toxic chemicals shall be handled and disposed of in a manner that prevents any significant pollutants from entering water in the state or creating a nuisance condition.
- 4. The permittee shall operate the CAFO in such a manner as to prevent nuisance conditions of air pollution as mandated by Texas Health and Safety Code, Chapters 341 and 382.
- 5. The permittee shall take reasonable steps necessary to prevent adverse effects to human health or safety, or to the environment.
- 6. The permittee shall maintain control of the RCS(s), required LMU(s), and control facilities identified on the site map submitted in the application. In the event the permittee loses control of any of these areas, the permittee shall notify the Executive Director within five (5) working days.
- 7. If animals are maintained in pastures, the permittee shall maintain crops, vegetation, forage growth or post harvest residues in those pastures during the normal growing season, excluding the feed and/or water trough areas.

C. Training

- 1. Employee Training
 - (a) Employees at the CAFO facility who are responsible for work activities relating to compliance with provisions of this permit must be regularly trained or informed of any information pertinent to the proper operation and

- maintenance of the facility and land application of manure, sludge, and wastewater.
- (b) Employee training shall address all levels of responsibility of the general components and goals of the PPP. Training shall include appropriate topics, such as land application of manure, sludge, and wastewater, proper operation and maintenance of the facility, good housekeeping, material management practices, recordkeeping requirements, and spill response and clean up.
- (c) The permittee is responsible for determining the appropriate training frequency for different levels of personnel. The PPP shall identify periodic dates for such training.
- 2. Operator Training. The operator shall attend at least eight (8) hours of continuing education in animal waste management or its equivalent, developed by the Executive Director and the Texas AgriLife Extension, for each two year period.
- 3. Verification of the date and time(s) of attendance and completion of required training shall be documented in the PPP.

D. Air Standard Permit Requirements

- 1. Air emission limitations.
 - (a) Facilities shall be operated in such a manner as to prevent the creation of a nuisance as defined by Texas Health and Safety Code, 30 TAC §§341.011 and 321.32(32), and as prohibited by 30 TAC §101.4. Facilities shall be operated in such a manner as to prevent a condition of air pollution as defined by Texas Health and Safety Code and 30 TAC §382.003(3).
 - (b) The permittee shall take necessary action to identify any nuisance condition that occurs. The permittee shall take action to abate any nuisance condition as soon as practicable or as specified by the Executive Director.
- 2. Wastewater treatment. The permittee shall design and operate RCSs to minimize odors in accordance with accepted engineering practices. Each RCS shall be operated in accordance with the design and an operation and maintenance plan that minimizes odors. The primary lagoon in a multi-stage lagoon system shall be designed with a minimum treatment volume so that the lagoon maintains a constant level at all times unless prohibited by climatic conditions. A multi-stage lagoon system shall be designed to minimize the amount of contaminated storm water runoff entering the primary lagoon by routing the contaminated storm water runoff into a secondary RCS.
- 3. Dust Control. To minimize dust emissions, the CAFO shall be operated and maintained as follows:
 - (a) Fugitive emissions from all grain receiving pits, where a pit is used, shall be minimized through the use of "choke feeding" or through an equivalent method of control. If choke feeding is used, operation of conveyors associated with receiving shall not commence until the receiving pits are full.
 - (b) As necessary, emissions from all in-plant roads, truck loading and unloading areas, parking areas, and other traffic areas shall be controlled with one or more of the following methods to minimize nuisance conditions and maintain compliance with all applicable commission requirements:
 - (1) sprinkled with water:
 - (2) treated with effective dust suppressant(s); or
 - (3) paved with a cohesive hard surface and cleaned.

- (c) All non-vehicular external conveyors or other external conveying systems associated with the feedmill shall be enclosed.
- (d) On-site feed milling operations with processing equipment using a pneumatic conveying system (which may include, but are not limited to, pellet mill/pellet cooler systems, flaker systems, grinders, and roller-mills) shall vent the exhaust air through a properly-sized high efficiency cyclone collector or an equivalent control device before releasing the exhaust air to the atmosphere. This requirement does not include cyclones used as product separators.
- (e) If the Executive Director determines that the implementation and employment of these practices is not effective in controlling dust, the permittee shall implement any necessary additional abatement measures to control and minimize this contaminant within the time period specified by the Executive Director.
- 4. Maintenance and Housekeeping. The permittee shall comply with the following to help prevent nuisance conditions.
 - (a) The premises shall be maintained to prevent the occurrence of nuisance conditions from odors and dust. Spillage of any raw products or waste products causing a nuisance condition shall be picked up and properly disposed of daily.
 - (b) Proper pen drainage shall be maintained at all times. Earthen pen areas shall be maintained by scraping uncompacted manure and shaping pen surfaces as necessary to minimize odors and ponding.

VIII. Recordkeeping, Reporting, and Notification Requirements

A. Recordkeeping

The permittee shall keep records on-site for a minimum of five (5) years from the date the record was created and shall submit them within five (5) days of a written request by the Executive Director.

- 1. The permittee shall update records daily to include:
 - (a) all measurable rainfall events; and
 - (b) the wastewater levels in each RCS, as shown on the depth marker. In circumstances where a RCS has a water level exceeding the expected end of the month depth, the permittee shall document in the PPP why the level of water in the structure is not at or below the expected depth.
- 2. The permittee shall update records weekly to include:
 - (a) records of all wastewater, sludge, and/or manure removed from the CAFO that shows the dates, amount, and recipient. The permittee must make the most recent nutrient analysis available to any hauler; and
 - (b) inspections of control facilities and land application equipment.
- 3. The permittee shall update records monthly to include:
 - (a) records describing mortality management practices;
 - (b) storage and disposal of chemicals, including pesticide containers; and
 - (c) records of all compost, manure, sludge and wastewater applied on the LMU(s). Such records must include the following information:
 - (i) date of compost, manure, sludge and wastewater application to each LMU;
 - (ii) location of the specific LMU and the volume applied during each application event;
 - (iii) acreage on which compost, manure, sludge and wastewater is applied;

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

B. Reporting and Notifications

- 1. The permittee shall provide written notice to the appropriate TCEQ regional office as soon as the RCS cleaning is scheduled, but not less than ten (10) days before cleaning. The permittee shall also provide written verification of completion to the same regional office within five (5) days after the cleaning has been completed. This paragraph does not apply to the cleaning of solid separators or settling basins that are functioning as solid separators.
- 2. The permittee shall notify the appropriate TCEQ regional office in writing or by electronic mail with the date, time, and location at least ten (10) working days before collecting soil samples from current and historical LMUs; and third-party fields.
- 3. Discharge Notification. If for any reason there is a discharge of manure, sludge or wastewater into water in the state, the permittee shall notify the appropriate TCEQ regional office orally within one (1) hour of discovery; unless it is not reasonably possible to do so in which event the discharge shall be reported as soon as reasonably possible, but in no event later than twenty-four (24) hours from when the discharge occurred. The permittee shall also submit written notice, within fourteen (14) working days of the discharge to the Office of Compliance and Enforcement, Enforcement Division (MC 224). In addition, the permittee shall document the following information, keep the information on-site, and submit the information to the appropriate regional office within fourteen (14) working days of becoming aware of such discharge. The written notification must include:

- (a) a description and cause of the discharge, including a description of the flow path to the receiving water body and an estimation of the volume discharged;
- (b) the period of discharge, including exact dates and times, and, if not corrected, the anticipated time the discharge is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the discharge;
- (c) if caused by a precipitation event(s), the date(s) of the event(s) and the rainfall amount(s) recorded from an on-site rain gauge; and
- (d) discharge monitoring analyses required by this permit.
- 4. In the event of a discharge of manure, sludge, or wastewater from a RCS or a LMU during a chronic or catastrophic rainfall event or resulting from catastrophic conditions, the permittee shall orally notify the appropriate TCEQ regional office within one (1) hour of the discovery of the discharge. The permittee shall send written notification to the appropriate regional office within fourteen (14) working days.
- 5. Chronic Rainfall Discharge. In the event of a discharge of manure, sludge or wastewater from a RCS or a LMU due to chronic rainfall, the permittee shall submit a report to the appropriate TCEQ regional office showing the CAFO records that substantiates that the overflow was a result of cumulative rainfall that exceeded the design rainfall event without the opportunity for dewatering, and was beyond the control of the permittee. After review of the report, if required by the Executive Director, the permittee shall have an engineering evaluation by a licensed Texas Professional Engineer developed and submitted to the Executive Director. This requirement is in addition to the discharge notification requirement in this permit.
- 6. Impacts to Human Health or Safety, or the Environment. The permittee shall provide the following noncompliance notifications:
 - (a) Any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally, by e-mail, or electronic facsimile transmission (Fax) to the TCEQ regional office within twenty four (24) hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the TCEQ regional office and the Enforcement Division (MC 224) within five (5) days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times. If the noncompliance has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance and to mitigate its adverse effects.
 - (b) In the event the permittee discharges manure, sludge, or wastewater other than as authorized in the permit, the permittee shall give twenty four (24) hour oral, e-mail, or fax notice and five (5) day written notice to TCEQ as required by paragraph (a) above.
- 7. The permittee shall submit an annual report to the appropriate regional office and the Enforcement Division (MC 224) by March 31 of each year for the 12-month reporting period of January 1 to December 31 of the previous year. The report shall be submitted on forms prescribed by the Executive Director to include, but not limited to:

