Administrative Package Cover Page

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. Application materials

Portada de Paquete Administrativo

Este archivo contiene los siguientes documentos:

1. Resumen en lenguaje sencillo (PLS, por sus siglas en inglés) de la actividad propuesta
   - Inglés
   - Idioma alternativo (español)
2. Primer aviso (NORI, por sus siglas en inglés)
   - Inglés
   - Idioma alternativo (español)
3. Solicitud original

Individual Industrial Wastewater Application

The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 30 Texas Administrative Code Chapter 39. The information provided in this summary may change during the technical review of the application and are not federal enforceable representations of the permit application.

Vanden Berge Farms located at 2345 CR 177 in Stephenville, Texas operates in a symbiotic relationship with Schreiber Foods, Inc., focusing on the environmental management of by-products from dairy food manufacturing. The farm's activities involve the storage and land application of treated effluent from Schreiber Foods, which specializes in cheese production.

At Schreiber Foods, the wastewater undergoes a comprehensive treatment process before it is sent to Vanden Berge Farms. Initially, the process water is collected and passed through monitoring stations. Here, a bar screen is employed for the removal of solids, followed by a dissolved air flotation tank which further eliminates solids. The domestic wastewater is separately treated using a chlorination system to disinfect it before it merges with the process wastewater at a lift station. This combined effluent is then directed to a sophisticated storage/treatment system. It consists of an aeration lagoon with a capacity of 3 million gallons and equipped with a 200 horsepower aeration pump. Additionally, there are two more aeration lagoons, each with the same storage capacity and 60 horsepower of aeration equipment, and a large 13.9 million gallon storage lagoon. After treatment, the effluent is stored and then pumped to Vanden Berge Farms. It is crucial to note that Vanden Berge Farms does not treat this wastewater; they only store and apply the already treated wastewater from Schreiber Foods to their land application fields that consist of 223 acres of coastal bermudagrass and sorghum.

Individual Industrial Wastewater Application

The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 30 Texas Administrative Code Chapter 39. The information provided in this summary may change during the technical review of the application and are not federal enforceable representations of the permit application.

Vanden Berge Farms, ubicada en 2345 CR 177 en Stephenville, Texas, opera en una relación simbiótica con Schreiber Foods, Inc., enfocándose en la gestión ambiental de subproductos de la fabricación de alimentos lácteos. Las actividades de la granja implican el almacenamiento y aplicación al suelo de efluentes tratados de Schreiber Foods, que se especializa en la producción de queso.

En Schreiber Foods, las aguas residuales se someten a un proceso de tratamiento integral antes de enviarlas a Vanden Berge Farms. Inicialmente, el agua del proceso se recolecta y pasa a través de estaciones de monitoreo. Aquí, se emplea una criba de barras para la eliminación de sólidos, seguida de un tanque de flotación de aire disuelto que elimina aún más los sólidos. Las aguas residuales domésticas se tratan por separado mediante un sistema de cloración para desinfectarlas antes de fusionarse con las aguas residuales del proceso en una estación de bombeo. Este efluente combinado luego se dirige a un sofisticado sistema de almacenamiento/tratamiento. Consiste en una laguna de aireación con capacidad de 3 millones de galones y equipada con una bomba de aireación de 200 caballos de fuerza. Además, hay dos lagunas de aireación más, cada una con la misma capacidad de almacenamiento y 60 caballos de fuerza de equipo de aireación, y una gran laguna de almacenamiento de 13.9 millones de galones. Después del tratamiento, el efluente se almacena y luego se bombea a Vanden Berge Farms. Es fundamental tener en cuenta que Vanden Berge Farms no trata estas aguas residuales; solo almacenan y aplican las aguas residuales ya tratadas de Schreiber Foods a sus campos de aplicación terrestre que consisten en 223 acres de bermuda y sorgo costeros.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

PROPOSED PERMIT NO. WQ0005478000

APPLICATION. Jack Vanden Berge, Ellen Vanden Berge, Jacob Vanden Berge, and Kayla Vanden Berge, 404 Morgan Mill Road, Stephenville, Texas 76401, which own a disposal site for the storage and land application of treated effluent from the dairy food manufacturing facility authorized under existing Texas Land Application Permit No. WQ0003074000, have applied to the Texas Commission on Environmental Quality (TCEQ) for proposed Texas Land Application Permit (TLAP) No. WQ0005478000 to authorize the disposal of treated wastewater at a volume not to exceed a daily average flow of 192,000 gallons per day via surface irrigation of 223 acres. The disposal area will be located at 2345 County Road 177, near the city of Stephenville, in Erath County, Texas 76401. TCEQ received this application on November 25, 2024. The permit application will be available for viewing and copying at Erath County Courthouse - Erath County Extension Office, Room 206, 100 West Washington Street, Stephenville, in Erath County, Texas prior to the date this notice is published in the newspaper. The application, including any updates, and associated notices are available electronically at the following webpage: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tlap-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=-98.1775,32.251666&level=18

ALTERNATIVE LANGUAGE NOTICE. Alternative language notice in Spanish is available at: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tlap-applications. El aviso de idioma alternativo en español está disponible en https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tlap-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 county-wide mailing list and to those who are on the mailing list for this application. That notice will contain the deadline for submitting public comments.**

PUBLIC COMMENT / PUBLIC MEETING. You may submit public comments or request a public meeting on this application. The purpose of a public meeting is to provide the opportunity to submit comments or to ask questions about the application. TCEQ will hold a

public meeting if the Executive Director determines that there is a significant degree of public interest in the application or if requested by a local legislator. A public meeting is not a contested case hearing.

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

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

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

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

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

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

AGENCY CONTACTS AND INFORMATION. All public comments and requests must be submitted either electronically at **https://www14.tceq.texas.gov/epic/eComment/**, or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Please be aware that any contact information you provide, including your name, phone number, email address and physical address will become part of the agency's public record. For more information about this permit application or the permitting process, please call the TCEQ Public Education Program, Toll Free, at 1-800-687-4040 or visit their website at www.tceq.texas.gov/goto/pep. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from Jack Vanden Berge, Ellen Vanden Berge, Jacob Vanden Berge, and Kayla Vanden Berge at the address stated above or by calling Mr. Corey Mullin, Enviro-Ag Engineering, at 254-485-3892.

Issuance Date: January 31, 2025

Comisión de Calidad Ambiental del Estado de Texas

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

PERMISO PROPUESTO NO. WQ0005478000

SOLICITUD. Jack Vanden Berge, Ellen Vanden Berge, Jacob Vanden Berge, y Kayla Vanden Berge, 404 Morgan Mill Road, Stephenville, Texas 76401, que poseen un sitio de disposición para el almacenamiento y aplicación a tierra del efluente tratado de la instalación de fabricación de alimentos lácteos autorizada bajo el existente Permiso para la Aplicación en Terrenos de Texas No. WQ0003074000, han solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) por el propuesto Permiso para la Aplicación en Terrenos de Texas (TLAP) No. WQ0005478000 para autorizar la disposición de aguas residuales tratadas en un volumen que no exceda un flujo promedio diario de 192,000 galones por día mediante el riego superficial de 223 acres. El sitio de disposición estará ubicado en 2345 County Road 177, cerca de la ciudad de Stephenville, en el Condado de Erath, Texas 76401. La TCEQ recibió esta solicitud el día 25 de noviembre de 2024. La solicitud para el permiso estará disponible para leerla y copiarla en el Palacio de Justicia del Condado de Earth - Oficina de Extensión del Condado de Erath, Sala 206, 100 West Washington Street, Stephenville, en el Condado de Erath, Texas antes de la fecha de publicación de este aviso en el periódico. 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/tlap-applications.
Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación es proporcionado como una cortesía y no es parte de la solicitud o del aviso. Para la ubicación exacta, consulte la solicitud. https://gisweb.tceq.texas.gov/LocationMapper/?marker=-98.1775,32.251666&level=18

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

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 especifico. 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.

INFORMACIÓN DISPONIBLE EN LÍNEA. Para detalles sobre el estado de la solicitud, favor de visitar la Base de Datos Integrada de los Comisionados en www.tceq.texas.gov/goto/cid. Para buscar en la base de datos, utilizar el número de permiso para esta solicitud que aparece en la parte superior de este aviso.

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 información adicional de Jack Vanden Berge, Ellen Vanden Berge, Jacob Vanden Berge, y Kayla Vanden Berge a la dirección indicada arriba o llamando al Sr. Corey Mullin, Enviro-Ag Engineering, al 254-485-3892.

Fecha de emisión el 31 de enero de 2025

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

Corporate Office:
3404 Airway Blvd.
Amarillo TX 79118

Central Texas:
9855 FM 847
Dublin TX 76446

New Mexico:
110 East Mill Road
Artesia NM 88210

November 11, 2024

Texas Commission on Environmental Quality
Water Quality Division
Applications Review and Processing Team, MC-148
12100 Park 35 Circle
Austin TX 78753

Re: TCEQ Industrial Wastewater Application – New Application for Vanden Berge Farms
Erath County, Texas.

Dear Sir/Madam,
Enclosed please find the completed Industrial Administrative Reports, Industrial Technical Reports, Worksheets and supporting documentation for the above referenced facility. Should you have any questions please do not hesitate to contact me.

Respectfully Submitted,

Jourdan Mullin
Enviro-Ag Engineering

Enclosures

cc: Vanden Berge Farms
EAE File

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

This report is required for all applications for TPDES permits and TLAPs, except applications for oil and gas extraction operations subject to 40 CFR Part 435. Contact the Applications Review and Processing Team at 512-239-4671 with any questions about completing this report.

Applications for oil and gas extraction operations subject to 40 CFR Part 435 must use the Oil and Gas Exploration and Production Administrative Report (TCEQ Form-20893 and 20893-inst[1]).

Item 1. Application Information and Fees (Instructions, Page 26)

a. Complete each field with the requested information, if applicable.

Applicant Name: Jack Vanden Berge, Ellen Vanden Berge, Jacob Vanden Berge, Kayla Vanden Berge

Permit No.: WQ000Click to enter text.

EPA ID No.: TX0Click to enter text.

Expiration Date: Click to enter text.

b. Check the box next to the appropriate authorization type.

☒ Industrial Wastewater (wastewater and stormwater)

☐ Industrial Stormwater (stormwater only)

c. Check the box next to the appropriate facility status.

☐ Active ☒ Inactive

d. Check the box next to the appropriate permit type.

☐ TPDES Permit ☒ TLAP ☐ TPDES with TLAP component

e. Check the box next to the appropriate application type.

☒ New

☐ Renewal with changes ☐ Renewal without changes

☐ Major amendment with renewal ☐ Major amendment without renewal

☐ Minor amendment without renewal

☐ Minor modification without renewal

f. If applying for an amendment or modification, describe the request: Click to enter text.

For TCEQ Use Only

Segment Number _____County _____
Expiration Date _____Region _____
Permit Number _____

[1] https://www.tceq.texas.gov/publications/search_forms.html

g. Application Fee

EPA Classification	New	Major Amend. (with or without renewal)	Renewal (with or without changes)	Minor Amend. / Minor Mod. (without renewal)
Minor facility not subject to EPA categorical effluent guidelines (40 CFR Parts 400-471)	☒ $350	☐ $350	☐ $315	☐ $150
Minor facility subject to EPA categorical effluent guidelines (40 CFR Parts 400-471)	☐ $1,250	☐ $1,250	☐ $1,215	☐ $150
Major facility	N/A [2]	☐ $2,050	☐ $2,015	☐ $450

h. Payment Information

Mailed

Check or money order No.: Click to enter text.

Check or money order amt.: Click to enter text.

Named printed on check or money order: Click to enter text.

Epay

Voucher number: 717239 & 717240

Copy of voucher attachment: A.A

Item 2. Applicant Information (Instructions, Pages 26)

a. Customer Number, if applicant is an existing customer: CNClick to enter text.

Note: Locate the customer number using the TCEQ's Central Registry Customer Search[3].

b. Legal name of the entity (applicant) applying for this permit: Jack Vanden Berge, Ellen Vanden Berge, Jacob Vanden Berge, Kayla Vanden Berge

Note: The owner of the facility must apply for the permit. The legal name must be spelled exactly as filed with the TX SOS, Texas Comptroller of Public Accounts, County, or in the legal documents forming the entity.

c. Name and title of the person signing the application. (**Note:** The person must be an executive official that meets signatory requirements in 30 TAC § 305.44.)

Prefix: Click to enter text. Full Name (Last/First Name): Mr. Jack Vanden Berge, Mrs. Ellen Vanden Berge, Mr. Jacob Vanden Berge, Mrs. Kayla Vanden Berge

Title: Owners Credential: Click to enter text.

d. Will the applicant have overall financial responsibility for the facility?

[2] All facilities are designated as minors until formally classified as a major by EPA.

[3] https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=cust.CustSearch

☒ Yes ☐ No

Note: The entity with overall financial responsibility for the facility must apply as a co-applicant, if not the facility owner.

Item 3. Co-applicant Information (Instructions, Page 27)

☒ Check this box if there is no co-applicant.; otherwise, complete the below questions.

a. Legal name of the entity (co-applicant) applying for this permit: Click to enter text.

Note: The legal name must be spelled exactly as filed with the TX SOS, Texas Comptroller of Public Accounts, County, or in the legal documents forming the entity.

b. Customer Number (if applicant is an existing customer): CNClick to enter text.

Note: Locate the customer number using the TCEQ's Central Registry Customer Search.

c. Name and title of the person signing the application. (**Note:** The person must be an executive official that meets signatory requirements in 30 TAC § 305.44.)

Prefix: Click to enter text. Full Name (Last/First Name): Click to enter text.

Title: Click to enter text. Credential: Click to enter text.

d. Will the co-applicant have overall financial responsibility for the facility?

☐ Yes ☐ No

Note: The entity with overall financial responsibility for the facility must apply as a co-applicant, if not the facility owner.

Item 4. Core Data Form (Instructions, Pages 27)

a. Complete one Core Data Form (TCEQ Form 10400) for each customer (applicant and co-applicant(s)) and include as an attachment. If the customer type selected on the Core Data Form is Individual, complete Attachment 1 of the Administrative Report. Attachment: A.B

Item 5. Application Contact Information (Instructions, Page 27)

Provide names of two individuals who can be contact for additional information about this application. Indicate if the individual can be contact about administrative or technical information, or both.

a. ☒ Administrative Contact . ☒ Technical Contact

Prefix: Mr. Full Name (Last/First Name): Jacob Vanden Berge

Title: Owner Credential: Click to enter text.

Organization Name: Vanden Berge Farms

Mailing Address: 2090 CR 176 City/State/Zip: Stephenville, TX 76401

Phone No: 254/485-2956 Email: jake@dairycowcompost.com

b. ☒ Administrative Contact ☒ Technical Contact

Prefix: Mr. Full Name (Last/First Name): Corey Mullin

Title: Consultant Credential: Click to enter text.

Organization Name: Enviro-Ag Engineering

Mailing Address: 9855 FM 847 City/State/Zip: Dublin, TX 76446

Phone No: 254/485-3892 Email: cmullin@enviroag.com

Attachment: Click to enter text.

Item 6. Permit Contact Information (Instructions, Page 28)

Provide two names of individuals that can be contacted throughout the permit term.

a. Prefix: Mr. Full Name (Last/First Name): Jacob Vanden Berge

Title: Owner Credential: Click to enter text.

Organization Name: Vanden Berge Farms

Mailing Address: 2090 CR 176 City/State/Zip: Stephenville, TX 76401

Phone No: 254/485-2956 Email: Jake@dairycowcompost.com

b. Prefix: Mr. Full Name (Last/First Name): Corey Mullin

Title: Consultant Credential: Click to enter text.

Organization Name: Enviro-Ag Engineering

Mailing Address: 9855 FM 847 City/State/Zip: Dublin, TX 76446

Phone No: 254/485-3892 Email: cmullin@enviroag.com

Attachment: Click to enter text.

Item 7. Billing Contact Information (Instructions, Page 28)

The permittee is responsible for paying the annual fee. The annual fee will be assessed for permits **in effect on September 1 of each year**. The TCEQ will send a bill to the address provided in this section. The permittee is responsible for terminating the permit when it is no longer needed (form TCEQ-20029).

Provide the complete mailing address where the annual fee invoice should be mailed and the name and phone number of the permittee's representative responsible for payment of the invoice.

Prefix: Mr. Full Name (Last/First Name): Jacob Vanden Berge

Title: Owner Credential: Click to enter text.

Organization Name: Vanden Berge Farms

Mailing Address: 2090 CR 176 City/State/Zip: Stephenville, TX 76401

Phone No: 254/485-2956 Email: Jake@dairycowcompost.com

Item 8. DMR/MER Contact Information (Instructions, Page 28)

Provide the name and mailing address of the person delegated to receive and submit DMRs or MERs. **Note:** DMR data must be submitted through the NetDMR system. An electronic reporting account can be established once the facility has obtained the permit number.

Prefix: Mr. Full Name (Last/First Name): Jacob Vanden Berge

Title: Owner Credential: Click to enter text.

Organization Name: Vanden Berge Farms

Mailing Address: 2090 CR 176 City/State/Zip: Stephenville, TX 76401

Phone No: 254/485-2956 Email: Jake@dairycowcompost.com

Item 9. Notice Information (Instructions, Pages 28)

a. Individual Publishing the Notices

Prefix: Ms. Full Name (Last/First Name): Jourdan Mullin

Title: Consultant Credential: Click to enter text.

Organization Name: Enviro-Ag Engineering

Mailing Address: 9855 FM 847 City/State/Zip: Dublin, TX 76401

Phone No: 806/679-5570 Email: jmullin@enviroag.com

b. Method for Receiving Notice of Receipt and Intent to Obtain a Water Quality Permit Package (only for NORI, NAPD will be sent via regular mail)

☒ E-mail: jmullin@enviroag.com

☐ Fax: Click to enter text.

☒ Regular Mail (USPS)

Mailing Address: 9855 FM 847

City/State/Zip Code: Dublin, TX 76446

c. Contact in the Notice

Prefix: Mr. Full Name (Last/First Name): Corey Mullin

Title: Consultant Credential: Click to enter text.

Organization Name: Enviro-Ag Engineering

Phone No: 254/485-3892 Email: cmullin@enviroag.com

d. Public Viewing Location Information

Note: If the facility or outfall is located in more than one county, provide a public viewing place for each county.

Public building name: Erath County Extension Office Location within the building: Erath County Courthouse

Physical Address of Building: 100 Washington St. Room 206

City: Stephenville County: Erath

e. Bilingual Notice Requirements

This information is required for new, major amendment, minor amendment or minor modification, and renewal applications.

This section of the application is only used to determine if alternative language notices will be needed. Complete instructions on publishing the alternative language notices will be in your public notice package.

Call the bilingual/ESL coordinator at the nearest elementary and middle schools and obtain the following information to determine if an alternative language notice(s) is required.

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

☒ Yes ☐ No

If no, publication of an alternative language notice is not required; skip to Item 8 (Regulated Entity and Permitted Site Information.)

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

   ☒ Yes ☐ No

3. Do the students at these schools attend a bilingual education program at another location?

   ☒ Yes ☐ No

4. Would the school be required to provide a bilingual education program, but the school has waived out of this requirement under 19 TAC §89.1205(g)?

   ☒ Yes ☐ No ☐ N/A

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

f. Plain Language Summary Template - Complete the Plain Language Summary (TCEQ Form 20972) and include as an attachment. Attachment: A.C

g. Complete one Public Involvement Plan (PIP) Form (TCEQ Form 20960) for each application for a new permit or major amendment and include as an attachment. Attachment: A.D

Item 10. Regulated Entity and Permitted Site Information (Instructions Page 29)

a. TCEQ issued Regulated Entity Number (RN), if available: RNClick to enter text.

Note: If your business site is part of a larger business site, a Regulated Entity Number (RN) may already be assigned for the larger site. Use the RN assigned for the larger site. Search the TCEQ's Central Registry to determine the RN or to see if the larger site may already be registered as a Regulated Entity. If the site is found, provide the assigned RN.

b. Name of project or site (the name known by the community where located): Vanden Berge Farms

c. Is the location address of the facility in the existing permit the same?

☐ Yes ☐ No ☒ N/A (new permit)

Note: If the facility is located in Bexar, Comal, Hays, Kinney, Medina, Travis, Uvalde, or Williamson County, additional information concerning protection of the Edwards Aquifer may be required.

d. Owner of treatment facility:

Prefix: Click to enter text. Full Name (Last/First Name): Click to enter text.

or Organization Name: Schreiber Foods, Inc.

Mailing Address: 400 N Washington Street City/State/Zip: Green Bay, WI, 54301

Phone No: 920/455-6109 Email: Paul.Bytheway@schreiberfoods.com

e. Ownership of facility: ☐ Public ☒ Private ☐ Both ☐ Federal

f. Owner of land where treatment facility is or will be: Click to enter text.

Prefix: Click to enter text. Full Name (Last/First Name): Click to enter text.

or Organization Name: Schreiber Foods, Inc.

Mailing Address: 400 N Washington Street City/State/Zip: Green Bay, WI, 54301

Phone No: 920/455-6109 Email: Paul.Bytheway@schreiberfoods.com

Note: If not the same as the facility owner, attach a long-term lease agreement in effect for at least six years (In some cases, a lease may not suffice - see instructions). Attachment: Click to enter text.

g. Owner of effluent TLAP disposal site (if applicable): Click to enter text.

Prefix: Click to enter text. Full Name (Last/First Name): Mr. Jack Vanden Berge, Mrs. Ellen Vanden Berge, Mr. Jacob Vanden Berge, Mrs. Kayla Vanden Berge

or Organization Name: Click to enter text.

Mailing Address: 2090 CR 176 City/State/Zip: Stephenville, TX 76401

Phone No: 254/485-2956 Email: Jake@dairycowcompost.com

Note: If not the same as the facility owner, attach a long-term lease agreement in effect for at least six years. Attachment: Click to enter text.

h. Owner of sewage sludge disposal site (if applicable):

Prefix: Click to enter text. Full Name (Last/First Name): Click to enter text.

or Organization Name: Click to enter text.

Mailing Address: Click to enter text. City/State/Zip: Click to enter text.

Phone No: Click to enter text. Email: Click to enter text.

Note: If not the same as the facility owner, attach a long-term lease agreement in effect for at least six years. Attachment: Click to enter text.

Item 11. TDPES Discharge/TLAP Disposal Information (Instructions, Page 31)

a. Is the facility located on or does the treated effluent cross Native American Land?

☐ Yes ☒ No

b. Attach an original full size USGS Topographic Map (or an 8.5"×11" reproduced portion for renewal or amendment applications) with all required information. Check the box next to each item below to confirm it has been included on the map.

☒ One-mile radius

☒ Applicant's property boundaries

☐ Labeled point(s) of discharge

☒ Effluent disposal site boundaries

☐ Sewage sludge disposal site

☒ Three-miles downstream information

☐ Treatment facility boundaries

☐ Highlighted discharge route(s)

☒ All wastewater ponds

☐ New and future construction

Attachment: A.E.

c. Is the location of the sewage sludge disposal site in the existing permit accurate?

☐ Yes ☒ No or New Permit

If no, or a new application, provide an accurate location description: Click to enter text.

d. Are the point(s) of discharge in the existing permit correct?

☐ Yes ☒ No or New Permit

If no, or a new application, provide an accurate location description: Click to enter text.

e. Are the discharge route(s) in the existing permit correct?

☐ Yes ☒ No or New Permit

If no, or a new permit, provide an accurate description of the discharge route: Click to enter text.

f. City nearest the outfall(s): N/A

g. County in which the outfalls(s) is/are located: N/A

h. Is or will the treated wastewater discharge to a city, county, or state highway right-of-way, or a flood control district drainage ditch?

☐ Yes ☒ No

If yes, indicate by a check mark if: ☐ Authorization granted ☐ Authorization pending

For new and amendment applications, attach copies of letters that show proof of contact and provide the approval letter upon receipt. Attachment: Click to enter text.

For all applications involving an average daily discharge of 5 MGD or more, provide the names of all counties located within 100 statute miles downstream of the point(s) of discharge: Click to enter text.

i. For TLAPs, is the location of the effluent disposal site in the existing permit accurate?

☐ Yes No or New Permit ☒

If no, or a new application, provide an accurate location description: The effluent disposal sites are located at 2345 CR 177 in Erath County, Texas

j. City nearest the disposal site: Stephenville

k. County in which the disposal site is located: Erath

l. For TLAPs, describe how effluent is/will be routed from the treatment facility to the disposal site: The facility will utilize underground pipelines to route the effluent from the offsite treatment facility to the disposal sites.

m. For TLAPs, identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: Unnamed tributary to the Dry Branch Creek.

Item 12. Miscellaneous Information (Instructions, Page 33)

a. Did any person formerly employed by the TCEQ represent your company and get paid for service regarding this application?

☐ Yes ☒ No

If yes, list each person: Click to enter text.

b. Do you owe any fees to the TCEQ?

☐ Yes ☒ No

If yes, provide the following information:

Account no.: Click to enter text.

Total amount due: Click to enter text.

c. Do you owe any penalties to the TCEQ?

☐ Yes ☒ No

If yes, provide the following information:

Enforcement order no.: Click to enter text.

Amount due: Click to enter text.

Item 13. Signature Page (Instructions, Page 33)

Permit No: WQ000Click to enter text.

Applicant Name: Jack Edwin Vanden Berge

Certification: I, Jack Vanden Berge, 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 (typed or printed): Jack Vanden Berge

Signatory title: Owner

Signature: Jack Vanden Berge (Use blue ink) Date: 11/8/24

Subscribed and Sworn to before me by the said Jack Vanden Berge

on this 8th day of November, 20 24.

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

Richard George
Notary Public

Erath
County, Texas

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

Note: *If co-applicants are necessary, each entity must submit an original, separate signature page.*

Item 13. Signature Page (Instructions, Page 33)

Permit No: WQ000Click to enter text.

Applicant Name: Ellen Daine Vanden Berge

Certification: I, Ellen Vanden Berge, 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 (typed or printed): Ellen Vanden Berge

Signatory title: Owner

Signature: Ellen Daine Vanden Berge (Use blue ink) Date: 11-8-24

Subscribed and Sworn to before me by the said Ellen Vanden Berge

on this 8th day of November, 2024.

My commission expires on the 25th day of February, 2028.

Richard George
Notary Public

Erath
County, Texas

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

Note: *If co-applicants are necessary, each entity must submit an original, separate signature page.*

Item 13. Signature Page (Instructions, Page 33)

Permit No: WQ000Click to enter text.

Applicant Name: Jacob Edward Vanden Berge

Certification: I, Jacob Vanden Berge, 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 (typed or printed): Jacob Vanden Berge

Signatory title: Owner

Signature: Jacob Vanden Berge (Use blue ink) Date: 11-8-24

Subscribed and Sworn to before me by the said Jacob Vanden Berge

on this 8th day of November, 20 24.

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

Richard George
Notary Public

Erath
County, Texas

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

Note: *If co-applicants are necessary, each entity must submit an original, separate signature page.*

Item 13. Signature Page (Instructions, Page 33)

Permit No: WQ000Click to enter text.

Applicant Name: Kayla Pendray Vanden Berge

Certification: I, Kayla Vanden Berge, 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 (typed or printed): Kayla Vanden Berge

Signatory title: Owner

Signature: Kayla VandenBerge (Use blue ink) Date: 11/8/24

Subscribed and Sworn to before me by the said Kayla Vanden Berge

on this 8th day of November, 2024.

My commission expires on the 25th day of February, 2028.

Richard George
Notary Public

Erath
County, Texas

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

Note: *If co-applicants are necessary, each entity must submit an original, separate signature page.*

INDUSTRIAL WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.1

The following information is required for new and amendment applications.

Item 1. Affected Landowner Information (Instructions, Page 35)

a. Attach a landowner map or drawing, with scale, as applicable. Check the box next to each item to confirm it has been provided.

- ☒ The applicant's property boundaries.
- ☒ The facility site boundaries within the applicant's property boundaries.
- ☒ The distance the buffer zone falls into adjacent properties and the property boundaries of the landowners located within the buffer zone.
- ☒ The property boundaries of all landowners surrounding the applicant's property. (Note: if the application is a major amendment for a lignite mine, the map must include the property boundaries of all landowners adjacent to the new facility (ponds).)
- ☐ The point(s) of discharge and highlighted discharge route(s) clearly shown for one mile downstream.
- ☐ The property boundaries of the landowners located on both sides of the discharge route for one full stream mile downstream of the point of discharge.
- ☐ The property boundaries of the landowners along the watercourse for a one-half mile radius from the point of discharge if the point of discharge is into a lake, bay, estuary, or affected by tides.
- ☒ The boundaries of the effluent disposal site (e.g., irrigation area or subsurface drainfield site) and all evaporation/holding ponds within the applicant's property.
- ☒ The property boundaries of all landowners surrounding the applicant's property boundaries where the effluent disposal site is located.
- ☐ The boundaries of the sludge land application site (for land application of sewage sludge for beneficial use) and the property boundaries of landowners within one-quarter mile of the applicant's property boundaries where the sewage sludge land application site is located.
- ☐ The property boundaries of landowners within one-half mile in all directions from the applicant's property boundaries where the sewage sludge disposal site (e.g., sludge surface disposal site or sludge monofil) is located.

Attachment: A.F

b. Check the box next to the format of the landowners list:

☒ Readable/Writeable CD ☐ Four sets of labels

Attachment: A.F

d. Provide the source of the landowners' names and mailing addresses: Erath County Appraisal District.

e. As required by Texas Water Code § 5.115, is any permanent school fund land affected by this application?

☐ Yes ☒ No

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

Item 2. Original Photographs (Instructions, Page 37)

Provide original ground level photographs. Check the box next to each of the following items to indicate it is included.

☒ At least one original photograph of the new or expanded treatment unit location.