- (a) number and type of animals, whether in open confinement or housed under roof;
- (b) estimated total manure, sludge, and wastewater generated during the reporting period;
- (c) total compost, manure, sludge and wastewater land applied during the last twelve (12) months on-site at the CAFO facility;
- (d) total wastewater, sludge, and/or manure transferred to other persons during the reporting period;
- (e) total number of acres for land application under the control of the permittee and all third-party acreage;
- (f) summary of discharges of manure, sludge, or wastewater from the production area that occurred during the reporting period including dates, times, and approximate volume;
- (g) a statement indicating that the NMP/NUP, under which the CAFO is operating, was developed and approved by a certified nutrient management specialist;
- (h) a copy of the initial soil analysis for each new LMU, regardless of whether manure, wastewater, or sludge has been applied;
- (i) soil monitoring reports of all soil samples collected in accordance with the requirements of this permit;
- (j) groundwater monitoring reports (if applicable);
- (k) the actual crop(s) planted and yield(s) for each LMU;
- (l) the actual nitrogen and phosphorus content of manure, sludge or process wastewater that was land applied;
- (m) the results of data used in calculations and the results of calculations conducted in accordance with Attachment E;
- (n) the results of any soil testing for nitrogen and phosphorus conducted during the previous 12 months;
- (o) the amount of any supplemental fertilizer applied during the previous 12 months; and
- (p) any other information requested by the Executive Director.
- 8. The permittee shall furnish to the appropriate regional office, and the Enforcement Division (MC 224), soil testing analysis for third-party fields of all soil samples within sixty (60) days of the date the samples were taken in accordance with the requirements of this permit.

IX. Standard Permit Conditions

- A. The permittee has a duty to comply with all permit conditions. Failure to comply with any permit conditions is a violation of the permit and statutes under which it was issued and is ground for enforcement action, for permit amendment, revocation or suspension, or for denial of a permit renewal application or an application for a permit for another facility.
- B. The permittee must apply for an amendment or renewal before the expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. Authorization to continue such activity terminates upon the effective denial of said permit.
- C. It is not a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the permit conditions.

- D. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation which has a reasonable likelihood of adversely affecting human health or the environment.
- E. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) installed or used by the permittee to achieve compliance with the permit conditions. Proper operation and maintenance also includes adequate laboratory and process controls, and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the permit conditions.
- F. The permittee shall furnish any information, at the request of the Executive Director, which is necessary to determine whether cause exists for revoking, suspending, or terminating authorization under this permit. The requested information must be provided within a reasonable time frame and in no case later than thirty (30) days from the date of the request.
- G. The permittee shall give notice to the Executive Director before physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements.
- H. Authorization from the Commission is required before beginning any change in the permitted facility or activity that would result in noncompliance with other permit requirements.
- I. Inspection and entry shall be allowed under Texas Water Code, Chapters 26-28, Health and Safety Code, §§361.032-361.033 and §361.037, and 40 Code of Federal Regulations (CFR) §122.41(I). The statement in Texas Water Code, §26.014 that the Commission entry of a facility shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during inspection.
- J. Standard Monitoring Requirements
 - 1. Samples required by this permit shall be collected and measurements shall be taken at times and in a manner so as to be representative of the monitored discharge or activity. Samples shall be delivered to the laboratory immediately upon collection, in accordance with any applicable analytical method and required maximum holding time. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§319.11 319.12. Measurements, tests and calculations shall be accurately accomplished in a representative manner.
 - 2. Records of monitoring activities must include:
 - (a) the date, time, and place of sample or measurement;
 - (b) the identity of any individual who collected the sample or made the measurement;
 - (c) the chain-of-custody procedures used to maintain sample integrity from sample collection to laboratory delivery;
 - (d) the date and time of laboratory analysis;
 - (e) the identity of the individual and laboratory who performed the analysis;
 - (f) the technique or method of analysis; and
 - (g) the results of the analysis or measurement and quality assurance/quality control records.

- 3. The permittee shall ensure that properly trained and authorized personnel monitor and sample the soil or wastewater related to any permitted activity.
- K. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly shall be reported to the Executive Director as promptly as possible.
- L. A permit may be transferred only according to the provisions of 30 TAC §305.64 (relating to Transfer of Permits) and 30 TAC §305.97 (relating to Action on Application for Transfer).
- M. PPPs, reports, and other information requested or required by the Executive Director shall be signed in accordance with the requirements of 30 TAC §305.128 (relating to Signatories to Reports).
- N. A permit may be amended, suspended and re-issued, or revoked for cause. The filing of a request by the permittee for a permit amendment, suspension and re-issuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- O. A permit does not convey any property rights of any sort or any exclusive privilege.
- P. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than fourteen (14) days following each schedule date.
- Q. If the permittee becomes aware that he/she failed to submit any relevant facts in a permit application, or submitted incorrect information in an application, or in any report to the Executive Director, the permittee shall promptly submit such facts or information.
- R. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code, §§26.136, 26.212, and 26.213, for violations including but not limited to the following:
 - 1. negligently or knowingly violating Clean Water Act (CWA) §§301, 302, 306, 307, 308, 318, or 405 or any condition or limitation implementing any sections in a permit issued under CWA §402, or any requirement imposed in a pretreatment program approved under CWA §402(a)(3) or §402(b)(8);
 - 2. falsifying, tampering with, or knowingly rendering inaccurate any monitoring device or method required to be maintained under a permit; or
 - 3. knowingly making any false statement, representation, or certification in any record or other document submitted or required to be maintained under a permit, including monitoring reports or reports of compliance or noncompliance.
- S. The permittee shall comply with all applicable rules and regulations of the commission, including 30 TAC 321, Subchapter B.
- This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:
 - 1. Violation of any terms or conditions of this permit;
 - 2. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
 - 3. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

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

X. Special Provisions

A. RCS Volumes. The permittee shall maintain the wastewater volumes in each RCS in accordance with Table 6.

Table 6: Volume Allocations for RCSs (Acre-Feet)

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RCS Name	Design Rainfall Event Runoff	Process Generated Wastewater	Minimum Treatment Volume	Sludge Accumulation	Water Balance	Required Capacity Without Freeboard	Actual Capacity Without Freeboard
RCS #1-2-3	37.11	1.49	4.96	10.00	5.85	59.41	59.411
RCS #6	43.12	0.0	0.0	6.65	0.0	49.77	49.77
Surge Pond #1	0.0	0.0	0.0	1.85	25.46	27.31	27.31
Surge Pond #2	7.50	0.0	0.0	1.85	13.86	23.21	23.21

Former RCS #4 has been removed from the permit see Special Provision in Section X.S.

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

- C. The permittee shall submit the following record to the appropriate Regional Office and the Enforcement Division (MC 224) by March 31 of each year for the 12-month reporting period of January 1 to December 31 of the previous year.
 - 1. date of compost, manure, sludge and wastewater application to each LMU;
 - 2. location of the specific LMU and the volume applied during each application event;
 - 3. acreage of each individual crop on which compost, manure, sludge and wastewater is applied;
 - 4. basis for and the total amount of nitrogen and phosphorus applied per acre to each LMU, including sources of nutrients other than compost, manure, sludge and wastewater on a dry basis;
 - 5. weather conditions, such as temperature, precipitation, and cloud cover, during the land application and twenty-four (24) hours before and after the land application;
 - 6. annual nutrient analysis for at least one (1) representative sample of manure, sludge (if applicable), and wastewater for total nitrogen, total phosphorus, and total potassium; and
 - 7. any measurements of sludge accumulations as required in each RCS.
- D. Table 7 describes the buffers that the permittee is required to install and maintain according to the NRCS practice standards in the referenced code. The map in Attachment B includes the location and distance requirements for all buffers.

Table 7: Buffer Distances

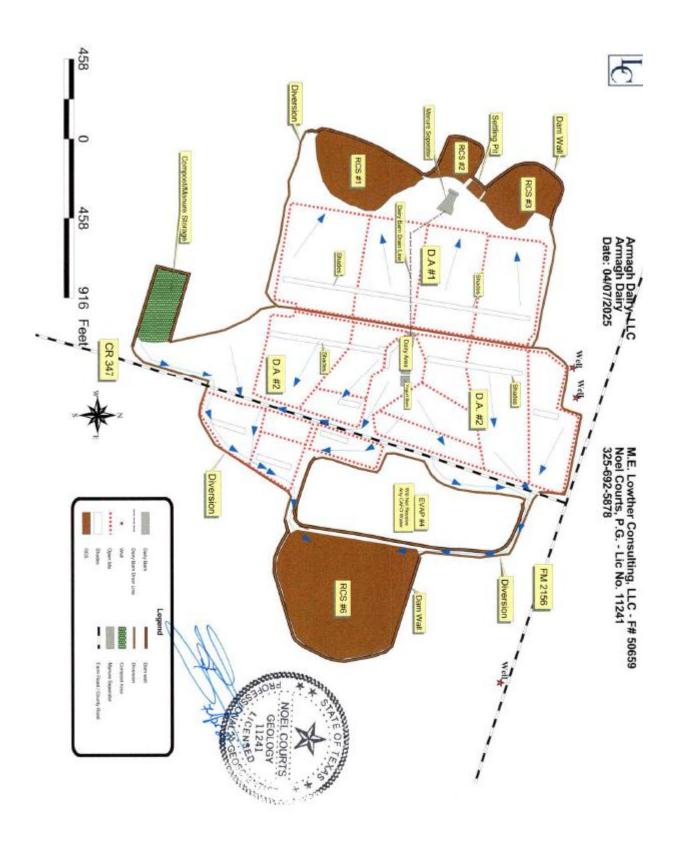
LMU Name	Vegetative Buffer Setback (feet)	Additional Buffer Setback NRCS Code 393 Filter Strip Flow Length (feet)			
LMU #1	Not Applicable				
LMU #2	100	40			
LMU #3	100	40			
LMU #4	100	40			
LMU #5	100	40			
LMU #6	Not Applicable				
LMU #7	100	40			
LMU #8	100	40			
LMU #9	100	40			
LMU #10	100	40			
LMU #11	100	40			
LMU #12	100	40			
LMU #13	100	40			

- E. The sludge volume in each RCS will be measured and recorded in the PPP as necessary, but at least annually.
- F. There will be no grazing of livestock on the LMUs for this CAFO unless the NMP reflects grazing and the grazing practices mentioned in the NRCS Conservation Practice Code 393, Filter Strip, are implemented to protect buffers.