☐ At least two photographs of the existing/proposed point of discharge and as much area downstream (photo 1) and upstream (photo 2) as can be captured. If the discharge is to an open water body (e.g., lake, bay), the point of discharge should be in the right or left edge of each photograph showing the open water and with as much area on each respective side of the discharge as can be captured.

☒ At least one photograph of the existing/proposed effluent disposal site.

☒ A plot plan or map showing the location and direction of each photograph.

Attachment: A.G

INDUSTRIAL ADMINISTRATIVE REPORT

Attachments

Prepared For:

Vanden Berge Farms

2090 CR 176

Stephenville, TX 76401

September 4, 2024

Prepared By:

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

3404 Airway Boulevard ♦ Amarillo, Texas 79118 ♦ Tel 806/353-6123 ♦ Fax 806/353-4132

Table of Contents

LIST OF FIGURES

LIST OF TABLES

A.A: TCEQ APPLICATION FEE

TCEQ ePay Receipt

Transaction Information

Trace Number:	582EA000621562
Date:	08/14/2024 01:18 PM
Payment Method:	CC - Authorization 000004787G
ePay Actor:	COREY MULLIN
TCEQ Amount:	$350.00
Texas.gov Price::	$358.13*

* This service is provided by Texas.gov, the official website of Texas. The price of this service includes funds that support the ongoing operations and enhancements of Texas.gov, which is provided by a third party in partnership with the State.

Payment Contact Information

Name:	COREY MULLIN
Company:	ENVIRO-AG ENGINEERING
Address:	9855 FM 847, DUBLIN, TX 76446
Phone:	254-485-3892

Cart Items

Voucher	Fee Description	AR Number	Amount
717239	WW PERMIT - MINOR FACILITY NOT SUBJECT TO 40 CFR 400-471 - NEW		$300.00
717240	30 TAC 305.53B WQ NOTIFICATION FEE		$50.00
		TCEQ Amount:	**$350.00**

A.B: CORE DATA FORMS

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission *(If other is checked please describe in space provided.)*

☒ New Permit, Registration or Authorization *(Core Data Form should be submitted with the program application.)*

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 603692856		RN

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy): 8/14/2024

☐ 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 here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* — *If new Customer, enter previous Customer below:*

Vanden Berge, Jack Edwin

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*

11. Type of Customer: ☐ Corporation ☒ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ Yes ☐ No

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:

	404 Morgan Mill Road						
City	Stephenville	State	TX	ZIP	76401	ZIP + 4	

16. Country Mailing Information *(if outside USA)*	17. E-Mail Address *(if applicable)*
	Lnvberge@gmail.com

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*

(254) 396-5225		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Vanden Berge Farms

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	2345 County Road 177							
	City	Stephenville	**State**	TX	**ZIP**	76401	**ZIP + 4**	
24. County	Erach							

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:					
26. Nearest City			**State**	**Nearest ZIP Code**	
Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).					
27. Latitude (N) In Decimal:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
2022		311513	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Disposal of process generated wastewater

34. Mailing Address:	**2090 CR 176**							
	City	**Stephenville**	**State**	**TX**	**ZIP**	**76401**	**ZIP + 4**	
35. E-Mail Address:	**Jake@dairycowcompost.com**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(254) 485-2956		( ) -

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☒ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Corey Mullin	41. Title:	Consultant

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(254) 485-3892		(254) 965-8000	cmullin@enviroag.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Vanden Berge Farms	Job Title:	Owner
Name *(In Print)*:	Jack Vanden Berge	Phone:	(254) 396- 5225
Signature:	Jack Vanden Berge	Date:	11/8/24

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission *(If other is checked please describe in space provided.)*

☒ New Permit, Registration or Authorization *(Core Data Form should be submitted with the program application.)*

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN		RN

SECTION II: Customer Information

4. General Customer Information	5. Effective Date for Customer Information Updates (mm/dd/yyyy)	8/14/2024

☒ 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 here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)*	*If new Customer, enter previous Customer below:*
Vanden Berge, Ellen Daine	

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*

11. Type of Customer:	☐ Corporation	☒ Individual	Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other		☐ Sole Proprietorship	☐ Other:

12. Number of Employees	13. Independently Owned and Operated?
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher	☒ Yes ☐ No

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:	404 Morgan Mill Road						
	City	Stephenville	State	TX	ZIP	76401	ZIP + 4

16. Country Mailing Information *(if outside USA)*	17. E-Mail Address *(if applicable)*
	Lnvberge@gmail.com

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*

(254) 592-1971		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Vanden Berge Farms

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	2345 County Road 177							
	City	Stephenville	**State**	TX	**ZIP**	76401	**ZIP + 4**	
24. County	Erath							

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
2022		311513	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Disposal of process generated wastewater

34. Mailing Address:	**2090 CR 176**							
	City	**Stephenville**	**State**	**TX**	**ZIP**	**76401**	**ZIP + 4**	
35. E-Mail Address:	**Jake@dairycowcompost.com**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(254) 485-2956		( ) -

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☒ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Corey Mullin	41. Title:	Consultant

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(254) 485-3892		(254) 965-8000	cmullin@enviroag.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Vanden Berge Farms	Job Title:	Owner	
Name *(In Print)*:	Ellen Vanden Berge		Phone:	(254) 592- 1971
Signature:	Ellen Vanden Berge		Date:	11-8-24

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission *(If other is checked please describe in space provided.)*

☒ New Permit, Registration or Authorization *(Core Data Form should be submitted with the program application.)*

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN		RN

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy) 8/14/2024

☒ 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 here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* | *If new Customer, enter previous Customer below:*

Vanden Berge, Jacob Edward

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*

11. Type of Customer:

☐ Corporation ☒ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees

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

13. Independently Owned and Operated?

☒ Yes ☐ No

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:

2090 County Road 176

City	Stephenville	State	TX	ZIP	76401	ZIP + 4	

16. Country Mailing Information *(if outside USA)*	17. E-Mail Address *(if applicable)*
	Jake@dairycowcompost.com

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*

(254) 485-2956		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Vanden Berge Farms

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	2345 County Road 177							
	City	Stephenville	**State**	TX	**ZIP**	76401	**ZIP + 4**	
24. County	Erath							

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
2022		311513	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Disposal of process generated wastewater

34. Mailing Address:	**2090 CR 176**							
	City	Stephenville	**State**	TX	**ZIP**	76401	**ZIP + 4**	
35. E-Mail Address:	Jake@dairycowcompost.com							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(254) 485-2956		( ) -

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☒ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Corey Mullin	**41. Title:**	Consultant

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(254) 485-3892		(254) 965-8000	cmullin@enviroag.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Vanden Berge Farms	**Job Title:**	Owner
Name *(In Print)*:	Jacob Vanden Berge	**Phone:**	(254) 485- **2956**
Signature:	Jacob Vanden Berge	**Date:**	11-8-24

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission *(If other is checked please describe in space provided.)*

☒ New Permit, Registration or Authorization *(Core Data Form should be submitted with the program application.)*

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN		RN

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy) 8/14/2024

☒ 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 here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* — *If new Customer, enter previous Customer below:*

Vanden Berge, Kayla Pendray

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*

11. Type of Customer: ☐ Corporation ☒ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:	2090 County Road 176						
	City	Stephenville	**State**	TX	**ZIP**	76401	**ZIP + 4**

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
	kayla7vb@gmail.com

18. Telephone Number	**19. Extension or Code**	**20. Fax Number** *(if applicable)*

(254) 485-2956		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Vanden Berge Farms

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	2345 County Road 177							
	City	Stephenville	**State**	TX	**ZIP**	76401	**ZIP + 4**	
24. County	Erath							

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
2022		311513	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Disposal of process generated wastewater

34. Mailing Address:	**2090 CR 176**							
	City	**Stephenville**	**State**	**TX**	**ZIP**	**76401**	**ZIP + 4**	
35. E-Mail Address:	**Jake@dairycowcompost.com**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(254) 485-2956		( ) -

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☒ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Corey Mullin		41. Title:	Consultant
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address	
(254) 485-3892		(254) 965-8000	cmullin@enviroag.com	

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Vanden Berge Farms	Job Title:	Owner	
Name *(In Print)*:	Kayla Vanden Berge		Phone:	(254) 485- 2956
Signature:	Kayla Vanden Berge		Date:	11/8/24

A.C: PLAIN LANGUAGE SUMMARY

Individual Industrial Wastewater Application

The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 30 Texas Administrative Code Chapter 39. The information provided in this summary may change during the technical review of the application and are not federal enforceable representations of the permit application.

Vanden Berge Farms located at 2345 CR 177 in Stephenville, Texas operates in a symbiotic relationship with Schreiber Foods, Inc., focusing on the environmental management of by-products from dairy food manufacturing. The farm's activities involve the storage and land application of treated effluent from Schreiber Foods, which specializes in cheese production.

At Schreiber Foods, the wastewater undergoes a comprehensive treatment process before it is sent to Vanden Berge Farms. Initially, the process water is collected and passed through monitoring stations. Here, a bar screen is employed for the removal of solids, followed by a dissolved air flotation tank which further eliminates solids. The domestic wastewater is separately treated using a chlorination system to disinfect it before it merges with the process wastewater at a lift station. This combined effluent is then directed to a sophisticated storage/treatment system. It consists of an aeration lagoon with a capacity of 3 million gallons and equipped with a 200 horsepower aeration pump. Additionally, there are two more aeration lagoons, each with the same storage capacity and 60 horsepower of aeration equipment, and a large 13.9 million gallon storage lagoon. After treatment, the effluent is stored and then pumped to Vanden Berge Farms. It is crucial to note that Vanden Berge Farms does not treat this wastewater; they only store and apply the already treated wastewater from Schreiber Foods to their land application fields that consist of 223 acres of coastal bermudagrass and sorghum.

Individual Industrial Wastewater Application

The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 30 Texas Administrative Code Chapter 39. The information provided in this summary may change during the technical review of the application and are not federal enforceable representations of the permit application.

Vanden Berge Farms, ubicada en 2345 CR 177 en Stephenville, Texas, opera en una relación simbiótica con Schreiber Foods, Inc., enfocándose en la gestión ambiental de subproductos de la fabricación de alimentos lácteos. Las actividades de la granja implican el almacenamiento y aplicación al suelo de efluentes tratados de Schreiber Foods, que se especializa en la producción de queso.

En Schreiber Foods, las aguas residuales se someten a un proceso de tratamiento integral antes de enviarlas a Vanden Berge Farms. Inicialmente, el agua del proceso se recolecta y pasa a través de estaciones de monitoreo. Aquí, se emplea una criba de barras para la eliminación de sólidos, seguida de un tanque de flotación de aire disuelto que elimina aún más los sólidos. Las aguas residuales domésticas se tratan por separado mediante un sistema de cloración para desinfectarlas antes de fusionarse con las aguas residuales del proceso en una estación de bombeo. Este efluente combinado luego se dirige a un sofisticado sistema de almacenamiento/tratamiento. Consiste en una laguna de aireación con capacidad de 3 millones de galones y equipada con una bomba de aireación de 200 caballos de fuerza. Además, hay dos lagunas de aireación más, cada una con la misma capacidad de almacenamiento y 60 caballos de fuerza de equipo de aireación, y una gran laguna de almacenamiento de 13.9 millones de galones. Después del tratamiento, el efluente se almacena y luego se bombea a Vanden Berge Farms. Es fundamental tener en cuenta que Vanden Berge Farms no trata estas aguas residuales; solo almacenan y aplican las aguas residuales ya tratadas de Schreiber Foods a sus campos de aplicación terrestre que consisten en 223 acres de bermuda y sorgo costeros.

A.D: PUBLIC INVOLVEMENT PLAN

Texas Commission on Environmental Quality

Public Involvement Plan Form for Permit and Registration Applications

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

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

Section 1. Preliminary Screening

☒ New Permit or Registration Application
☐ New Activity - modification, registration, amendment, facility, etc. (see instructions)

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

Section 2. Secondary Screening

☒ Requires public notice,
☐ Considered to have significant public interest, **and**
☐ Located within any of the following geographical locations:

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

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

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

Section 3. Application Information

Type of Application (check all that apply):

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

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

Water Quality

☒ Texas Pollutant Discharge Elimination System (TPDES)

- ☒ Texas Land Application Permit (TLAP)
- ☐ State Only Concentrated Animal Feeding Operation (CAFO)
- ☐ Water Treatment Plant Residuals Disposal Permit

☐ Class B Biosolids Land Application Permit

☐ Domestic Septage Land Application Registration

Water Rights New Permit

☐ New Appropriation of Water

☐ New or existing reservoir

Amendment to an Existing Water Right

☐ Add a New Appropriation of Water

☐ Add a New or Existing Reservoir

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

Section 4. Plain Language Summary

Provide a brief description of planned activities.

Vanden Berge Farms is set to implement a sustainable irrigation strategy by utilizing treated wastewater from the neighboring Schreiber Foods, Inc. facility. This initiative is designed to harness the nutrient-rich effluent as a supplemental water source for the cultivation of coastal bermudagrass. The practice aligns with environmentally responsible agriculture, aiming to reduce freshwater usage and enhance soil fertility. By recycling wastewater, Vanden Berge Farms not only conserves valuable water resources but also leverages the inherent nutrients to support the growth of their bermudagrass crops, which are often used for forage.

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.

Stephenville

(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

88.9%

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

$24,810

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

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

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

0%

(e) Languages commonly spoken in area by percentage

English - 89.4%
Spanish - 10.6%

(f) Community and/or Stakeholder Groups

N/A

(g) Historic public interest or involvement

N/A

Section 6. Planned Public Outreach Activities

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

☒ Yes ☐ No

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

☐ Yes ☒ No

If Yes, please describe.

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

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

☐ Yes ☐ No

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

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

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

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

☐ Yes ☐ No

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

☐ Yes ☐ No

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

☐ TCEQ Regional Office ☐ TCEQ Central Office
☐ Public Place (specify)

Section 7. Voluntary Submittal

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

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

☒ Yes ☐ No

What types of notice will be provided?

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

A.E: 7.5-MINUTE USGS TOPOGRAPHIC QUADRANGLE

A.E.1 7.5-Minute USGS Topographic Quadrangle Map

Figure A.E.1, 7.5-Minute USGS Topographic Quadrangle Map, is an original 7.5-Minute USGS Topographic Map of the Stephenville and Knob Hill, Texas Quadrangles. This map shows the production areas, irrigation sites and a 1-mile radius.

Figure A.E.1: 7.5-Minute USGS Topographic Quadrangle Map

A.F: AFFECTED LANDOWNER INFORMATION

A.F.1 Adjacent Landowners Map

Figure A.F.1 shows the information required in item 1.a. of the Industrial Administrative Report 1.1. Property boundaries were obtained from the Erath County Appraisal District Interactive Map as of August 2024. The tracts identified on the map correspond to Table A.F.1, below.

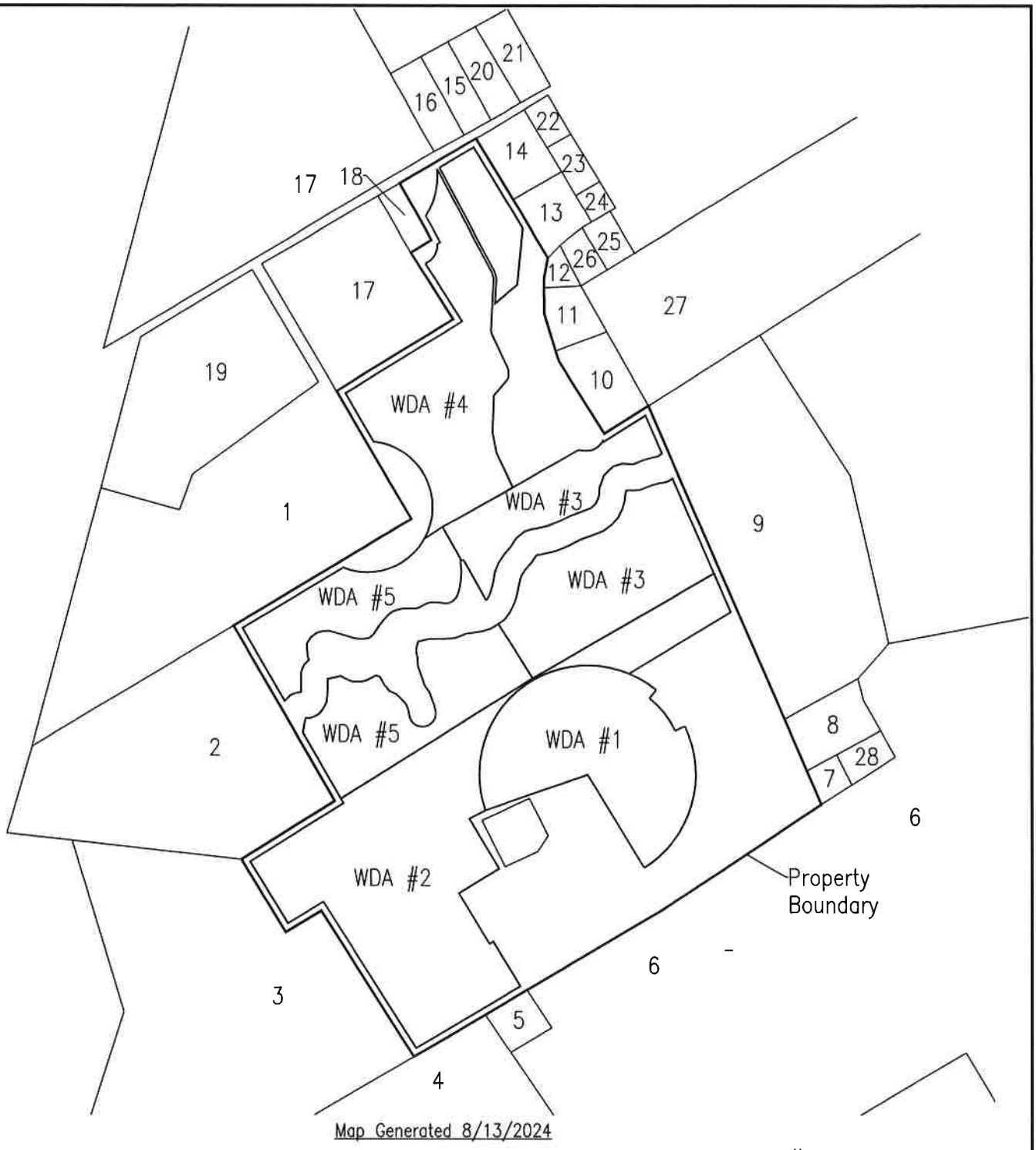
A.F.2 Landowners List

The landowner names and addresses presented in Table A.F.1 was obtained from the Erath County Appraisal District Property Search web databases, retrieved 8/2024.

Table A.F.1. Adjacent Landowners

Map Property ID	Owner Name	Mailing Address
1	Schreiber Foods, Inc.	PO Box 19010 Green Bay WI 54307-9010
2	Bolling Curtis Allen Trust & Richard Bolling EST	1530 Bates Stephenville, TX 76401
3	Keith & Vanessa Halford	1817 CR 177 Stephenville, TX 76401
4	Board Of Regents of the TX A&M University System	301 Tarrow Street 6th Floor College Station, TX 77840-7896
5	Karen & Roynold Lawson	2282 CR 177 Stephenville, TX 76401
6	KBBC Development, LLC	2121 McClendon Rd. Weatherford, TX 76088
7	Sherman & Thetis Edwards	3397 CR 177 Stephenville, TX 76401
8	Jo Ann McCgirl	3717 CR 177 Stephenville, TX 76401
9	Kenneth & Linda Gifford	4171 CR 177 Stephenville, TX 76401
10	Bernie & Melodee Ray	375 PR 1611 Stephenville, TX 76401
11	Paul & April McCourt	144 W Panorama La Grange, TX 78945
12	Glynda Gordon	10412 Maria Dr. Ft. Worth, TX 76108-4680
13	Pipal Construction, LLC	547 Comanche CR 343 Dublin, TX 76446
14	Rodda Schara	1002 E Blanco Rd. #A Boerne, TX 78006
15	Joshua & Kylyn Graves	2235 CR 176 Stephenville, TX 76401

Map Property ID	Owner Name	Mailing Address
16	Stenton & Randi Posas	2125 CR 176 Stephenville, TX 76401
17	Nell Gordon Properties, LLC	114 Byron Nelson St. Stephenville, TX 76401
18	Jeffrey Hodges	1896 CR 176 Stephenville, TX 76401
19	SFSTTX001, LLC	PO Box 19010 Green Bay, WI 54307-9010
20	Tracy Brown	2345 CR 176 Stephenville, TX 76401
21	Russell & Rhonda Bare	2385 CR 176 Stephenville, TX 76401
22	Gary Schaffer	148 CR 477 Stephenville, TX 76401
23	Greg & Melissa Thompson Estate	372 CR 477 Stephenville, TX 76401
24	Rebecca & Ernest Van Diest	444 CR 477 Stephenville, TX 76401
25	Sheryl & Troy Truss	507 CR 477 Stephenville, TX 76401
26	Norbert & Rebeckah Staudt	101 PR 1611 Stephenville, TX 76401
27	Lee Shipp	306 PR 881 Stephenville, TX 76401
28	Sierra Carr	3471 CR 177 Stephenville, TX 76401



Vanden Berge Farms Stephenville, TX Erath County	Adjacent Landowners Map Figure A.F.1 Page 9	ENVIRO-AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

A.G: PHOTOGRAPHS

A.G.1 Photograph Location Map

Figure A.G.1, Photograph Location Map, shows the location of each photograph and the direction the camera was facing when the photograph was taken.

A.G.2 Photographs

Figures A.G.2a-b, Photographs, are original photographs of the proposed effluent disposal sites and production area.

Map Generated 8/13/2024

Legend:
Denotes Photograph Location

N
W E
S

600' 0 600' 1,200'

SCALE: 1" = 1,200'

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

Vanden Berge Farms Stephenville, TX Erath County	Photograph Location Map Figure A.G.1 Page 11	ENVIRO–AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

1

2

3

4

5

6

Vanden Berge Farms Stephenville, Texas Erath County	Photographs Figure A.G.2a Page 12	ENVIRO-AG EAE ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

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10

11

12

Vanden Berge Farms Stephenville, Texas Erath County	Photographs Figure A.G.2b Page 13	ENVIRO-AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.0

The following information **is required** for all applications for a TLAP or an individual TPDES discharge permit.

For **additional information** or clarification on the requested information, please refer to the Instructions for Completing the Industrial Wastewater Permit Application[1] available on the TCEQ website. Please contact the Industrial Permits Team at 512-239-4671 with any questions about this form.

If more than one outfall is included in the application, provide applicable information for each individual outfall. **If an item does not apply to the facility, enter N/A** to indicate that the item has been considered. Include separate reports or additional sheets as **clearly cross-referenced attachments** and provide the attachment number in the space provided for the item the attachment addresses.

NOTE: This application is for an industrial wastewater permit only. Additional authorizations from the TCEQ Waste Permits Division or the TCEQ Air Permits Division may be needed.

Item 1. Facility/Site Information (Instructions, Page 39)

a. Describe the general nature of the business and type(s) of industrial and commercial activities. Include all applicable SIC codes (up to 4).

Vanden Berge Farms operates symbiotic with Schreiber Foods, Inc., focusing on the environmental management of by-products from dairy food manufacturing. The farm's activities involve the storage and land application of treated effluent from Schreiber Foods, which specializes in cheese production. This process is a form of waste management and recycling, as it repurposes the water waste into a beneficial resource for agricultural use. The industrial codes provided, such as SIC 2022 and 2023 and NAICS 311513 and 31514, classify these businesses under the categories of dairy product manufacturing and cheese production, highlighting their roles in the food manufacturing sector and their commitment to integrating environmental practices into their operations.

b. Describe all wastewater-generating processes at the facility.

[1] https://www.tceq.texas.gov/permitting/wastewater/industrial/TPDES_industrial_wastewater_steps.html

Vanden Berge Farms is not a source of wastewater; rather, it plays a crucial role in the management of water resources by receiving, storing, and applying treated wastewater from Schreiber Foods, Inc. Schreiber Foods operates a cream cheese manufacturing facility, where raw milk undergoes a transformation process, extracting water to create "cow water." This byproduct is utilized internally for cleaning, combining milk minerals, organic substances, and cleaning agents to form the wastewater. This wastewater, along with treated domestic sewage, undergoes further treatment on-site. Once adequately treated, it is then conveyed to Vanden Berge Farms. Here, the treated wastewater is responsibly applied to land application fields, aiding in irrigation and fertilization, demonstrating a commitment to environmental stewardship and the recycling of valuable water resources.

c. Provide a list of raw materials, major intermediates, and final products handled at the facility.

Materials List

Raw Materials	Intermediate Products	Final Products
N/A		

Attachment: Click to enter text.

d. Attach a facility map (drawn to scale) with the following information:

- Production areas, maintenance areas, materials-handling areas, waste-disposal areas, and water intake structures.
- The location of each unit of the WWTP including the location of wastewater collection sumps, impoundments, outfalls, and sampling points, if significantly different from outfall locations.

Attachment: T.A

e. Is this a new permit application for an existing facility?

☐ Yes ☒ No

If **yes**, provide background discussion: Click to enter text.

f. Is/will the treatment facility/disposal site be located above the 100-year frequency flood level.

☒ Yes ☐ No

List source(s) used to determine 100-year frequency flood plain: FEMA Map ID: 48021800 8B

If **no**, provide the elevation of the 100-year frequency flood plain and describe what protective measures are used/proposed to prevent flooding (including tail water and rainfall run-on controls) of the treatment facility and disposal area: Click to enter text.

Attachment: T.B

g. For **new** or **major amendment** permit applications, will any construction operations result in a discharge of fill material into a water in the state?

☐ Yes ☒ No ☐ N/A (renewal only)

h. If **yes** to Item 1.g, has the applicant applied for a USACE CWA Chapter 404 Dredge and Fill permit?

☐ Yes ☐ No

If **yes**, provide the permit number: Click to enter text.

If **no**, provide an approximate date of application submittal to the USACE: Click to enter text.

Item 2. Treatment System (Instructions, Page 40)

a. List any physical, chemical, or biological treatment process(es) used/proposed to treat wastewater at this facility. Include a description of each treatment process, starting with initial treatment and finishing with the outfall/point of disposal.

At Schreiber Foods, the wastewater undergoes a comprehensive treatment process before it is sent to Vanden Berge Farms. Initially, the process water is collected and passed through monitoring stations. Here, a bar screen is employed for the removal of solids, followed by a dissolved air flotation tank which further eliminates solids. The domestic wastewater is separately treated using a chlorination system to disinfect it before it merges with the process wastewater at a lift station. This combined effluent is then directed to a sophisticated storage/treatment system. It consists of an aeration lagoon with a capacity of 3 million gallons and equipped with a 200 horsepower aeration pump. Additionally, there are two more aeration lagoons, each with the same storage capacity and 60 horsepower of aeration equipment, and a large 13.9 million gallon storage lagoon. After treatment, the effluent is stored and then pumped to Vanden Berge Farms. It is crucial to note that Vanden Berge Farms does not treat this wastewater; they only store and apply the already treated wastewater from Schreiber Foods to their land application fields.

b. Attach a flow schematic **with a water balance** showing all sources of water and wastewater flow into the facility, wastewater flow into and from each treatment unit, and wastewater flow to each outfall/point of disposal.

Attachment: T.A.1

Item 3. Impoundments (Instructions, Page 40)

Does the facility use or plan to use any wastewater impoundments (e.g., lagoons or ponds?)

☒ Yes ☐ No

If **no**, proceed to Item 4. If **yes**, complete **Item 3.a** for **existing** impoundments and **Items 3.a - 3.e** for **new or proposed** impoundments. **NOTE:** See instructions, Pages 40-42, for additional information on the attachments required by Items 3.a - 3.e.

a. Complete the table with the following information for each existing, new, or proposed impoundment. Attach additional copies of the Impoundment Information table, if needed.

Use Designation: Indicate the use designation for each impoundment as Treatment (**T**), Disposal (**D**), Containment (**C**), or Evaporation (**E**).

Associated Outfall Number: Provide an outfall number if a discharge occurs or will occur.

Liner Type: Indicate the liner type as Compacted clay liner (**C**), In-situ clay liner (**I**), Synthetic/plastic/rubber liner (**S**), or Alternate liner (**A**). **NOTE:** See instructions for further detail on liner specifications. If an alternate liner (A) is selected, include an attachment that provides a description of the alternate liner and any additional technical information necessary for an evaluation.

Leak Detection System: If any leak detection systems are in place/planned, enter **Y** for yes. Otherwise, enter **N** for no.

Groundwater Monitoring Wells and Data: If groundwater monitoring wells are in place/planned, enter **Y** for yes. Otherwise, enter **N** for no. Attach any existing groundwater monitoring data.

Dimensions: Provide the dimensions, freeboard, surface area, storage capacity of the impoundments, and the maximum depth (not including freeboard). For impoundments with irregular shapes, submit surface area instead of length and width.

Compliance with 40 CFR Part 257, Subpart D: If the impoundment is required to be in compliance with 40 CFR Part 257, Subpart D, enter **Y** for yes. Otherwise, enter **N** for no.

Date of Construction: Enter the date construction of the impoundment commenced (mm/dd/yy).

Impoundment Information

Parameter	Pond #	Pond #	Pond #	Pond #
Use Designation: (T) (D) (C) or (E)	Storage			
Associated Outfall Number	1			
Liner Type (C) (I) (S) or (A)	C			
Alt. Liner Attachment Reference	N/A			
Leak Detection System, Y/N	N			
Groundwater Monitoring Wells, Y/N	N			
Groundwater Monitoring Data Attachment	N			
Pond Bottom Located Above The Seasonal High-Water Table, Y/N	Y			
Length (ft)	350			

Parameter	Pond #	Pond #	Pond #	Pond #
Width (ft)	300			
Max Depth From Water Surface (ft), Not Including Freeboard	12			
Freeboard (ft)	2			
Surface Area (acres)	3.64			
Storage Capacity (gallons)	8,400,000			
40 CFR Part 257, Subpart D, Y/N	No			
Date of Construction	2010			

Attachment: T.C

The following information (**Items 3.b – 3.e**) is required only for **new or proposed** impoundments.

b. For new or proposed impoundments, attach any available information on the following items. If attached, check **yes** in the appropriate box. Otherwise, check **no** or **not yet designed**.