- G. Settling Basin Solids.
 - 1. For the purpose of this permit, settling basin solids shall be defined as manure.
 - If settling basin solids are land applied, an annual sample must be collected and analyzed in accordance with Section VII.A.9(a), in addition to other manure and wastewater.
 - 3. Settling basin solids shall be cleaned out regularly to maintain the percent settling basin design efficiency.
 - 4. At a minimum, settling basins shall be cleaned out annually, unless the permittee furnishes certification by a licensed Texas P.E. that the settling basin continues to perform according to the design removal efficiency.
- H. All runoff from silage, commodity, and hay storage outside the RCS drainage area will be contained. Appropriate provisions for that containment will be stated in the PPP upon issuance of the permit. This permit does not authorize any discharge from the silage, commodity, or hay storage areas located outside the drainage area of the RCSs.
- I. Irrigation of wastewater from the LMU #2 center pivot sprinkler is prohibited over the buffered areas. The irrigation system must be capable of restricting flow to the required number of drop nozzles (and end gun if present) to protect the buffer. Cut-off points for center pivot in LMU #2 must be clearly identified on the surface of the LMU.
- J. Upon issuance of the permit, prior to land application of manure or wastewater, a current NMP must be in place and it shall thereafter be updated annually with the most recent soil, manure, and wastewater analyses. For LMUs that have a phosphorus level in the soil of more than 200 ppm, a NUP must be developed or updated in accordance with Section VII.A.8(c).
- K. During the annual site inspection, the permittee will inspect Well #1 and Well #2. Special attention should be given to ensure that the concrete slabs, well heads, and the best management practices listed in Table 3 are in place and functional. Integrity compromises, such as the concrete slab cracking, sanitary seal deterioration, cracks in the well casing, or well house deterioration will be repaired within 30 days of the discovery. Permittee shall ensure no runoff or wastes encroach upon the wells. Fertilizers and pesticides will not be stored on or in any structure that houses the water wellhead. Maintenance records for the wells shall be maintained onsite.
- L. Sludge must be analyzed for nutrient content prior to routing offsite for any land application. The analysis for each haul off shall be maintained in the PPP.
- M. The culverts located under the roadway in Drainage Area #2 and #3 should be inspected at least once a month to ensure wastewater can adequately drain to RCS #6.
- N. The permittee shall update records daily to identify wastewater pumped from one RCS to another. The record shall identify the RCS being pumped and the RCS receiving pumped wastewater. The permittee shall record the pond levels after the transfer has occurred as the daily pond level reading.
- O. A LMU map showing historical LMUs shall be maintained in the PPP.
- P. In addition to the weekly inspection in Section VII.A.10.(a)(3)(ii), the permittee shall inspect the pumps and pipelines used for pumping wastewater from all the RCSs. Any break in the pipelines or pumping equipment failure shall be repaired within 30 days of the discovery. Maintenance records for the pumps and pipelines shall be maintained onsite.
- Q. Yogurt/Cheese Production Barn
 - 1. This permit does not authorize the barn identified as "Yogurt Barn" in Attachment A SITE MAP-1, nor the disposal of wastes generated in the Yogurt Barn. Disposal of

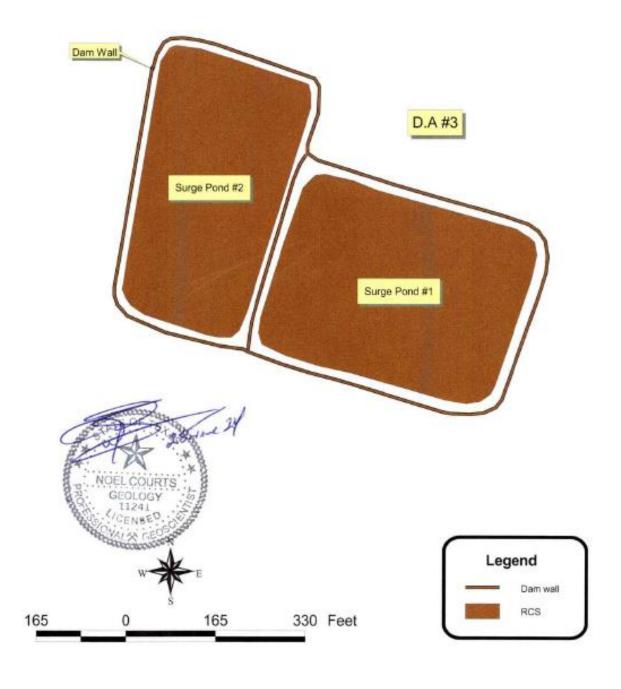
- wastes generated in the Yogurt Barn under this permit is prohibited. The disposal of wastes from the milking process is allowed.
- 2. Within 180 days of permit issuance, the permittee shall submit an application to the Industrial Permits Team of the Water Quality Division for a wastewater permit to authorize the waste produced from the Yogurt Barn.
- 3. Within 30 days of the Industrial permit issuance, the Permittee shall ensure waste produced from the Yogurt Barn is diverted away from the RCSs. The permittee shall coordinate with the TCEQ Stephenville office to develop an acceptable method of diverting the waste from the Yogurt Barn away from the RCSs.
- R. Former RCS #4 (identified on Attachment A Site Map 1) to the permit as EVAP #4) has been taken out of service at this Dairy facility and repurposed for the wastewater from the Yogurt/Cheese production.
 - 1. The permittee shall ensure that no CAFO wastewater or open lot runoff enters the RCS. All berms and any other runoff control structures or measures necessary to convey all contaminated runoff from the RCS must be constructed and certified by a licensed Texas Professional Engineer.
 - 2. Within 180 days of permit issuance, the Permittee shall obtain coverage under the Evaporation Pond General Permit, WQG10 for RCS #4.

ATTACHMENT A – SITE MAP – 1



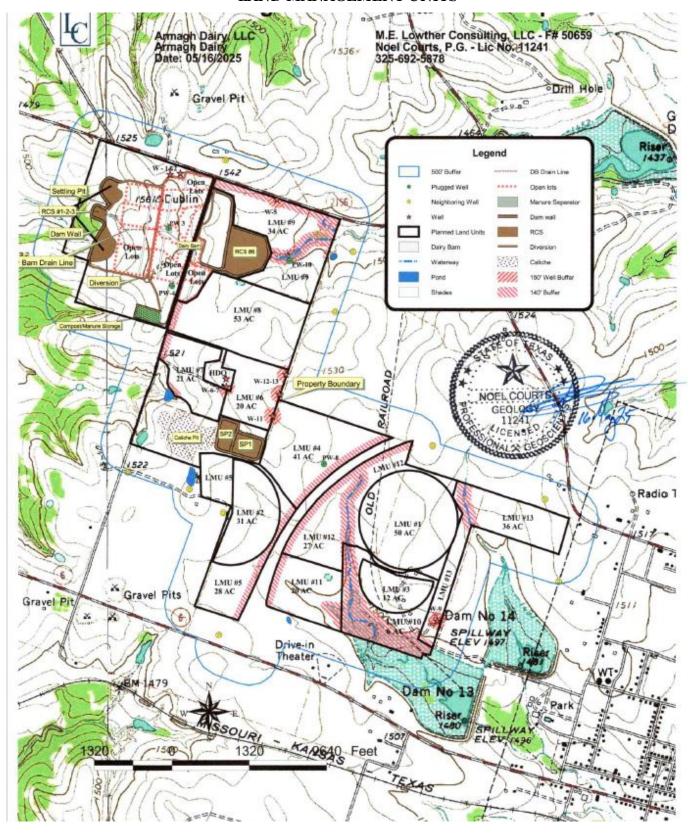
ATTACHMENT A – SITE MAP – 2

All surface water is diverted away from the Surge Ponds. The only water that enters the Surge Ponds is direct rainfall and irrigation water transferred to the Surge Ponds from D.A. #1 & D.A. #2.

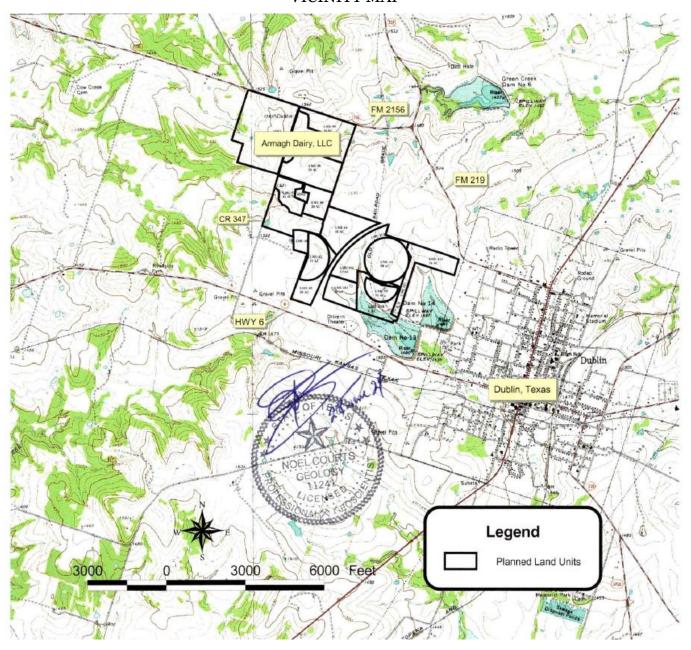


ATTACHMENT B

LAND MANAGEMENT UNITS

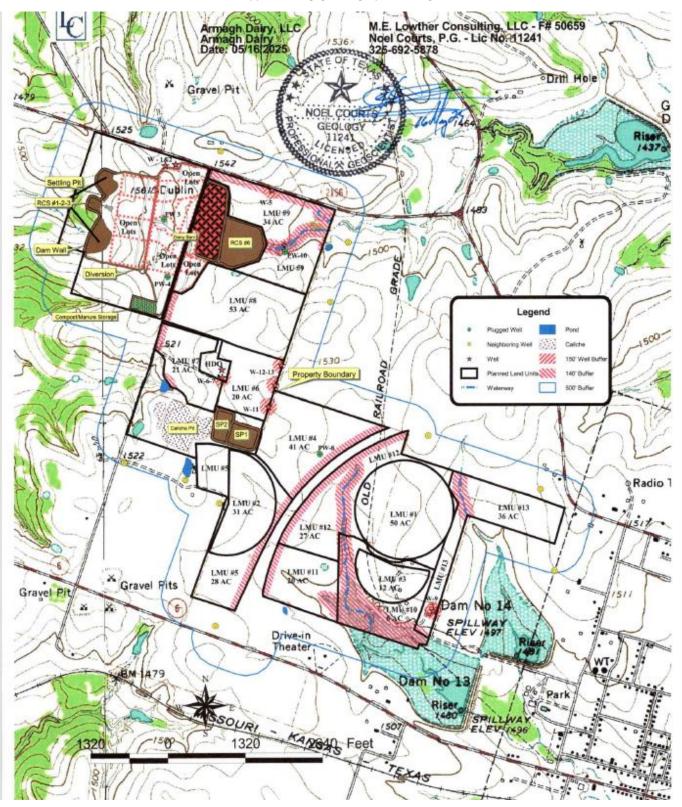


ATTACHMENT C VICINITY MAP



ATTACHMENT D

WELL LOCATION AREAS



ATTACHMENT E

METHODOLOGY FOR CALCULATING MAXIMUM APPLICATION RATES AND ANNUAL RECALCULATION OF APPLICATION RATES

1. Identify the Soil Test Phosphorus (P) Level (Extremely Low, Very Low- Low, Medium, High, Very High) on the soil test analysis.

Soil Test P Rating	Soil Test P Levels (ppm*)
Extremely Low	Less than 5
Very Low - Low	5 to less than 20
Medium	20 to less than 50
High	50 to less than 100
Very High	Greater than or equal to 100

*ppm is equivalent to mg/kg of solids

- 2. Update Table 1 to Attachment E:
 - (a) Populate the Sub Total column with the point value that corresponds to the Site Characteristic for each.
 - (b) Calculate the Total Index Points
 - (c) Select the P Runoff Potential from the total sum of the Index Points of the Site Characteristics using the Phosphorus Index Classification Table.
- 3. Determine which of the tables (Table 2A or Table 2B) of Table 2 to Attachment E on the following page is appropriate to use. Each table describes the criteria for its use.
- 4. Determine which application rate column is appropriate using the following criteria:
 - (a) Use the Maximum TMDL Annual P Rate if this LMU is located in a segment with an approved TMDL.
 - (b) Use Maximum Annual P Application if this LMU is <u>not</u> located in a segment with an approved TMDL and you wish to apply annually.
 - (c) Use Maximum Biennial Application Rate if this LMU is <u>not</u> located in a segment with an approved TMDL and you wish to apply biennially.
- 5. Determine the Maximum Application Rate using the table identified in Step 3, the column identified in Step 4, and the P Runoff Potential identified in Step 2.(c).
- 6. Using one of the approved crops and yield goals identified on Attachment F for this LMU, determine the maximum application rate (in lbs/ac) for that crop and yield goal and the Maximum Application Rate identified in Step 5 from the S-Crop Table.
 - (a) Example 1: If the Maximum Application Rate in Step 5 is "1.5 Times Annual Crop P Requirement", find the number identified on the S-Crop Table under the column "Crop P₂O₅ requirement" for your crop/yield goal, then multiply that number by 1.5 to determine your maximum application rate (in lbs/ac P₂O₅).
 - (b) Example 2: If the Maximum Application Rate in Step 5 is "0.5 Times Annual Crop P Removal", find the number identified on the S-Crop Table under the column "Crop P₂O₅ Removal Rate" for your crop/yield goal, then multiply that number by 0.5 to determine your maximum application rate (in lbs/ac P₂O₅).

ATTACHMENT E

TABLE 1: PHOSPHORUS INDEX WORKSHEET FOR EAST TEXAS FROM NRCS PRACTICE STANDARD 590

Client Name:			Field(s):		Date:	
Planner:			Location:		Crop:	
Impaired Watershed						
(Y or N):		% Slope:				
Site Characteristic		[Weighting Fa	actor Times the	Column Factor]		Sub
(Weighting Factor)	0	1	2	4	8	Total
Soil Test P Rating	N/A	Very Low – Lov	Moderate	High	Very High	
(1.00)	[0]	[1.0]	[2.0]	[4.0]	[8.0]	
Fertilizer Phosphorus (P ₂ O ₅) Application Rate	None Applied	1-40 lbs/ac P ₂ O ₅	41-90 lbs/ac P ₂ O ₅	91-150 lbs/ac P ₂ O ₅	>150 lbs/ac P ₂ O ₅	
(0.75)	[0]	[0.75]	[1.5]	[3.0]	[6.0]	
Organic Phosphorus (P ₂ O ₅) Application Rate	None Applied	1-40 lbs/ac P ₂ O ₅	41-90 lbs/ac P ₂ O ₅	91-150 lbs/ac P ₂ O ₅	>150 lbs/ac P ₂ O ₅	
(0.75)	[0]	[0.75]	[1.5]	[3.0]	[6.0]	
Phosphorus Fertilizer Application Method and Timing	None Applied	Placed deeper than 2 in. or broadcast and incorporated within 48 hours	applied 12/1-2/15	Surface applied 2/16-4/15 or 6/16- 11/30	Surface Applied 4/16-6/15	
(0.50)	[0]	[0.50]	[1.0]	[2.0]	[4.0]	
Organic Phosphorus source Application Method and Timing	None Applied	Placed deeper than 2 in. or broadcast and incorporated within 48 hours	applied 12/1-2/15	Surface applied 2/16-4/15 or 6/16- 11/30	Surface Applied 4/16-6/15	
(0.50)	[0]	[0.50]	[1.0]	[2.0]	[4.0]	
Proximity of nearest field edge to named stream or lake	> 2000 feet	1000 – 1999 fee	et 500 – 999 feet	100 – 499 feet	< 100 feet	
(1.25)	[0]	[1.25]	[2.5]	[5.0]	[10.0]	
Runoff Class (Runoff Class Table 3)	Negligible	Low	Moderate	High	Very High	
(1.00)	[0]	[1.0]	[2.0]	[4.0]	[8.0]	
Soil Erosion (all sources)	Very Low <1 t/ac	Low 1-3 t/ac	Medium 3-5 t/ac	High 5-10 t/ac	Very High >10 t/ac	
(1.50)	[0]	[1.5]	[3.0]	[6.0]	[12.0]	
			•	T	otal Index Points:	

ATTACHMENT E

TABLE 2: APPLICATION RATES FROM NRCS PRACTICE STANDARD 590

Commercial fertilizers must be applied in accordance with SWFTL* recommendations. Application of all organic soil amendments must not exceed the values in Table 2A or 2B.

<u>Table 2A</u>. A Nutrient Management Plan (NMP)¹ is required where any organic soil amendments are applied where Soil Test P Level is less than 200 ppm statewide or, less than 350 ppm in arid areas² with distance to a named stream greater than one mile.

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

Table 2B. A Nutrient Utilization Plan (NUP)¹ is required where Soil Test P Level is: equal to or greater than 200 ppm in nonarid areas², or equal to or greater than 350 ppm in arid areas² with distance to a named stream greater than one mile and erosion control is adequate to keep erosion at the soil loss tolerance (T) or less, or equal to or greater than 200 ppm in arid areas² with distance to a named stream less than one mile.

P – Index Rating	Maximum TMDL Annual P Application Rate	Maximum Annual P Application Rate	Maximum Biennial Application Rate
Very Low, Low	1.0 Times Annual Crop P Removal ⁴	Annual Crop N Removal	2.0 Times Crop 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 Crop N Removal
High	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 Crop N Removal
Very High	o.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 Crop N Removal

Footnotes Applicable to both Tables

¹NMP and NUP designations are consistent with 30 TAC §321.40.

²All counties must use the 200 ppm P level limit to determine whether to use Table 2A or Table 2B. However, in counties receiving less than 25 inches of annual rainfall, the 350 ppm P level limit applies if the field application area is greater than 1 mile from a named stream or lake. See map in current Texas Agronomy Technical Note 15, Phosphorus Assessment Tool for Texas for county rainfall designations.

³Not to exceed the annual nitrogen requirement rate.