1. Liner data

   ☒ Yes ☐ No ☐ Not yet designed

2. Leak detection system or groundwater monitoring data

   ☐ Yes ☒ No ☐ Not yet designed

3. Groundwater impacts

   ☐ Yes ☒ No ☐ Not yet designed

   NOTE: Item b.3 is required if the bottom of the pond is not above the seasonal high-water table in the shallowest water-bearing zone.

Attachment: Click to enter text.

For TLAP applications: Items 3.c – 3.e are **not required**, continue to Item 4.

c. Attach a USGS map or a color copy of original quality and scale which accurately locates and identifies all known water supply wells and monitor wells within ½-mile of the impoundments.

Attachment: Click to enter text.

d. Attach copies of State Water Well Reports (e.g., driller's logs, completion data, etc.), and data on depths to groundwater for all known water supply wells including a description of how the depths to groundwater were obtained.

Attachment: Click to enter text.

e. Attach information pertaining to the groundwater, soils, geology, pond liner, etc. used to assess the potential for migration of wastes from the impoundments or the potential for contamination of groundwater or surface water.

Attachment: Click to enter text.

Item 4. Outfall/Disposal Method Information (Instructions, Page 42)

Complete the following tables to describe the location and wastewater discharge or disposal operations for each outfall for discharge, and for each point of disposal for TLAP operations.

If there are more outfalls/points of disposal at the facility than the spaces provided, copies of pages 6 and/0r numbered accordingly (i.e., page 6a, 6b, etc.) may be used to provide information on the additional outfalls.

For TLAP applications: Indicate the disposal method and each individual irrigation area **I**, evaporation pond **E**, or subsurface drainage system **S** by providing the appropriate letter designation for the disposal method followed by a numerical designation for each disposal area in the space provided for **Outfall** number (e.g. **E1** for evaporation pond 1, **I2** for irrigation area No. 2, etc.).

Outfall Longitude and Latitude

Outfall No.	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)
I1	32.252953°	-98.175865°
I2	32.250234°	-98.181426°
I3	32.257028°	-98.175490°
I4	32.261027°	-98.179119°
I5	32.256366°	-98.181642°

Outfall Location Description

Outfall No.	Location Description

Description of Sampling Point(s) (if different from Outfall location)

Outfall No.	Description of sampling point

Outfall Flow Information – Permitted and Proposed

Outfall No.	Permitted Daily Avg Flow (MGD)	Permitted Daily Max Flow (MGD)	Proposed Daily Avg Flow (MGD)	Proposed Daily Max Flow (MGD)	Anticipated Discharge Date (mm/dd/yy)
I1-I5			No Limit	No limit	6/1/2025

Outfall No.	Permitted Daily Avg Flow (MGD)	Permitted Daily Max Flow (MGD)	Proposed Daily Avg Flow (MGD)	Proposed Daily Max Flow (MGD)	Anticipated Discharge Date (mm/dd/yy)

Outfall Discharge – Method and Measurement

Outfall No.	Pumped Discharge? Y/N	Gravity Discharge? Y/N	Type of Flow Measurement Device Used
I1-I5	Y	N	Flow Meter

Outfall Discharge – Flow Characteristics

Outfall No.	Intermittent Discharge? Y/N	Continuous Discharge? Y/N	Seasonal Discharge? Y/N	Discharge Duration (hrs/day)	Discharge Duration (days/mo)	Discharge Duration (mo/yr)
I1-I5	Y	N	Y	24	30	12

Outfall Wastestream Contributions

Outfall No. **S-1**

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
Storage	No Limit	N/A

Outfall No. Click to enter text.

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow

Outfall No. Click to enter text.

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow

Attachment: Click to enter text.

Item 5. Blowdown and Once-Through Cooling Water Discharges (Instructions, Page 43)

a. Indicate if the facility currently or proposes to:

☐ Yes ☒ No Use cooling towers that discharge blowdown or other wastestreams

☐ Yes ☒ No Use boilers that discharge blowdown or other wastestreams

☐ Yes ☒ No Discharge once-through cooling water

NOTE: If the facility uses or plans to use cooling towers or once-through cooling water, Item 12 **is required**.

b. If **yes** to any of the above, attach an SDS with the following information for each chemical additive.

- Manufacturers Product Identification Number
- Product use (e.g., biocide, fungicide, corrosion inhibitor, etc.)
- Chemical composition including CASRN for each ingredient
- Classify product as non-persistent, persistent, or bioaccumulative
- Product or active ingredient half-life
- Frequency of product use (e.g., 2 hours/day once every two weeks)
- Product toxicity data specific to fish and aquatic invertebrate organisms

- Concentration of whole product or active ingredient, as appropriate, in wastestream.

In addition to each SDS, attach a summary of the above information for each specific wastestream and the associated chemical additives. Specify which outfalls are affected.

Attachment: Click to enter text.

c. Cooling Towers and Boilers

If the facility currently or proposes to use cooling towers or boilers that discharge blowdown or other wastestreams to the outfall(s), complete the following table.

Cooling Towers and Boilers

Type of Unit	Number of Units	Daily Avg Blowdown (gallons/day)	Daily Max Blowdown (gallons/day)
Cooling Towers			
Boilers			

Item 6. Stormwater Management (Instructions, Page 44)

Will any existing/proposed outfalls discharge stormwater associated with industrial activities, as defined at *40 CFR § 122.26(b)(14)*, commingled with any other wastestream?

☐ Yes ☒ No

If **yes**, briefly describe the industrial processes and activities that occur outdoors or in a manner which may result in exposure of the activities or materials to stormwater: Click to enter text.

Item 7. Domestic Sewage, Sewage Sludge, and Septage Management and Disposal (Instructions, Page 44)

Domestic Sewage - Waste and wastewater from humans or household operations that is discharged to a wastewater collection system or otherwise enters a treatment works.

a. Check the box next to the appropriate method of domestic sewage and domestic sewage sludge treatment or disposal. Complete Worksheet 5.0 or Item 7.b if directed to do so.

☐ Domestic sewage is routed (i.e., connected to or transported to) to a WWTP permitted to receive domestic sewage for treatment, disposal, or both. Complete Item 7.b.

☐ Domestic sewage disposed of by an on-site septic tank and drainfield system. Complete Item 7.b.

☐ Domestic and industrial treatment sludge ARE commingled prior to use or disposal.

☐ Industrial wastewater and domestic sewage are treated separately, and the respective sludge IS NOT commingled prior to sludge use or disposal. Complete Worksheet 5.0.

☐ Facility is a POTW. Complete Worksheet 5.0.

☐ Domestic sewage is not generated on-site.

☐ Other (e.g., portable toilets), specify and Complete Item 7.b: Click to enter text.

b. Provide the name and TCEQ, NPDES, or TPDES Permit No. of the waste-disposal facility which receives the domestic sewage/septage. If hauled by motorized vehicle, provide the name and TCEQ Registration No. of the hauler.

Domestic Sewage Plant/Hauler Name

Plant/Hauler Name	Permit/Registration No.

Item 8. Improvements or Compliance/Enforcement Requirements (Instructions, Page 45)

a. Is the permittee currently required to meet any implementation schedule for compliance or enforcement?

☐ Yes ☒ No

b. Has the permittee completed or planned for any improvements or construction projects?

☐ Yes ☒ No

c. If **yes** to either 8.a **or** 8.b, provide a brief summary of the requirements and a status update: Click to enter text.

Item 9. Toxicity Testing (Instructions, Page 45)

Have any biological tests for acute or chronic toxicity been made on any of the discharges or on a receiving water in relation to the discharge within the last three years?

☐ Yes ☒ No

If **yes**, identify the tests and describe their purposes: Click to enter text.

Additionally, attach a copy of all tests performed which **have not** been submitted to the TCEQ or EPA. **Attachment:** Click to enter text.

Item 10. Off-Site/Third Party Wastes (Instructions, Page 45)

a. Does or will the facility receive wastes from off-site sources for treatment at the facility, disposal on-site via land application, or discharge via a permitted outfall?

☒ Yes ☐ No

If **yes**, provide responses to Items 10.b through 10.d below.

If **no**, proceed to Item 11.

b. Attach the following information to the application:

- List of wastes received (including volumes, characterization, and capability with on-site wastes).
- Identify the sources of wastes received (including the legal name and addresses of the generators).
- Description of the relationship of waste source(s) with the facility's activities.

Attachment: T.I

c. Is or will wastewater from another TCEQ, NPDES, or TPDES permitted facility commingled with this facility's wastewater after final treatment and prior to discharge via the final outfall/point of disposal?

☐ Yes ☒ No

If **yes**, provide the name, address, and TCEQ, NPDES, or TPDES permit number of the contributing facility and a copy of any agreements or contracts relating to this activity.

Attachment: Click to enter text.

d. Is this facility a POTW that accepts/will accept process wastewater from any SIU and has/is required to have an approved pretreatment program under the NPDES/TPDES program?

☐ Yes ☒ No

If **yes**, **Worksheet 6.0** of this application **is required**.

Item 11. Radioactive Materials (Instructions, Page 46)

a. Are/will radioactive materials be mined, used, stored, or processed at this facility?

☐ Yes ☒ No

If **yes**, use the following table to provide the results of one analysis of the effluent for all radioactive materials that may be present. Provide results in pCi/L.

Radioactive Materials Mined, Used, Stored, or Processed

Radioactive Material Name	Concentration (pCi/L)

b. Does the applicant or anyone at the facility have any knowledge or reason to believe that radioactive materials may be present in the discharge, including naturally occurring radioactive materials in the source waters or on the facility property?

☐ Yes ☐ No

If **yes**, use the following table to provide the results of one analysis of the effluent for all radioactive materials that may be present. Provide results in pCi/L. Do not include information provided in response to Item 11.a.

Radioactive Materials Present in the Discharge

Radioactive Material Name	Concentration (pCi/L)

Item 12. Cooling Water (Instructions, Page 46)

a. Does the facility use or propose to use water for cooling purposes?

☐ Yes ☒ No

If **no**, stop here. If **yes**, complete Items 12.b thru 12.f.

b. Cooling water is/will be obtained from a groundwater source (e.g., on-site well).

☐ Yes ☒ No

If **yes**, stop here. If **no**, continue.

c. Cooling Water Supplier

1. Provide the name of the owner(s) and operator(s) for the CWIS that supplies or will supply water for cooling purposes to the facility.

Cooling Water Intake Structure(s) Owner(s) and Operator(s)

CWIS ID				
Owner				
Operator				

2. Cooling water is/will be obtained from a Public Water Supplier (PWS)

☐ Yes ☒ No

If **no**, continue. If **yes**, provide the PWS Registration No. and stop here: PWS No. Click to enter text.

3. Cooling water is/will be obtained from a reclaimed water source?

☐ Yes ☒ No

If **no**, continue. If **yes**, provide the Reuse Authorization No. and stop here: Click to enter text.

4. Cooling water is/will be obtained from an Independent Supplier

☐ Yes ☒ No

If **no**, proceed to Item 12.d. If **yes**, provide the actual intake flow of the Independent Supplier's CWIS that is/will be used to provide water for cooling purposes and proceed: Click to enter text.

d. 316(b) General Criteria

1. The CWIS(s) used to provide water for cooling purposes to the facility has or will have a cumulative design intake flow of 2 MGD or greater.

☐ Yes ☒ No

2. At least 25% of the total water withdrawn by the CWIS is/will be used at the facility exclusively for cooling purposes on an annual average basis.

☐ Yes ☒ No

3. The CWIS(s) withdraw(s)/propose(s) to withdraw water for cooling purposes from surface waters that meet the definition of Waters of the United States in *40 CFR § 122.2*.

☐ Yes ☒ No

If **no**, provide an explanation of how the waterbody does not meet the definition of Waters of the United States in *40 CFR § 122.2*: Click to enter text.

If **yes** to all three questions in Item 12.d, the facility **meets** the minimum criteria to be subject to the full requirements of Section 316(b) of the CWA. Proceed to **Item 12.f**.

If **no** to any of the questions in Item 12.d, the facility **does not meet** the minimum criteria to be subject to the full requirements of Section 316(b) of the CWA; however, a determination is required based upon BPJ. Proceed to **Item 12.e**.

e. The facility does not meet the minimum requirements to be subject to the fill requirements of Section 316(b) **and uses**/proposes **to use cooling towers**.

☐ Yes ☐ No

If **yes**, stop here. If **no**, complete Worksheet 11.0, Items 1.a, 1.b.1-3 and 6, 2.b.1, and 3.a to allow for a determination based upon BPJ.

f. Oil and Gas Exploration and Production

1. The facility is subject to requirements at 40 CFR Part 435, Subparts A or D.

☐ Yes ☐ No

If **yes**, continue. If **no**, skip to Item 12.g.

2. The facility is an existing facility as defined at 40 CFR § 125.92(k) or a new unit at an existing facility as defined at 40 CFR § 125.92(u).

☐ Yes ☐ No

If **yes**, complete Worksheet 11.0, Items 1.a, 1.b.1-3 and 6, 2.b.1, and 3.a to allow for a determination based upon BPJ. If **no**, skip to Item 12.g.3.

g. Compliance Phase and Track Selection

1. Phase I - New facility subject to 40 CFR Part 125, Subpart I

☐ Yes ☐ No

If **yes**, check the box next to the compliance track selection, attach the requested information, and complete Worksheet 11.0, Items 2 and 3, and Worksheet 11.2.

☐ Track I - AIF greater than 2 MGD, but less than 10 MGD

- Attach information required by *40 CFR §§ 125.86(b)(2)-(4)*.

☐ Track I - AIF greater than 10 MGD

- Attach information required by *40 CFR § 125.86(b)*.

☐ Track II

- Attach information required by *40 CFR § 125.86(c)*.

Attachment: Click to enter text.

2. Phase II - Existing facility subject to 40 CFR Part 125, Subpart J

   ☐ Yes ☐ No

   If **yes**, complete Worksheets 11.0 through 11.3, as applicable.

3. Phase III - New facility subject to 40 CFR Part 125, Subpart N

   ☐ Yes ☐ No

   If **yes**, check the box next to the compliance track selection and provide the requested information.

   ☐ Track I - Fixed facility

   - Attach information required by 40 CFR § 125.136(b) and complete Worksheet 11.0, Items 2 and 3, and Worksheet 11.2.

   ☐ Track I - Not a fixed facility

   - Attach information required by 40 CFR § 125.136(b) and complete Worksheet 11.0, Item 2 (except CWIS latitude/longitude under Item 2.a).

   ☐ Track II - Fixed facility

   - Attach information required by 40 CFR § 125.136(c) and complete Worksheet 11.0, Items 2 and 3.

   Attachment: Click to enter text.

Item 13. Permit Change Requests (Instructions, Page 48)

This item is only applicable to existing permitted facilities.

a. Is the facility requesting a **major amendment** of an existing permit?

   ☐ Yes ☒ No

   If **yes**, list each request individually and provide the following information: 1) detailed information regarding the scope of each request and 2) a justification for each request. Attach any supplemental information or additional data to support each request.

Click to enter text.

b. Is the facility requesting any **minor amendments** to the permit?

   ☐ Yes ☒ No

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 3.0: LAND APPLICATION OF EFFLUENT

This worksheet **is required** for all applications for a permit to disposal of wastewater by land application (i.e., TLAP)).

Item 1. Type of Disposal System (Instructions, Page 69)

Check the box next to the type of land disposal requested by this application:

- ☒ Irrigation
- ☐ Evaporation
- ☐ Evapotranspiration beds
- ☐ Drip irrigation system
- ☐ Subsurface application
- ☐ Subsurface soils absorption
- ☒ Surface application
- ☐ Other, specify: Click to enter text.

Item 2. Land Application Area (Instructions, Page 69)

Land Application Area Information

Effluent Application (gallons/day)	Irrigation Acreage (acres)	Describe land use & indicate type(s) of crop(s)	Public Access? (Y/N)
No Limit	223	Coastal Bermudagrass, Sorghum, and Small Grains	N

Item 3. Annual Cropping Plan (Instructions, Page 69)

Attach the required cropping plan that includes each of the following:

- Cool and warm season plant species
- Breakdown of acreage and percent of total acreage for each crop
- Crop growing season
- Harvesting method/number of harvests
- Minimum/maximum harvest height
- Crop yield goals
- Soils map
- Nitrogen requirements per crop
- Additional fertilizer requirements
- Supplemental watering requirements
- Crop salt tolerances
- Justification for not removing existing vegetation to be irrigated

Attachment: T.D

Item 4. Well and Map Information (Instructions, Page 70)

a. Check each box to confirm the required information is shown and labeled on the attached USGS map:

☒ The exact boundaries of the land application area

☒ On-site buildings

☒ Waste-disposal or treatment facilities

☒ Effluent storage and tailwater control facilities

☒ Buffer zones

☒ All surface waters in the state onsite and within 500 feet of the property boundaries

☒ All water wells within ½-mile of the disposal site, wastewater ponds, or property boundaries

☒ All springs and seeps onsite and within 500 feet of the property boundaries

Attachment: T.A

b. List and cross reference all water wells located on or within 500 feet of the disposal site, wastewater ponds, or property boundaries in the following table. Attach additional pages as necessary to include all of the wells.

Well and Map Information Table

Well ID	Well Use	Producing? Y/N/U	Open, cased, capped, or plugged?	Proposed Best Management Practice
1	Domestic	Y	Cased	150—ft Buffer
2	Domestic	Y	Cased	150-ft Buffer
3	Domestic	Y	Cased	150-ft Buffer
4	Domestic	Y	Cased	150-ft Buffer
5	Domestic	Y	Cased	150-ft Buffer
6	Domestic	Y	Cased	150-ft Buffer
7	Domestic	Y	Cased	150-ft Buffer
8	PWS	Y	Cased	500-ft Buffer
9	Domestic	Y	Cased	150-ft Buffer
10	Domestic	Y	Cased	150-ft Buffer
11	Domestic	Y	Cased	150-ft Buffer
12	Domestic	Y	Cased	150-ft Buffer
13	Domestic	Y	Cased	150-ft Buffer
14	Domestic	Y	Cased	150-ft Buffer
15	Domestic	Y	Cased	150-ft Buffer
16	Domestic	Y	Cased	150-ft Buffer

17	Domestic	Y	Cased	150-ft Buffer
18	Domestic	Y	Cased	150-ft Buffer
34	Domestic	Y	Cased	150-ft Buffer
35	Domestic	Y	Cased	150-ft Buffer
36	Domestic	Y	Cased	150-ft Buffer
37	Domestic	Y	Cased	150-ft Buffer
38	Domestic	Y	Cased	150-ft Buffer
39	Domestic	Y	Cased	150-ft Buffer
40	Domestic	Y	Cased	150-ft Buffer
41	Domestic	Y	Cased	150-ft Buffer
42	Domestic	Y	Cased	150-ft Buffer
43	Domestic	Y	Cased	150-ft Buffer
44	Domestic	Y	Cased	150-ft Buffer
45	Domestic	Y	Cased	150-ft Buffer
46	Domestic	Y	Cased	150-ft Buffer

Attachment: T.E

c. Groundwater monitoring wells or lysimeters are/will be installed around the land application site or wastewater ponds.

☐ Yes ☒ No

If **yes**, provide the existing/proposed location of the monitoring wells or lysimeters on the site map attached for Item 4.a. Additionally, attach information on the depth of the wells or lysimeters, sampling schedule, and monitoring parameters for TCEQ review, possible modification, and approval.

Attachment: Click to enter text.

d. Attach a short groundwater technical report using *30 TAC § 309.20(a)(4)* as guidance. **Attachment: T.F**

Item 5. Soil Map and Soil Information (Instructions, Page 71)

Check each box to confirm that the following information is attached:

a. ☒ USDA NRCS Soil Survey Map depicting the area to be used for land application with the locations identified by fields and crops.

b. ☒ Breakdown of acreage and percent of total acreage for each soil type.

c. ☒ Copies of laboratory soil analyses. **Attachment:** T.G

Item 6. Effluent Monitoring Data (Instructions, Page 72)

a. Completion of Table 14 **is required** for all **renewal** and **major amendment** applications. Complete the table with monitoring data for the previous two years for all parameters

regulated in the current permit. An additional table has been provided with blank headers for parameters regulated in the current permit which are not listed in Table 14.

Table 14 for Outfall No.: Click to enter text. **Samples are (check one): ☐ Composite ☐ Grab**

Date (mo/yr)	Daily Avg Flow (gpd)	BOD5 (mg/L)	TSS (mg/L)	Nitrogen (mg/L)	Conductivity (mmhos/cm)	Total acres irrigated	Hydraulic Application rate (acre-feet/month)

b. Use this table to provide effluent analysis for parameters regulated in the current permit which are not listed in Table 14.

Additional Parameter Effluent Analysis

Date (mo/yr)							

Date (mo/yr)							

c. Attach an explanation of all persistent excursions to permitted parameters and corrective actions taken. **Attachment:** Click to enter text.

Item 7. Pollutant Analysis (Instructions, Page 72)

a. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (e.g., 05/01/2018-05/30/2018): 8/28/2024-10/17/2024

b. ☒ Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.

c. Complete Tables 15 and 16.

Table 15 for Outfall No.: **Schreiber Lagoon** Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
BOD (5-day)	ND	49.7	61.1	ND
CBOD (5-day)	ND	21.0	ND	ND
Chemical oxygen demand	240	211	265	576
Total organic carbon	26.4	22.5	22.5	15.1
Dissolved oxygen	8.56	8.90	8.11	8.86
Ammonia nitrogen	2.34	2.79	0.363	0.106
Total suspended solids	132	165	258	347
Nitrate nitrogen	1.89	ND	ND	31.6
Total organic nitrogen	5.09	ND	17	13.1
Total phosphorus	7.46	5.50	8.42	10.3
Oil and grease	ND	ND	ND	ND
Total residual chlorine	ND	0.294	0.135	ND
Total dissolved solids	3720	3350	3260	3840
Sulfate	156	148	157	183
Chloride	1520	1340	1430	1370
Fluoride	ND	ND	ND	ND
Total alkalinity (mg/L as CaCO3)	990	522	865	825
Temperature (°F)				
pH (standard units)	8.77	8.73	8.69	8.20

Table 16 for Outfall No.: **Schreiber Lagoon** Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	MAL (µg/L)
Aluminum, total	0.628	0.580	1.37	0.898	2.5
Antimony, total	ND	ND	ND	ND	5
Arsenic, total	ND	ND	ND	ND	0.5
Barium, total	0.0194	0.0232	0.0348	0.0362	3
Beryllium, total	ND	ND	ND	ND	0.5
Cadmium, total	ND	ND	ND	ND	1
Chromium, total	ND	ND	ND	ND	3
Chromium, hexavalent	ND	ND	ND	ND	3
Chromium, trivalent	ND	ND	ND	ND	N/A
Copper, total	ND	ND	ND	ND	2
Cyanide, available	ND	ND	ND	ND	2/10

Pollutant	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	MAL (µg/L)
Lead, total	ND	ND	ND	ND	0.5
Mercury, total	ND	ND	ND	ND	0.005/0.0005
Nickel, total	ND	ND	ND	ND	2
Selenium, total	ND	ND	ND	ND	5
Silver, total	ND	ND	ND	ND	0.5
Thallium, total	ND	ND	ND	ND	0.5
Zinc, total	ND	ND	ND	ND	5.0

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 3.1: SURFACE LAND APPLICATION AND APPLICATION

This worksheet **is required** for all applications for a permit to disposal of wastewater by surface land application or evaporation.

Item 1. Edwards Aquifer (Instructions, Page 73)

a. Is the facility subject to *30 TAC Chapter 213*, Edwards Aquifer Rules?

☐ Yes ☒ No

If **no**, proceed to Item 2. If **yes**, complete Items 1.b **and** 1.c.

b. Check the box next to the subchapter applicable to the facility.

☐ 30 TAC Chapter 213, Subchapter A

☐ 30 TAC Chapter 213, Subchapter B

c. If *30 TAC Chapter 213, Subchapter A* applies, attach **either**: 1) a Geologic Assessment (if conducted in accordance with *30 TAC § 213.5*) **or** 2) a report that contains the following:

- A description of the surface geological units within the proposed land application site and wastewater pond area.
- The location and extent of any sensitive recharge features in the land application site and wastewater pond area
- A list of any proposed BMPs to protect the recharge features.

Attachment: Click to enter text.

Item 2. Surface Spray/Irrigation (Instructions, Page 73)

a. Provide the following information on the irrigation operations:

Area under irrigation (acres): 223

Design application rate (acre-ft/acre/yr): 3.82

Design application frequency (hours/day): 24

Design application frequency (days/week): 7

Design total nitrogen loading rate (lbs nitrogen/acre/year): 300

Average slope of the application area (percent): 1-3

Maximum slope of the application area (percent): 4.2

Irrigation efficiency (percent): 85

Effluent conductivity (mmhos/cm): 1.0

Soil conductivity (mmhos/cm): 6.5

Curve number: 71

Describe the application method and equipment: Pivot & Reel Gun

b. Attach a detailed engineering report which includes a water balance, storage volume calculations, and a nitrogen balance. **Attachment:** T.H

Item 3. Evaporation Ponds (Instructions, Page 74)

a. Daily average effluent flow into ponds: Click to enter text. gallons per day

b. Attach a separate engineering report of evaporation calculations for average long-term and worst-case critical conditions. **Attachment:** Click to enter text.

Item 4. Evapotranspiration Beds (Instructions, Page 74)

a. Provide the following information on the evapotranspiration beds:

Number of beds: Click to enter text.

Area of bed(s) (acres): Click to enter text.

Depth of bed(s) (feet): Click to enter text.

Void ratio of soil in the beds: Click to enter text.

Storage volume within the beds (include units): Click to enter text.

Description of any lining to protect groundwater: Click to enter text.

b. Attach a certification by a licensed Texas professional engineer that the liner meets TCEQ requirements. **Attachment:** Click to enter text.

c. Attach a separate engineering report with water balance, storage volume calculations, and description of the liner. **Attachment:** Click to enter text.

Item 5. Overland Flow (Instructions, Page 74)

a. Provide the following information on the overland flow:

Area used for application (acres): Click to enter text.

Slopes for application area (percent): Click to enter text.

Design application rate (gpm/foot of slope width): Click to enter text.

Slope length (feet): Click to enter text.

Design BOD5 loading rate (lbs BOD5/acre/day): Click to enter text.

Design application frequency (hours/day): Click to enter text.

Design application frequency (days/week): Click to enter text.

b. Attach a separate engineering report with the method of application and design requirements according to *30 TAC § 217.212*. **Attachment:** Click to enter text.

INDUSTRIAL TECHNICAL REPORT

Attachments

Prepared For:

Vanden Berge Farms
2090 CR 176
Stephenville, TX 76401

September 5, 2024

Prepared By:

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

3404 Airway Boulevard ♦ Amarillo, Texas 79118 ♦ Tel 806/353-6123 ♦ Fax 806/353-4132

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LIST OF FIGURES

T.A: FACILITY MAPS

T.A.1 Process Flow Diagram

Figure T.A.1, Process Flow Diagram, provides an overall schematic of the processes at the site.

T.A.2 Vicinity Map

Figure T.A.2, Vicinity Map, is a general highway map generated in AutoCAD using Tiger Primary and Secondary roads data from geospatial Data Gateway at http://datagateway.nrcs.usda.gov/ (retrieved 2020). The location of the facility is depicted on the map.

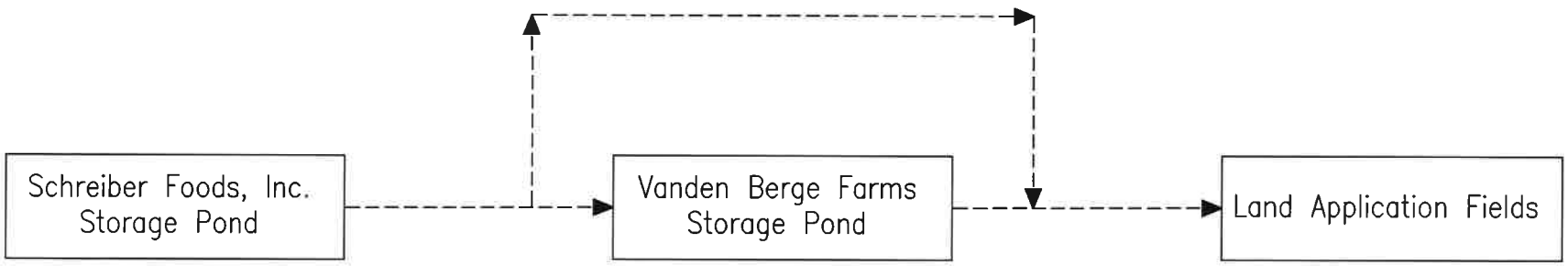
T.A.3 7.5 Minute USGS Map

Figure T.A.3, entitled 7.5 Minute USGS Map, is a seamless, high-quality copy of the 7.5-Minute USGS quadrangle map (Stephenville and Knob Hill, TX quadrangles) that shows the boundary of the land owned, operated, or controlled by the facility and used as part of the application; and all springs, lakes, or ponds located on-site and within 1 mile of the property boundary.