⁴Not to exceed the annual nitrogen removal rate.

SWFTL* Texas A&M AgriLife Extension Soil, Water and Forage Testing Laboratory

ATTACHMENT F

SITE SPECIFIC INFORMATION FOR LAND MANAGEMENT UNITS FROM THE NUTRIENT MANAGEMENT PLAN

Table 1: Alternative Crops and Yield Goals

LMU Name	Acreage	Crops	Yield Goals	
		Coastal Hay / Coastal	2 Cut Hay / Grazing 1 AU / 1 Ac	
	379	Rye Grass / Rye Grass Hay	Moderate Grazing / 6000#	
		Small Grain	Light-Moderate Grazing	
Applicable to ALL		Oats / Oat Hay	Light-Heavy Grazing / 2-3 Tons	
LMUs		Wheat	Light-Heavy Grazing	
		Coastal Green Chop (30%DM)	9 – 11 Tons	
		Small Grain Green Chop (25%DM)	6 – 7 Tons	
		Coastal / Wheat Forage	2 – 4 Cut Hay / 2000 – 6000#	

ATTACHMENT F

SITE SPECIFIC INFORMATION FOR LAND MANAGEMENT UNITS (LMUs) FROM THE NUTRIENT MANAGEMENT PLAN

Table 2: Current Site-Specific Information from NMP

LMU Name	Acreage	Crop(s) and Yield Goal(s)	*Nitrogen Recommen dation (lbs/ac)(*1)	*Phosphorus as P ₂ O ₅ Recommend ation (lbs/ac)(*1)	Nitrogen Maximum Application Rates (lbs/ac)* (*1)	Phosphorus as P ₂ O ₅ Maximum Application Rates (lbs/ac)*
LMU #1	50	Coastal: 4 Cut Hay / Ryegrass: Moderate Graze	540	289	540	289
LMU #2	31	Coastal: 4 Cut Hay / Ryegrass: Moderate Graze	196	105	196	105
LMU #3	12	Coastal: 4 Cut Hay / Ryegrass: Moderate Graze	540	289	540	289
LMU #4	41	Coastal: 4 Cut Hay / Ryegrass: Moderate Graze	186	211	186	211
LMU #5	28	Coastal: 4 Cut Hay / Ryegrass: Moderate Graze	186	211	186	211
LMU #6	20	Coastal: 4 Cut Hay / Ryegrass: Moderate Graze	186	211	186	211
LMU #7	21	Coastal: 4 Cut Hay / Ryegrass: Moderate Graze	186	211	186	211
LMU #8	53	Coastal: 4 Cut Hay / Ryegrass: Moderate Graze	186	211	186	211
LMU #9	34	Coastal: 4 Cut Hay / Ryegrass: Moderate Graze	186	211	186	211

LMU Name	Acreage	Crop(s) and Yield Goal(s)	*Nitrogen Recommen dation (lbs/ac)(*1)	*Phosphorus as P ₂ O ₅ Recommend ation (lbs/ac)(*1)	Nitrogen Maximum Application Rates (lbs/ac)* (*1)	Phosphorus as P ₂ O ₅ Maximum Application Rates (lbs/ac)*
LMU #10	6	Coastal: 4 Cut Hay / Ryegrass: Moderate Graze	398	450	398	450
LMU #11	20	Coastal: 4 Cut Hay / Ryegrass: Moderate Graze	298	338	298	338
LMU #12	27	Coastal: 4 Cut Hay / Ryegrass: Moderate Graze	186	211	186	211
LMU #13	36	Coastal: 4 Cut Hay / Ryegrass: Moderate Graze	186	211	186	211

NOTE

^{*}Nutrients Applied When Application is At Maximum Rates from NMP 590-633 Plan V 5.0 with the Print Date 07/23/2025. Any future revision to the NMP will be based on the current version of the 590-633 CNMP Component (NMP/NUP) Worksheet. Maximum rates are based on wastewater and manure analyses dated 07/10/2024 and soil analysis report(s) dated 09/28/2023, 10/04/2023 and 11/20/2024 by the Soil, Water and Forage Testing Laboratory, AgriLife Extension, College Station, Texas. The Maximum Rates (lb/ac) for nitrogen (N) and phosphorus (P_2O_5) will be updated based on most recent annual analyses of soil and waste.

^(*1) Nutrient recommendations and maximum amount of nutrients derived from all sources have been established for both nitrogen and phosphorus based on the NMP submitted with the application. The permittee is required to recalculate these values annually in accordance with the requirements of this permit. These annual recalculations do not constitute a substantial change and therefore do not require an amendment of this permit.

Fact Sheet and Executive Director's Preliminary Decision

I. Description of Application

Applicant: Armagh Dairy, LLC Permit No.: WQ0004844000

Regulated Activity: Concentrated Animal Feeding Operation; Dairy Cattle

Permit Action: Major Amendment with Renewal Authorization: Air & Water Quality Authorization

II. Executive Director's Recommendation

The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The proposed permit shall be issued for a 5-year term in accordance with 30 TAC Chapter 305.

III. Reason for Proposed Project

The applicant has applied to the Texas Commission on Environmental Quality (TCEQ) for a major amendment with renewal of Texas Pollutant Discharge Elimination System Permit No. WQ0004844000 for an existing dairy cattle Concentrated Animal Feeding Operation (CAFO) to authorize the applicant to add other breed of cattle to the current Jersey cattle including Holstein and Guernsey; reduce the Land Management Unit (LMU) acreage of the following LMUs: LMU #4 from 42 to 41 acres, LMU #6 from 22 to 20 acres, and LMU #10 from 14 to 6 acres; and add Wells #12 and #13. The total land application area is decreasing from 390 to 379 acres. The design calculations for the retention control structures (RCSs) have been revised to remove RCS #4, which did not change the required capacities of the remaining RCSs. The authorized total headcount of 2,299 head, of which 999 are milking cows, and the list of alternative crops and yield goals will remain the same.

Former RCS #4 has been removed from the Dairy facility to be repurposed for the Yogurt/Cheese operation.

Facility Description and Location

Maximum Capacity: 2,299 total head, of which 999 head are milking

Land Management Units (LMUs) (Acres): LMU#1 - 50, LMU#2 - 31, LMU#3 - 12, LMU#4 - 41, LMU #5 - 28, LMU #6 - 20, LMU #7 - 21, LMU #8 - 53, LMU #9 - 34, LMU #10 - 6, LMU #11 - 20, LMU #12 - 27, LMU #13 - 36.

Location: The facility is located at 560 County Road 347, Dublin in Erath County, Texas. Latitude: 32.112777° N and Longitude: 98.373333° W.

Drainage Basin: The facility is located in the drainage area of the Leon River Below Proctor Lake in Segment 1221, Leon River Below Leon Reservoir in Segment 1223, and the North Bosque River in Segment 1226 of the Brazos River Basin.

The facility consists of 6 Retention Control Structures (RCSs) and 1 Settling Pit. The table below indicates the volume allocations for the RCS(s):

RCS #1-2-3 act as one single RCS and are in series with RCS #6 via pump. Surge Pond #1 and Surge Pond #2 act in series and are used as irrigation ponds.

Table 1: Volume Allocations for RCSs (Acre-Feet)

RCS Name	Design Rainfall Event Runoff	Process Generated Wastewater	Minimum Treatment Volume	Sludge	Water Balance	Required Capacity	Actual Capacity (if existing)
RCS #1- 2-3	37.11	1.49	4.96	10.00	5.85	59.41	59.411
RCS #6	43.12	0.0	0.0	6.65	0.0	49.77	49.770
SP #1	0.0	0.0	0.0	1.85	25.46	27.31	27.31
SP #2	7.50	0.0	0.0	1.85	13.86	23.21	23.21

- A. The volume allocations are determined using Natural Resource Conservation Service standards, American Society of Agricultural and Biological Engineers standards, and/or site-specific data submitted in the permit application.
- B. The Design Rainfall Event is the volume of runoff from the 25 year, 10 day storm event. The RCS is required to include adequate capacity to contain this amount of runoff as a margin of safety to protect against discharges during rainfall events that may exceed the average monthly values used to design the RCS, but do not constitute chronic or catastrophic rainfall. This volume allocation accommodates runoff from open lot surfaces, all areas between the open lots and the RCS, runoff from roofed areas that contribute to the RCS and direct rainfall on the surface of the RCS. Runoff curve numbers used to calculate the runoff volume from the open lot surfaces are reflective of the characteristics of open lot surfaces and range between 90 and 95. Runoff curve numbers used to compute the runoff from areas between the open lots and the RCS are reflective of the land use and condition of the areas between the open lots and RCS. A curve number of 100 is used for the RCS surface and all roofed areas.
- C. Process Generated Wastewater is the volume of wet manure and wastewater generated by the facility that is flushed or otherwise directed to the RCS. Wastewater includes all water used directly or indirectly by the facility that comes in contact with manure or other waste. The RCS must contain the process generated wastewater from a 21 day period or greater. RCS #1-2-3 is designed to contain 24 days of process generated wastewater for this permit.
- D. Treatment volume is required to minimize odors for facilities requesting air authorization under the Air Standard Permit in 30 TAC Section 321.43. Treatment volume is based on the amount of volatile solids produced and the volatile solids loading rate. Volatile solids are solid material in waste that can be decomposed through biological, physical, and chemical activity. The rate of solids decomposition is based on temperature; therefore it varies by geographic location. The volatile solids loading rate for this facility is 4.69 pounds per day of volatile solids per 1000 ft³ of treatment volume.
- E. Sludge accumulation volumes are required in the RCS that receives runoff from open lots, and flushwater from the milking parlor. The sludge accumulation volume for flushwater entering the RCS is calculated using the following equation: Adjusted Live Animal Weight (LAW) multiplied by a sludge accumulation rate of 0.25 cu-ft/lb of LAW, then multiplied by the design sludge accumulation period. The sludge accumulation volume allocated for runoff from open lots is estimated as 25% of the design storm volume from the open lots.