T.A.4 Site Map

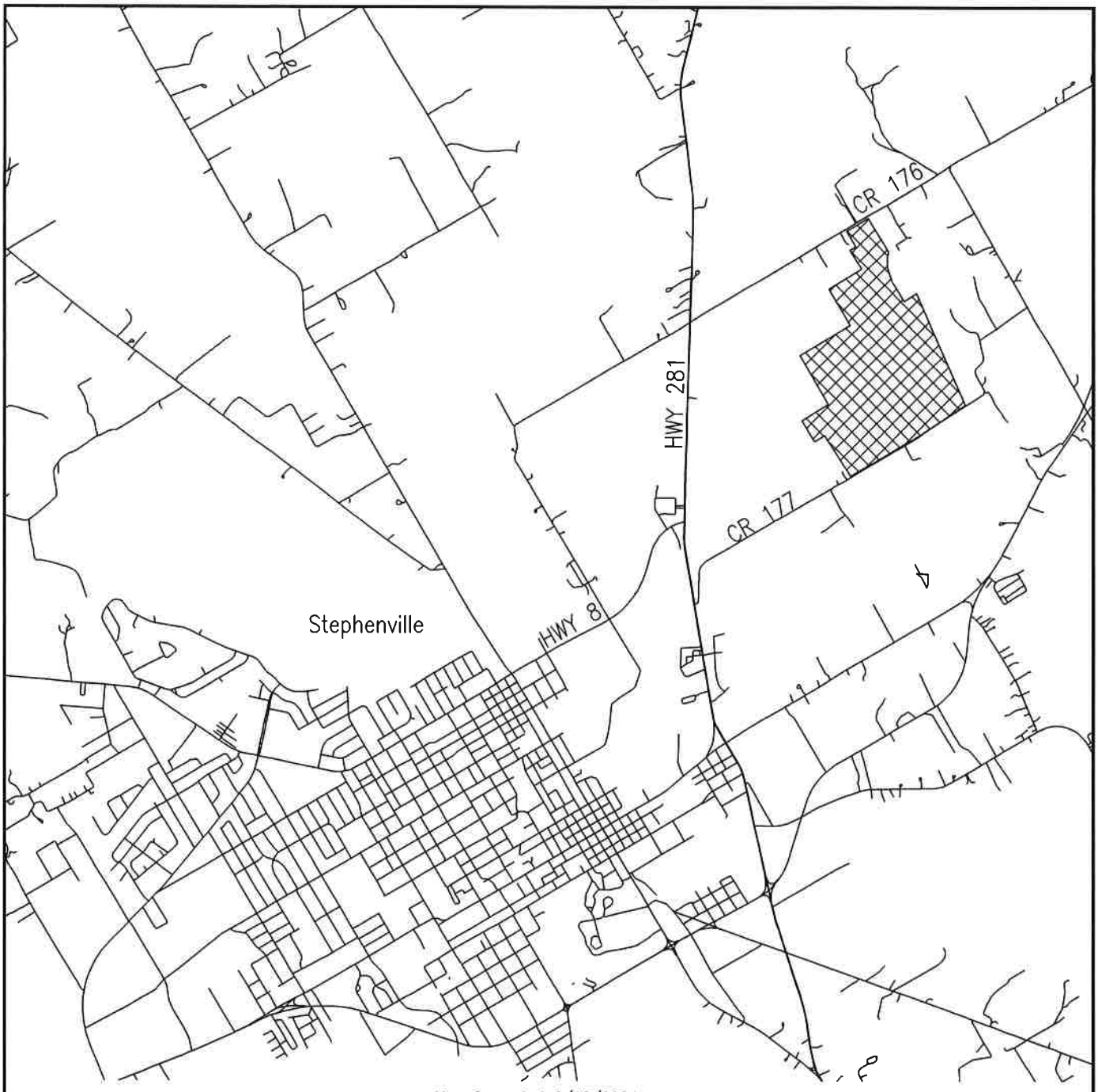
Figure T.A.4, Site Map, is a scaled drawing of the entire property to be permitted showing the locations of the following:

- Storage Pond
- Waste Disposal Areas
- Buffer Zones
- Freshwater Ponds



Legend:
----- Denotes Liquid

Vanden Berge Farms Stephenville, TX Erath County	Process Flow Diagram Figure T.A.1 Page 2	ENVIRO-AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132



Map Generated 8/12/2024

Legend:
Denotes Facility

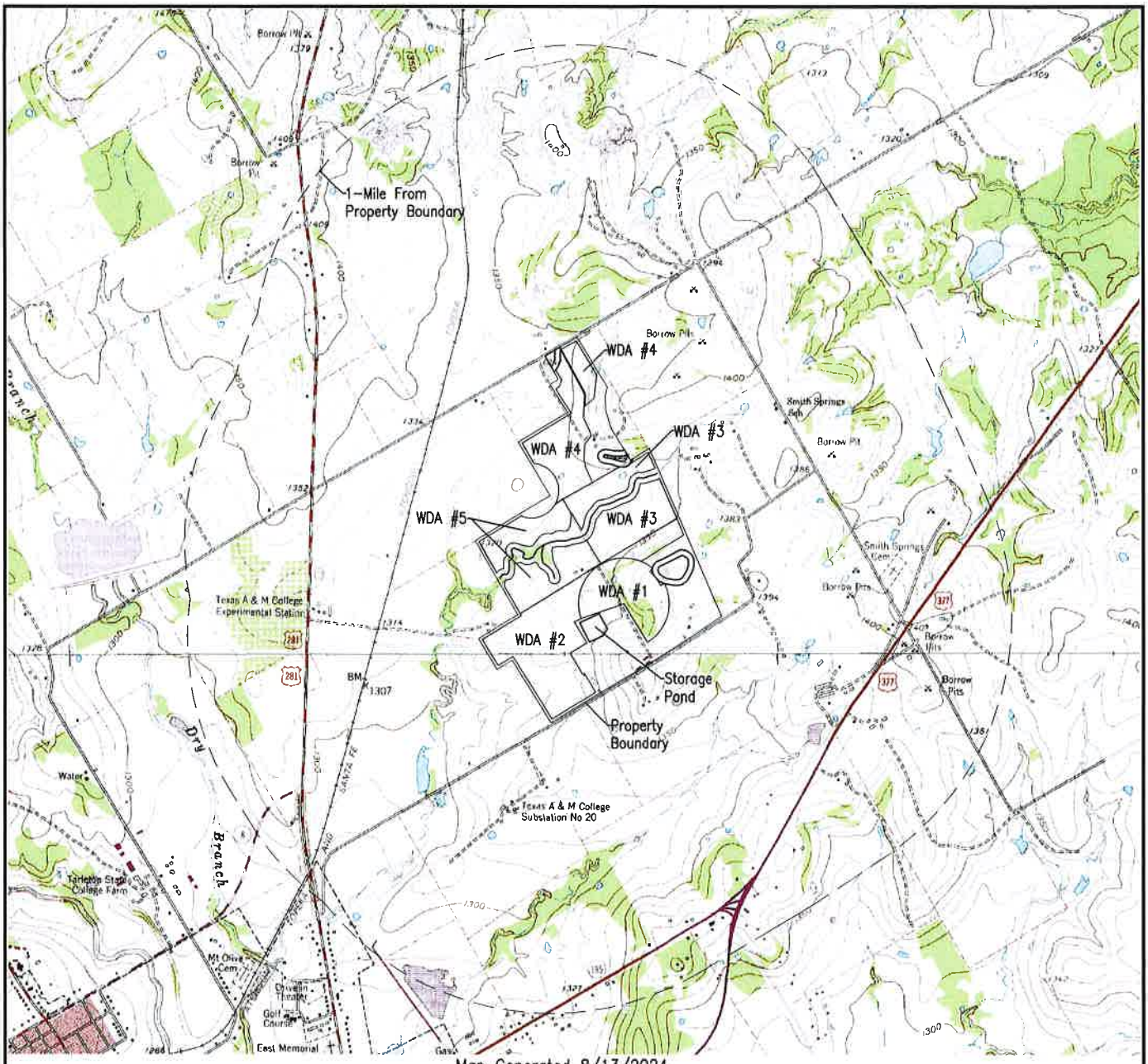
N
W E
S

2 miles 0 2 miles 4 miles

SCALE: 1" = 4 miles

Source: USDA–NRCS. Geospatial Data Gateway. Available at: http://datagateway.nrcs.usda.gov/. Tiger Roads, 2010 – Accessed December 2017

Vanden Berge Farms Stephenville, Texas Erath County	Vicinity Map Figure T.A.2 Page 3	ENVIRO–AG EAE ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132



Map Generated 8/13/2024

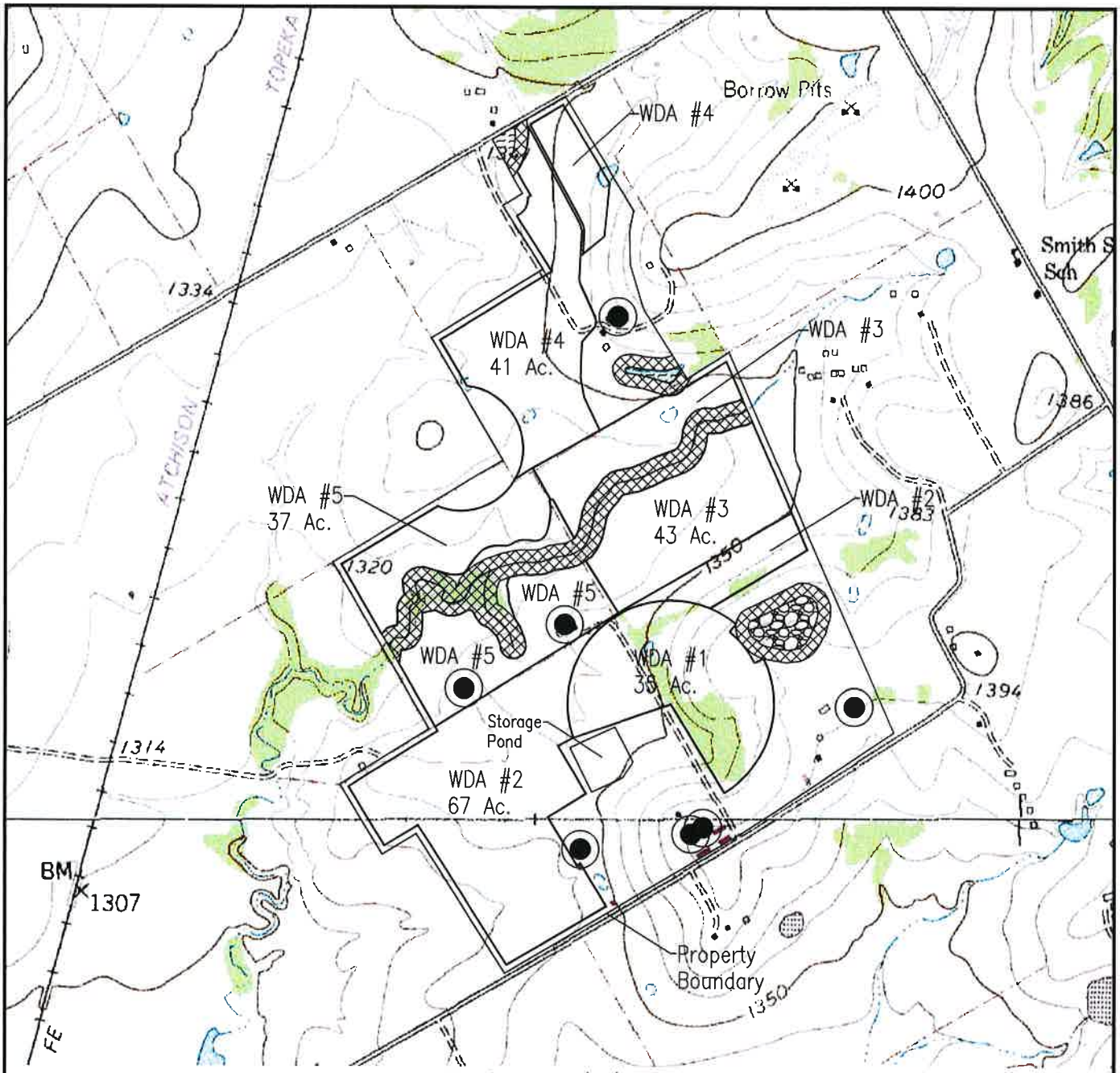
N
W E
S

1,400' 0 1,400' 2,800'

SCALE: 1" = 2,800'

Source: USDA-NRCS. Geospatial Data Gateway. Available at: http://datagateway.nrcs.usda.gov/. Digital Raster Graphic County Mosaic by NRCS - Accessed December 2016.

Vanden Berge Farms Stephenville, TX Erath County	7.5 Minute USGS Map Figure T.A.3 Page 4	ENVIRO-AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132



Map Generated 8/13/2024

LEGEND:

- Denotes Fresh Water Pond
- Denotes 100–ft. Buffer Zone
- Denotes Borrow Area
- Denotes Well with Buffer

N
W E
S

600' 0 1200' 600'

SCALE: 1" = 1200'

Source: USDA–NRCS. Geospatial Data Gateway. Available at: http://datagateway.nrcs.usda.gov/. Digital Raster Graphic County Mosaic by NRCS – Accessed December 2016.

Vanden Berge Farms Stephenville, TX Erath County	Site Map Figure T.A.4 Page 5	ENVIRO–AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

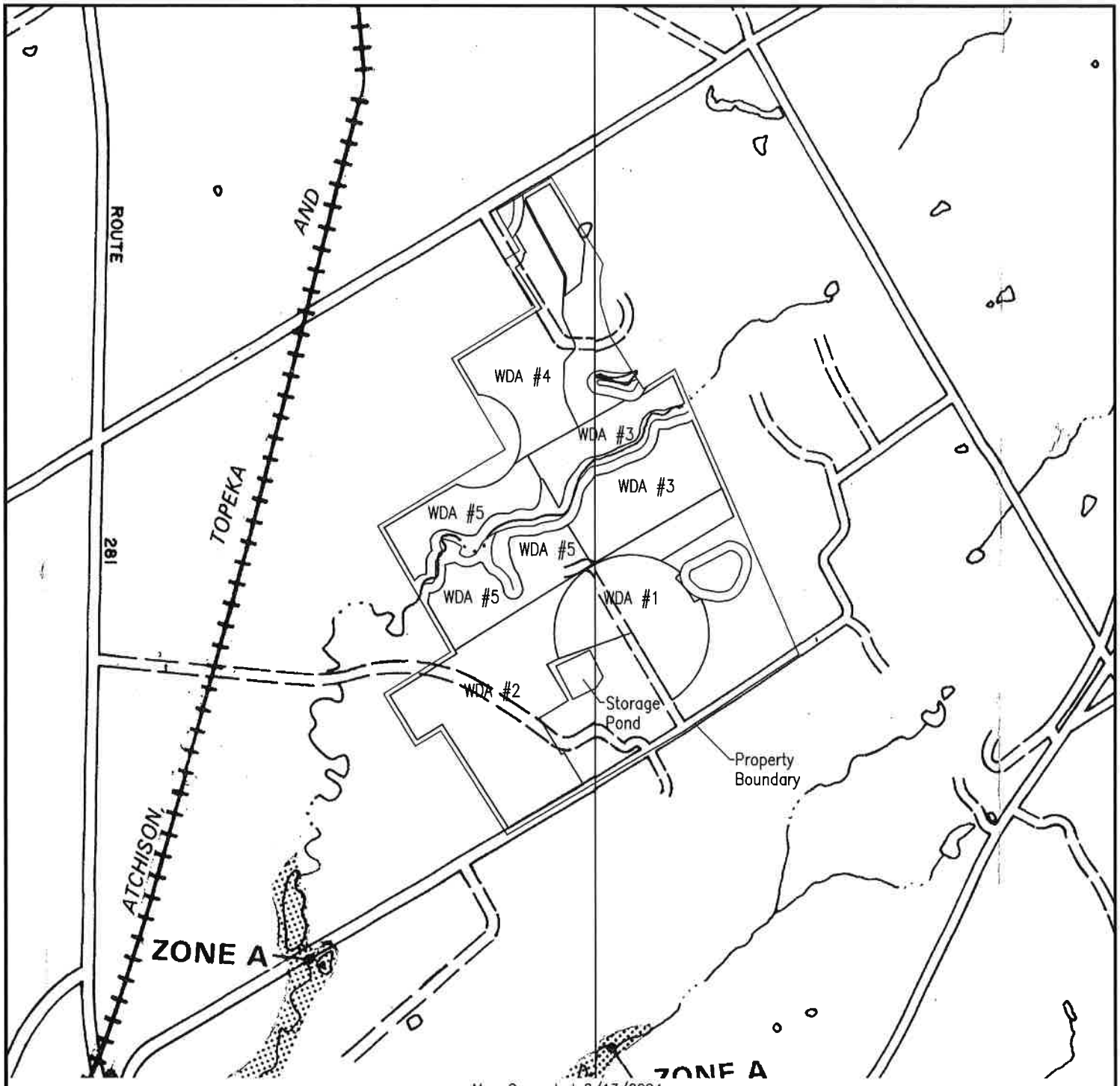
T.B: FLOODPLAIN INFORMATION

T.B.1 FEMA Floodplain Map

Figure T.B.1, FEMA Floodplain Map, shows the storage pond and waste disposal areas overlain on a copy of the FEMA map panels for this area of Erath County.