Fact Sheet and Executive Director's Preliminary Decision Armagh Dairy, LLC, TPDES Permit No. WQ0004844 000

- A minimum of one year of sludge storage is required in the RCS. Design sludge volumes in this permit reflect a 20 year sludge accumulation period.
- F. The RCS volume designated as Water Balance is the capacity needed in addition to the Process Generated Wastewater volume to provide adequate operating capacity so that the operating volume does not encroach into the design storm volume. The water balance is an analysis of the inflow into the RCS, all outflows from the RCS and the consumptive use requirements of the crops on the land areas being irrigated. The water balance is developed on a monthly basis. It estimates all inflows into the RCS including process generated wastewater and runoff from open lots, areas between open lots and the RCS, roofed areas and direct rainfall onto the RCS surface. Consumptive use potential for the areas to be irrigated is developed based on the potential evapotranspiration of the crops and the effective average monthly rainfall on the area to be irrigated. Runoff curve numbers used for the water balance are adjusted from one (1) day to 30 day curve numbers to more accurately reflect monthly values. Evaporation from the RCS surface is computed on a monthly basis. Monthly withdrawals from the RCS are developed based on the total inflow to the RCS minus evaporation from the RCS surface and limited by the monthly crop consumptive use potential.

IV. Summary of Changes from Existing Authorization

- A. Section IV. of the permit (on Page 1) was amended to show the change in owner address; the LMUs and the acreage; and the removal of retention control structure (RCS) #4.
- B. The technical packet was revised to show the revised RCS volume allocations. Section VI.C.1 shows the revised treatment capacity for RCS #1-2-3; and Table 6 in Section X.A shows the RCSs volume allocations, and the removal of RCS #4.
- C. Table 2 of the permit that relates to current liner and capacity certifications was revised to show the recertified capacity certification date for Surge Pond #1 and #2, and to remove RCS #4.
- D. Attachments A that relates to Site Map- 1, B that relates to LMU maps and D that relates to Well location were updated to reflect the changes to the site.
- E. Table 3 that relates to well status and BMPs, in Section VII.A.7 of the permit was revised to add Wells #12 and #13.
- F. Table 4 that relates to soil limitations and BMPs, in Section VII.A.7 of the permit was revised to add the Hico-Fairy soil series and remove the Duffau soil series.
- G. Table 7 that relates to buffer distances, in Section X.D of the permit was revised to show the buffer setbacks in LMU #2.
- H. Section X.I of the permit that relates to center pivot sprinklers was revised to remove LMU #1 because it is no longer applicable due to the reconfiguration of the LMU. The provision stated:
 - Irrigation of wastewater from the LMU #1 and #2 center pivot sprinkler is prohibited over the buffered areas. The irrigation system must be capable of restricting flow to the required number of drop nozzles (and end gun if present) to protect the buffer. Cut-off points for center pivot in LMU #1 and #2 must be clearly identified on the surface of the LMU.

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- I. Section X.M of the permit that relates to culverts was revised to remove RCS #4. The provision stated:
 - The culverts located under the roadway in Drainage Area #2 and #3 should be inspected at least once a month to ensure wastewater can adequately drain to RCS #4 and #6.
- J. The permit has been amended to remove Section X.N, which had to do with the RCSs design requirements, and the section has been renumbered from that point forward. The engineering design calculations submitted with this application are designed to contain the volume of runoff and direct precipitation from the 25- year / 10- day rainfall event, whereas the requirement in Section X.N was added to the permit when the RCSs were designed, and the SPAW Model was used to verify the adequacy of the RCSs. The provision stated:
- K. In accordance with 30 TAC 321.42(u), in the event that the engineering evaluation, as required by Section VIII.B.3 of this permit, identifies that an unauthorized direct discharge occurred from RCS #1, #2, #3, Surge Pond 1 or Surge Pond 2 or that the unauthorized discharge was caused by pumping from RCS #1, #2, #3, Surge Pond 1 or Surge Pond 2 to prevent an unauthorized direct discharge, the permittee shall submit to the TCEQ CAFO Program of the Land Application Team (MC 150) within 60 days of the engineering report, revised design calculations incorporating the capacity for the 25 year/10 day rainfall event for the RCS(s) that caused the unauthorized discharge. Within 90 days of design approval from the TCEQ CAFO Program of the Land Application Team, the permittee shall modify the RCS(s) that caused the unauthorized discharge to meet the capacity for the 25 year/10 day rainfall event. Upon written request to the TCEQ Regional Office, the Executive Director may grant an extension to the 90 day requirement.
- L. Former Section X.R that relates to the average weight of the cattle was removed to allow the Permittee to confine all breeds of dairy cattle. The provision stated:
 - "The average liveweight of a mature Jersey cow is 975 pounds. However, the waste calculations for the facility are based on an average weight of 1,000 pounds. The permittee shall obtain a major amendment before changing the breed of any confined cattle."
- M. Former Section X.S that related to the Yogurt/Cheese production barn is renamed Section X.Q.
- N. A new Section X.R has been added to the permit to address the removal of RCS #4. The requirements are as follows:
 - Former RCS #4 (identified on Attachment A Site Map 1 to the permit as EVAP #4) has been taken out of service at this Dairy facility, and repurposed for the wastewater from the Yogurt/Cheese production.
 - 1. The permittee shall ensure that no CAFO wastewater or open lot runoff enters the RCS. All berms and any other runoff control structures or measures necessary to convey all contaminated runoff from the RCS must be constructed and certified by a licensed Texas Professional Engineer.
 - 2. Within 180 days of permit issuance, the Permittee shall obtain coverage under the Evaporation Pond General Permit, WQG10 for RCS #4.

V. Proposed Permit Conditions and Monitoring Requirements

A. Effluent Limitations

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

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

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

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

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

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

The general and site-specific provisions which are expected to result in compliance with water quality criteria and protection of attainable water quality are discussed in the

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following sections of this fact sheet: RCS Design and Operational Requirements; Requirements for Beneficial Use of Manure, Sludge, and Wastewater; Additional Water Quality Requirements; and Monitoring and Reporting Requirements.

B. RCS Design and Operational Requirements

The draft permit includes the following requirements related to proper RCS design, construction, operation and maintenance:

- 1. The RCS(s) must be designed and constructed to meet or exceed the margin of safety, equivalent to the volume of runoff and direct precipitation from the 25 year/10 day rainfall event. The design rainfall event, at which time the CAFO is authorized to discharge, is 11.9 inches. The application includes design calculations and certification by a Professional Engineer, which determine the design criteria for the RCS(s).
- 2. A RCS management plan is required to be implemented. This plan must establish expected end of the month water storage volumes for each RCS. These maximum levels are based on the design assumptions used to determine the required size of the RCS. This plan assures the permittee will maintain wastewater volumes within the designed operating capacity of the structures, except during chronic or catastrophic rainfall events. The permittee must document and provide an explanation for all occasions where the water level exceeds the expected end of the month storage volumes. By maintaining the wastewater level at or below the expected monthly volume, the RCS will be less likely to encroach into the volume reserved for the design rainfall event and/or discharge during smaller rainfall events.
- 3. The pond marker must have one-foot increments. This requirement identifies the level of wastewater storage to assist the permittee in the implementation of the RCS management plan. It also acts as an enforcement tool for TCEQ to determine compliance with the RCS management plan.
- 4. The wastewater level in the RCS(s) must be recorded daily. This requirement will assist the permittee in the implementation of the RCS management plan and will provide a visual indication of compliance.
- 5. The amount of sludge in the RCS(s) must be maintained at or below the designed sludge volume. Proper sludge management will reduce overflows associated with insufficient wastewater storage capacity. This permit requires that sludge accumulations in the RCS(s) be measured at least annually.
- 6. The RCS(s) must be adequately lined and certified by a Texas Professional Engineer; alternatively, certification must document that in situ material meets the requirements of constructed and installed liners. Groundwater has the potential to resurface as surface water. Therefore, preventing impacts to groundwater also provides protection to surface water. A liner certification, certified by a Professional Engineer, for the existing RCS(s) was submitted with the application.

Table 2: Existing RCS Liner Certifications

RCS Name	Liner Certification Date
RCS #1	November 10, 1989

RCS #2	November 10, 1989
RCS #3	November 10, 1989
RCS #6	October 09, 1989
Surge Pond #1	August 22, 2005
Surge Pond #2	March 11, 2011
Settling Pit	November 20, 2008

- 7. The RCS(s) must maintain two vertical feet of material equivalent to construction materials between the top of the embankment and the structure's spillway to protect from overtopping the structure. RCS(s) without spillways must have a minimum of two vertical feet between the top of the embankment and the required storage capacity.
- 8. The entry of uncontaminated stormwater runoff into RCS(s) must be minimized. The site includes diversion structures to direct contaminated runoff into the RCS(s) and to prevent uncontaminated stormwater runoff from entering the RCS(s).

C. Requirements for Beneficial Use of Manure, Sludge, and Wastewater

Nutrient pollutants of concern have narrative criteria and are discharged in CAFO wastewater. Nutrient pollutants have been addressed through imposition of BMPs. No water quality impacts are expected to occur from land application based upon properly prepared and implemented nutrient management practices. The proposed permit contains requirements related to the collection, handling, storage and beneficial use of manure, wastewater, and sludge. These requirements were established based on TCEQ rules, EPA guidance, NRCS Field Operations Technical Guidance and the Animal Waste Management Field Handbook, recommendations from the TCEQ's Water Quality Assessment Team, and best professional judgment.

The elements of a NMP as listed in 40 CFR §122.42(e)(1) have been incorporated into this permit. This permit requires a NMP developed by a certified nutrient management specialist, based on United States Department of Agriculture/Natural Resource Conservation Service (NRCS) Practice Standard 590 and each of the required elements to be implemented upon issuance of this permit. In relation to these items, the proposed permit meets federal requirements.

1. For LMUs with a soil phosphorus concentration of less than 200 ppm in Zone 1 depth (0-6 inches if incorporated, 0-2 or 2-6 inch if not incorporated), land application of commercial fertilizer, compost, manure, sludge and wastewater must be in accordance with a certified NMP. This plan is based on the NRCS Practice Standard Code 590. This plan involves a site-specific evaluation of the LMU to include soils, crops, nutrient need and includes the phosphorus index tool. The phosphorus index is a site-specific evaluation of the risk potential for phosphorus movement into watercourses. The risk potential is determined by site characteristics such as soil phosphorus level, proposed phosphorus application rate, application method and timing, proximity of the nearest field edge to a named stream or lake, runoff class, and soil erosion potential. The application rates are adjusted according to the risk potential. The higher the risk potential, the lower the application rate;

- thus there is minimal potential to have excess nutrients available to leave the site and affect water quality.
- 2. For LMUs with a soil phosphorus concentration of 200-500 ppm in Zone 1 depth (0-6 inches if incorporated, 0-2 or 2-6 inch if not incorporated), land application of commercial fertilizer, compost, manure, sludge and wastewater must be in accordance with a nutrient utilization plan (NUP). The NUP is a revised NMP based on crop removal. A crop removal application rate is the amount of nutrients contained in and removed by the proposed crop. At the discretion of the certified nutrient management specialist, the NUP may also include a phosphorus reduction component. This NUP must be submitted to the TCEQ for review and approval.
- 3. For LMUs with a soil phosphorus concentration of greater than 500 ppm in Zone 1 depth (0-6 inches if incorporated, 0-2 or 2-6 inch if not incorporated), land application of commercial fertilizer, compost, manure, sludge and wastewater must be in accordance with a NUP based on crop removal which also includes a phosphorus reduction component. A phosphorus reduction component is a management practice, incorporated into the NUP, which is designed to further reduce the soil phosphorus concentration by means such as phosphorus mining, moldboard plowing, or other practices utilized by the permittee. This revised NUP must also be submitted to the TCEQ for review and approval. Permittees required to operate under a NUP with a phosphorus reduction component must show a reduction in the soil phosphorus concentration within twelve (12) months or may be subject to enforcement actions.
- 4. Table 3 below identifies the maximum application rate, as shown in the NMP submitted in the permit application. NMPs are routinely updated and the values shown below are subject to change.

Table 3: LMU Maximum Application Rates and Soil Phosphorus Levels

LMU Name	Soil Test P (ppm)	Max Annual P ₂ O ₅ (lbs/ac)
LMU #1	160	289
LMU #2	227	105
LMU #3	53	289
LMU #4	384	211
LMU #5	384	211
LMU #6	444	211
LMU #7	231	211
LMU #8	400	211
LMU #9	218	211
LMU #10	53	450
LMU #11	156	338
LMU #12	265	211

LMU Name	Soil Test P (ppm)	Max Annual P ₂ O ₅ (lbs/ac)
LMU #13	211	211

- 5. All generated manure, sludge or wastewater in excess of the amount allowed to be land applied by the NMP or NUP must be delivered to a composting facility authorized by the Executive Director, delivered to a permitted landfill, beneficially used by land application on land located outside of the major sole source impairment zone, or provided to operators of third-party fields for beneficial use subject to specified land application requirements and testing. By requiring specific outlets for excess manure, sludge and wastewater, the permit limits unregulated use of manure, sludge and wastewater within the watershed.
- 6. The permittee must continue to operate under a Comprehensive NMP (CNMP) certified by the Texas State Soil and Water Conservation Board (TSSWCB). The CNMP must be developed by a qualified individual(s) in accordance with TSSWCB regulations. The CNMP is a whole farm plan that addresses nutrient management from the origin in the feed rations to final disposition. The CNMP considers all nutrient inputs, onsite use and treatment, outputs, and losses. Inputs include animal feed, purchased animals, and commercial fertilizer. Outputs include animals sold, harvested crops removed from the facility, and manure removed from the facility. Losses include volatilization, stormwater runoff, and leaching.
- 7. The permittee must implement additional conservation practices on LMUs adjacent to water in the state. These conservation practices include a 100-foot vegetative buffer, filter strips, vegetative barrier, and/or contour buffer strips. Site specific conditions and NRCS practice standards specify which conservation practices, in addition to the required 100-foot vegetative buffer, must be implemented. The conservation practices reduce erosion, suspended solids and nutrients in runoff from LMUs. This will improve the quality of stormwater runoff prior to entering water in the state.
- 8. In Table 4 below, the Additional Buffer Setback distance was determined by using the NRCS Conservation Practice Code 393, Filter Strip. The practice code uses a combination of hydrologic soil groups and field slope percentages to calculate an appropriate filter strip length.

Table 4: Buffer Distances for Each LMU

Table 4. Bullet Distances for Each LMC		
LMU Name	Vegetative Buffer Setback (feet)	Additional Buffer Setback NRCS Code 393 Filter Strip flow length (feet)
LMU #1	Not Applicable	
LMU #2	100	40
LMU #3	100	40
LMU #4	100	40
LMU #5	100	40
LMU #6	100	50
LMU #7	100	50

LMU Name	Vegetative Buffer Setback (feet)	Additional Buffer Setback NRCS Code 393 Filter Strip flow length (feet)
LMU #8	100	40
LMU #9	100	50
LMU #10	100	40
LMU #11	100	40
LMU #12	100	40
LMU #13	100	50

- 9. Land application is prohibited between the hours of 12 a.m. and 4 a.m. This provision reduces the potential of irrigation related discharges associated with equipment malfunctions.
- 10. Discharge of wastewater from irrigation is prohibited, except a discharge resulting from irrigation events associated with imminent overflow conditions. Precipitation-related runoff from LMUs is allowed by the permit, when land application practices are consistent with a NMP or NUP.
- 11. Terms of the NMP and Changes to the Terms of the NMP

The permit addresses the terms of the NMP and changes to the terms of the NMP to clarify substantial and non-substantial changes.

- (a) Attachment E of the draft permit describes the methodology for calculating maximum application rates and annual recalculation of application rates and Attachment F of the draft permit shows the list of the proposed alternative crops, their yield goals, and the N and P requirements and removal rates for each crop and yield goal.
- (b) To the extent that the alternative crops were identified in the application, annual recalculations do not constitute a substantial change to the terms of the NMP, and therefore will not require a permit amendment. The maximum amounts of N and P from all sources of nutrients and the amounts of manure and process wastewater to be applied on alternative crops will be determined in accordance with the methodology described in Attachment E of the draft permit when such crops are being used.
- (c) Nutrient recommendations and maximum amount of nutrients derived from all sources have been established for both nitrogen (N) and phosphorus (P) based on the NMP that was submitted with the application. The permittee is required to recalculate these values annually based on the most recent analyses of wastewater, manure, and soil.
- (d) Section VII.A.8(a)(2) of the permit lists changes to the terms of the NMP that will require a major amendment to the permit. Changes that would result in a major amendment are:
 - Increase in animal headcount;
 - Increase in LMU acreage or a change in LMU location; or

- Change in crop and yield goal (not listed in Attachment F of the proposed permit).
- (e) Any changes (substantial or non-substantial) to the NMP, other than the annual recalculation of application rates outlined in Attachment E, must be submitted to the ED for review. If the ED determines that the changes to the NMP are non-substantial, the revised NMP will be made publicly available and included in the permit record. If the ED determines that the changes to the NMP are substantial, the information provided by the permittee will be subject to the major amendment process.

12. Third-Party Fields

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

VI. Additional Water Quality Requirements

The approved recharge feature certification submitted in the permit application must be updated and maintained in the onsite PPP. The recharge feature certification identifies any natural or artificial features on the CAFO site, either on or beneath the ground surface, which could provide or create significant pathways for wastewater or manure to enter the underlying aquifer, and describes measures to prevent adverse impacts to groundwater. Groundwater has the potential to resurface as surface water. Therefore, preventing impacts to groundwater also provides protection to surface water.

Table 5 below shows potential soil limitations identified in the recharge feature evaluation and the proposed management practices to address those limitations.

Table 5: Soil Limitations

Soil Series and Map ID	Potential Limitations	Best Management Practices (BMPs)
BdC: Bolar Denton; Pd: Purves-Dugout	Flooding	Permanent vegetation; High crop
HfD2: Hico-Fairy	High infiltration rate	residue; Land application at
PcB & PcC: Purves	Shallow; Slow permeability	agronomic rate
DeB: Denton; HoB: Slidell	Very slow permeability	Permanent vegetation; Land application at agronomic rate

Table 6 below lists all wells on the facility, their status, and what BMP will be implemented to protect groundwater. A Well Buffer Exception request for Well #1 and #2 was submitted to and approved by the TCEQ Water Quality Assessment Team.

Table 6: Water Well Protection

Well Number	Status	BMPs
1	Producing	Concrete surface slab sealed to the well casing
2	Producing	Concrete surface slab sealed to the well casing
PW3	Non-Producing	Plugged
CW4	Non-Producing	Plugged
5	Producing	Maintain 150 ft buffer
6	Producing	Maintain 150 ft buffer
7	Producing	Maintain 150 ft buffer
PW8	Non-Producing	Plugged
9	Producing	Maintain 150 ft buffer
PW10	Non-Producing	Plugged
11	Producing	Maintain 150 ft buffer
12	Producing	Maintain 150 ft buffer
13	Producing	Maintain 150 ft buffer

VII. Monitoring and Reporting Requirements

A. The permittee is required to report all discharges to TCEQ. Discharges resulting from a chronic or catastrophic rainfall event or catastrophic conditions must be reported orally within one hour of the discovery of the discharge and in writing within fourteen (14) working days. For any discharges, grab samples must be collected and analyzed for Biochemical Oxygen Demand, *Escherichia coli*, Total Dissolved Solids, Total Suspended Solids, Nitrate, Total Phosphorus, Ammonia Nitrogen and pesticides (if suspected).

- B. The permittee must provide a report to the TCEQ to substantiate a chronic rainfall discharge. After review of the report, if required by the Executive Director, the permittee must have an engineering evaluation by a licensed Texas Professional Engineer developed and submitted to the Executive Director. The report and engineering evaluation may be used to verify that the facility was maintained and operated according to the permit conditions. Information reviewed may include rainfall records at the CAFO, RCS wastewater levels preceding the discharge, irrigation records, and the current sludge volume. This requirement allows for closer scrutiny by TCEQ for discharges resulting from chronic conditions and provides documentation for enforcement of unauthorized discharges.
- C. Soil samples must be taken annually from LMUs and analyzed for Nitrate, Phosphorus, Potassium, Sodium, Magnesium, Calcium, Soluble salts/electrical conductivity, and pH. The results are used in the NMP to determine land application rates. Annual soil samples must be collected by one of the following persons:
 - the NRCS; a certified nutrient management specialist;
 - the Texas State Soil and Water Conservation Board;
 - the Texas AgriLife Extension; or
 - an agronomist or soil scientist on full-time staff at an accredited university located in the State of Texas.

The TCEQ or its designee shall have soil samples collected annually for each current and historical LMUs and the TCEQ Regional Office must be notified ten (10) days prior to annual soil sample collection activities on third-party fields. The permittee is required to submit soil analyses for third-party fields to TCEQ.

- D. The permittee is required to annually collect and analyze at least one (1) representative sample of wastewater, sludge (if applicable), or manure for total nitrogen, total phosphorus, and total potassium. The results are used in the NMP to determine land application rates.
- E. Some of the land application records maintained by the permittee must be submitted to the TCEQ annually. These records include: date of compost, manure, sludge and wastewater application to each LMU; location of the specific LMU and the volume applied during each application event; acreage of each individual crop on which compost, manure, sludge and wastewater is applied; basis for and the total amount of nitrogen and phosphorus applied per acre to each LMU, including sources of nutrients and amount of nutrients on a dry weight basis other than compost, manure, sludge and wastewater and; weather conditions, such as temperature, precipitation, and cloud cover, during the land application and twenty-four (24) hours before and after the land application.
- F. Other recordkeeping requirements include: daily records of RCS wastewater levels and measurable rainfall; weekly records of manure, wastewater, and sludge removed from the facility, inspections of control facilities and land application equipment; and monthly records of compost, manure, sludge and wastewater land applied.

VIII. 303(D) Listing and Total Maximum Daily Load (TMDL)

The facility for this permit action is located within the watersheds of the Leon River Below Proctor Lake in segment 1221, the Leon River Below Leon Reservoir in segment 1223, and

the North Bosque River in Segment 1226 of the Brazos River Basin. The designated uses and dissolved oxygen criterion as stated in Appendix A of the Texas Surface Water Quality Standards (30 TAC §307.10) for Segment Nos. 1221, 1223 and 1226 are primary contact recreation, public water supply, high aquatic life use, and 5.0 mg/L dissolved oxygen.

The Leon River Below Proctor Lake (Segment 1221) is currently listed on the State's inventory of impaired and threatened waters (the 2024 Clean Water Act Section 303(d) list) for bacteria. Resley Creek (Segment 1221A), an unclassified water body, is currently listed on the 2024 Clean Water Act Section 303(d) list for depressed dissolved oxygen and bacteria. The Leon River Below Leon Reservoir (Segment 1223) is currently listed for depressed dissolved oxygen and bacteria. Green Creek (Segment 1226B) is currently listed for depressed dissolved oxygen. The North Bosque River (Segments 1226 and 1255) was included in the 1998 Texas Clean Water Act 303(d) List and deemed impaired under narrative water quality standards related to nutrients and aquatic plant growth.

Segment Nos. 1226 and 1255 are included in the Agency's document *Two Total Maximum Daily Loads for Phosphorus in the North Bosque River*, adopted by the Commission on February 9, 2001 and approved by EPA on December 13, 2001. *An Implementation Plan for Soluble Reactive Phosphorus in the North Bosque River Watershed* (I-Plan) was approved by the Commission on December 13, 2002 and approved by the Texas State Soil and Water Conservation Board on January 16, 2003. Similarly, TCEQ expects that management measures for control of phosphorus loading will also have a direct and indirect effects on dissolved oxygen by reducing the load of oxygen demanding materials.

According to the TMDL I-Plan, management measures for control of phosphorus loading will also have some corollary effect on reducing bacteria loading, since the nonpoint source nutrient and bacteria loads largely originate from the same sites and materials and are transported via the same processes and pathways.

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

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

Primary management strategies for dairies, both voluntary and regulatory, were identified in the I-Plan which included: phosphorus-based application rates in LMUs, voluntarily measures to reduce the amount of phosphorus in dairy cow diets, voluntarily removing 50% of dairy-generated manure from the watershed, more stringent RCS design requirements to reduce the potential for overflows from RCSs, evaluation of chronic rainfall and incidences of RCS overflows, additional tailwater requirements, additional protective measures to prevent runoff caused by excessive irrigation, CNMPs, and educational requirements for dairy operators and employees.

The proposed permit includes the following requirements to address the recommendations in the I-Plan:

- RCS(s) designed and constructed for 25 year, 10 day rainfall event
- RCS management plan
- pond marker with one foot increments
- daily recordkeeping of wastewater levels
- chronic rainfall discharge notification, including records that substantiate that the overflow was a result of cumulative rainfall that exceeded the design rainfall event without the opportunity for dewatering
- NMP and NUP based on phosphorus risk index
- CNMP
- specific outlets for excess manure, sludge and wastewater
- additional record-keeping for exported manure, sludge and wastewater to track each permittee's contribution toward the 50% voluntary removal goal in the Bosque River Total Maximum Daily Load (TMDL)
- prohibition of discharges from LMUs, except as related to imminent overflow
- minimize ponding and puddling of wastewater and prevent tailwater discharges
- additional conservation practices between land application areas and water in the state
- prohibition of land application between 12 a.m. and 4 a.m.
- automatic shutdown or alarm system may be required if unauthorized discharge occurs from irrigation system
- employee and operator required training related to land application of manure, sludge, and wastewater, proper operation and maintenance of the facility, good housekeeping, material management practices, recordkeeping requirements, and spill response and clean up

The voluntary phosphorus diet reductions may be implemented through consultations between a nutritionist and the permittee. Any such dietary phosphorus reductions will result in reduced phosphorus concentrations in manure. These strategies are facets of CNMPs.

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

IX. Threatened or Endangered Species

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

X. Procedures for Final Decision

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant instructing the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the applicant to place a copy of the application in a public place for review and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application, and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

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

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

After the public comment deadline, the Executive Director prepares a response to all timely, relevant and material, or significant public comments significant on the application

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

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

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

For additional information about this application, contact Kayla Robichaux at (512) 239-4742.

XI. Administrative Record

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

- TCEQ Permit No. WQ0004844000 issued October 6, 2022.
- The application received on September 11, 2024 and subsequent revisions.
- Interoffice Memorandum for groundwater review from the Water Quality Assessment Team, Water Quality Assessment Section, Water Quality Division January 15, 2025.
- Interoffice Memorandum for NMP review from the Water Quality Assessment Team, Water Quality Assessment Section, Water Quality Division, dated August 1, 2025.
- Interoffice Memorandum from the Standards Implementation Team, Water Quality Assessment Section, Water Quality Division, dated December 20, 2024.
- Bosque River TMDL Implementation Plan.
- Federal Clean Water Act Section 402; Section 382.051 of the Texas Clean Air Act; Texas Water Code §26.027; 30 TAC §39, §305, §321 Subchapter B; Commission Policies; and EPA Guidelines.
- Texas 2024 Clean Water Act Section 303(d) List, Texas Commission on Environmental Quality, June 26, 2024; approved by EPA on November 13, 2024.
- NRCS Animal Waste Management Field Handbook and Field Office Technical Guidance for Texas.
- NRCS, ASABE and ASTM Standards.

- John Borrelli, Clifford B. Fedler & James M. Gregory, February 1, 1998. Mean Crop Consumptive Use and Free-Water Evaporation for Texas.
- U.S. Department of Agriculture, Natural Resources Conservation Service, 25-Year, 10 Day precipitation (inches), Arkansas, Louisiana, New Mexico, Oklahoma and Texas. USDA, Technical Paper No 49, Weather Bureau.