T.B.2 Protective Measures

According to the FEMA map for Erath County, the storage pond and waste disposal areas are not located in a 100-year floodplain.



Map Generated 8/13/2024

LEGEND:

Zone A Denotes Flood Zone

N
W E
S

750' 0 750' 1,500'

SCALE: 1" = 1500'

Source: FEMA Flood Map

Vanden Berge Farms Stephenville, TX Erath County	FEMA Floodplain Map Figure T.B.1 Page 7	ENVIRO-AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

T.C: STORAGE POND CERTIFICATIONS

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

Corporate Office:
3404 Airway Blvd.
Amarillo TX 79118

Central Texas:
9855 FM 847
Dublin TX 76446

New Mexico:
110 East Mill Road
Artesia NM 88210

CERTIFICATION

Schreiber Foods Vanden Berge
Erath County, Texas

Capacity Certification – RCS #1

An as-built survey was conducted by Enviro-Ag Engineering, Inc., to determine the total capacity of RCS #1. The capacity was calculated to be:

Structure	**Capacity**
RCS #1	*25.84 acre-feet*

Respectfully submitted,

4/3/24

Norman Mullin, P.E. – License No. 66107
Enviro-Ag Engineering, Inc. – Firm No. 2507

CALCULATION OF SPECIFIC DISCHARGE

SITE:	**Schreiber Foods Vanden Berge**	**NHM**
LOCATION:	**Erath County, Texas**	**May '24**
STRUCTURE:	**RCS #1**	

This worksheet calculates the specific discharge through a soil liner based on the measured thickness of the installed clay liner and the results of the permeability testing. The maximum allowable specific discharge of the installed 36 inch thick liner at 1.1 x E-06 cm/sec is 0.1587 in/day.

	Hydraulic Conductivity Results of Core Samples				
Laboratory Sample I.D.	6531	6532	6533	6534	
1. Water Depth, feet	11	11	11	11	
2. Liner Thickness, inches	18.0	18.0	18.0	18.0	
3. Hydraulic Conductivity, cm/sec	4.90E-08	3.70E-08	2.80E-08	3.00E-08	
4. Calculated specific discharge, v'					
Seepage Rate, inches/day	0.0139	0.0105	0.0079	0.0085	
Maximum Seepage Rate, inches/day	0.1587	0.1587	0.1587	0.1587	

NOTES:

(1) Water depth of the pond in feet.

(2) Soil liner thickness in inches.

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

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

where: v' = Specific Discharge of area representative of core sample, inches/day

d = Measure Liner Thickness at core sample location, feet

k = Hydaulic Conductivity of liner based on core sample testing, inches/day

H = Maximum Water Depth, feet

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

Norman Mullin 5/15/24

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

T.D: AGRONOMIC MANAGEMENT PLAN

AGRONOMIC MANAGEMENT PLAN WQ0000000000

Prepared For:

Vanden Berge Farms

2090 CR 176

Stephenville, TX 76401

October 28, 2024

Prepared By:

ENVIRO-AG ENGINEERING, INC.
EAE
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AGRONOMIC MANAGEMENT PLAN

Purpose

This document supports the Vanden Berge Farms land application of waste as prescribed by the Texas Land Application Permit (TLAP) through the Texas Commission on Environmental Quality (TCEQ). The purpose of this Agronomic Management Plan (AMP) is to illustrate the beneficial use of industrial effluent from Schreiber Foods, Inc. All effluent applications are managed in a manner that ensures environmental stability and maximum crop production.

This plan is updated on an annual basis to address current soil and waste analysis, climatic data, previous water demands and proposed crop water usage for the next plan year. Application rate calculations will be developed and maintained on site for use by the operator to determine application timing and rates.

Background

Vanden Berge Farms is applying for a TLAP authorization through the TCEQ to beneficially irrigate treated effluent from Schreiber Foods, Inc. onto 223 acres of irrigated farmland.

General Objectives of AMP

- Present information pertaining to the effluent, soils, and crops.
- Present irrigation tract(s) layout Figure 1.1.
- Present information pertaining to crop rotations and yield goals to illustrate the appropriateness of the selected crops for use with this project.
- A description of wastewater usage for irrigation. This will include information on actual effluent application rates to meet the crop hydraulic/nutrient demands and maximize crop yield goals.
- An estimation of the annual loading of nutrients supplied by the effluent.
- An overview of wastewater/nutrient storage is needed in the soil profile, and a pre-plant scenario is needed to serve as a starter fertilizer.
- Monitoring soil profiles to ensure no saturated soils are present within 3 feet of the surface.

Overview

Treated effluent from Schreiber Foods, Inc. will be pumped to the storage lagoon. The treated effluent is distributed to high-production farmland that has been typically planted with bermudagrass or Sorghum. These crops are intensively managed for maximum production. The stated crop yield goals will be provided by data from the NRCS or from historical data obtained from the farmer.

The landowner uses management practices to ensure maximized crop production. High residue crops are utilized, and deep tillage is used when necessary to maximize the soil's ability to store and retain water, allowing for maximum root penetration.

Site Features

The regional climate is classified as humid subtropical, with hot summers and mild to cool winters. The growing season averages 220 frost-free days. The average annual rainfall is 30-35 inches and generally occurs during the warm-season months of May, June, July, and August.

Most precipitation occurs during the growing seasons for bermudagrass when evapotranspiration is highest. However, optimum yields can only be achieved through supplemental irrigation of the crops due to low rainfall and high evaporative rates. Most cropping systems require preseason irrigation with growing season application depending upon stored water to produce the maximum yield goals. These are standard operational production practices in this area. The permittee requests preseason irrigation up to 30 days before crop planting to achieve optimum production. This will allow the facility to manage application events to build up a moisture and nutrient profile in the soil before planting. This management tool would reduce the need to use groundwater for pre-water and the costs associated with pre-plant starter fertilizers.

Soils

According to the information contained in the Erath County Soil Survey, soils of the 223-acre irrigation tract consist of; Blanket, Bolar-Denton, Bastsil, Clairette, Fairy-Hico, Frio, Purves-Dugout-Maloterre, Hassle, and Windthorst series. The physical and hydrological properties of these soils are illustrated in Table 1 below. More soil information can be found in supporting documentation.

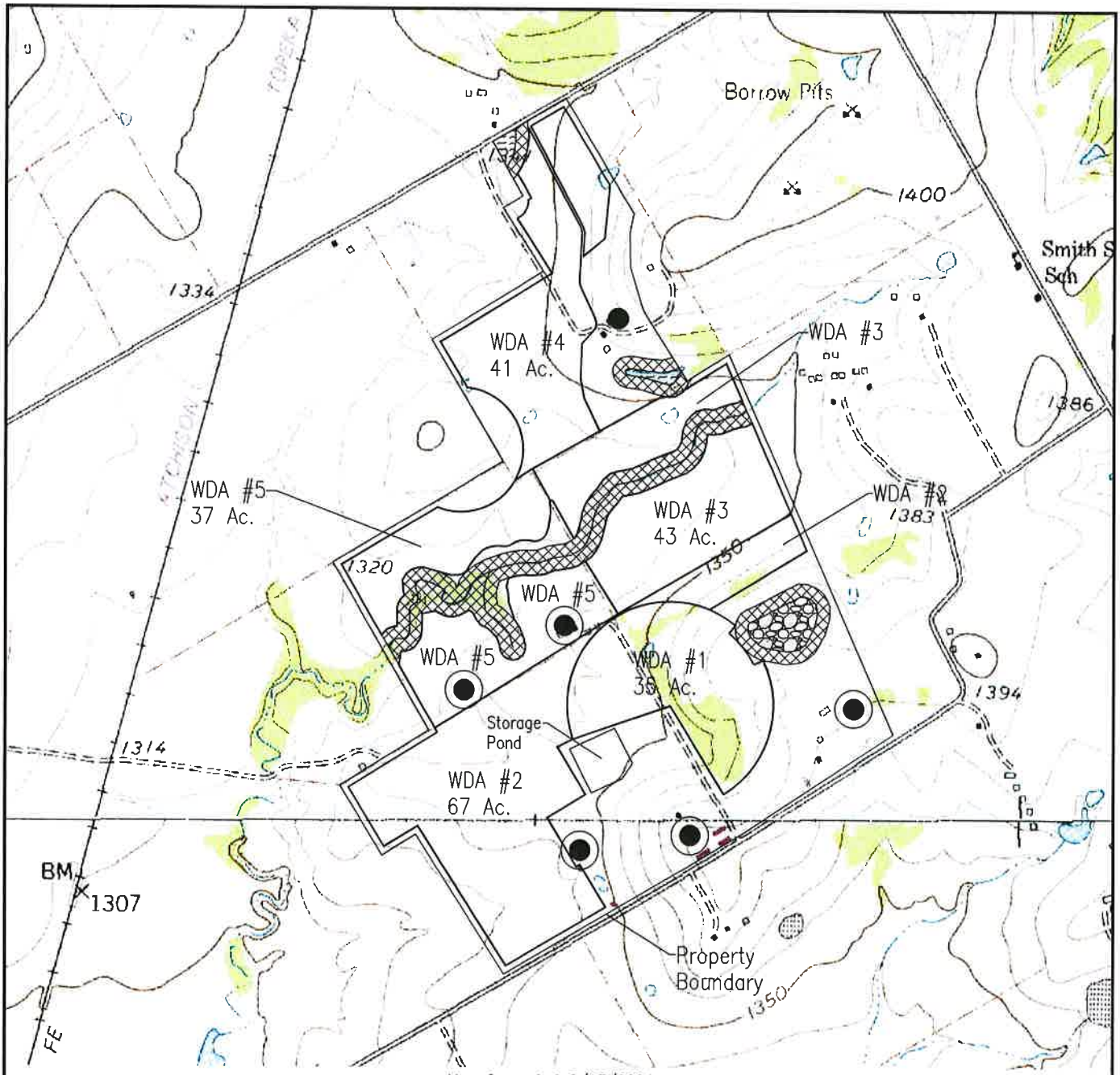
Table 1: Estimated Soil Properties

Soil Series & Map ID	Slope (%)	HSG	Depth (in)	USDA Soil Texture	Permeability / Infiltration Rate(in/hr.)	Available Water Capacity (in/in of soil)
BaB – Blanket	1-3	C	0-14 14-40	Clay Loam	0.6-2.0 0.06-0.6	0.15-0.20 0.12-0.20
BdC - Bolar	3-5	C	0-16 16-32	Clay Loam	0.6-2.0 0.6-2.0	0.17-0.21 0.16-0.20
BdC – Denton	3-5	D	0-10 10-28 28-32	Silty Clay	0.06-0.20 0.06-0.20 0.06-0.20	0.11-0.15 0.09-0.14 0.09-0.13
BsB – Bastsil	1-3	B	0-8 8-15 15-34	Sandy Loam	2.0-6.0 2.0-6.0 0.6-2.0	0.12-0.16 0.12-0.16 0.12-0.16
BsC	3-5	B	0-9 9-15	Fine Sandy Loam	2.0-6.0 2.0-6.0	0.12-0.16 0.12-0.16

Soil Series & Map ID	Slope (%)	HSG	Depth (in)	USDA Soil Texture	Permeability / Infiltration Rate(in/hr.)	Available Water Capacity (in/in of soil)
			15-38		0.6-2.0	0.12-0.16
CtB – Clairette	1-3	C	0-4 4-10 10-26	Very Fine Sandy Loam	2.0-6.0 0.6-2.0 0.20-0.6	0.10-0.17 0.15-0.19 0.10-0.18
CtC – Clairette	3-5	C	0-4 4-10 10-26	Loam	0.6-2.0 0.6-2.0 0.20-0.6	0.15-0.19 0.15-0.19 0.10-0.18
FhC2 – Fairy	1-5	B	0-13 13-45	Very Fine Sandy Loam	2.0-6.0 0.6-2.0	0.10-0.17 0.05-0.17
FhC2 – Hico	1-5	B	0-12 12-51	Fine Sandy Loam	2.0-6.0 0.6-2.0	0.10-0.15 0.05-0.17
FriA – Frio	0-1	C	0-22 22-40	Silty Clay	0.20-0.6 0.20-0.6	0.12-0.20 0.08-0.16
Pd – Purves	1-20	D	0-8 8-12 12-14	Stony Clay	0.06-0.20 0.06-0.6 0.06-0.6	0.11-0.20 0.08-0.18 0.04-0.07
Pd – Dugout	1-20	D	0-8 8-18	Gravelly Clay	0.20-0.6 0.20-0.6	0.06-0.15 0.07-0.16
Pd – Maloterre	1-20	D	0-8	Gravelly Clay Loam	0.6-2.0	0.06-0.11
WaB – Hassee	1-3	D	0-12 12-50	Fine Sandy Loam	0.6-2.0 0.001-0.06	0.11-0.17 0.12-0.18
WaB2 – Hassee	1-3	D	0-6 6-50	Fine Sandy Loam	0.6-2.0 0.001-0.06	0.11-0.17 0.12-0.18
WkA – Hassee	0-2	D	0-18 18-55	Fine Sandy Loam	0.6-2.0 0.001-0.06	0.11-0.17 0.12-0.18
WnD3 – Windthorst	1-8	C	0-6 6-16- 16-25	Sandy Clay	0.20-2.0 0.20-0.6 0.20-0.6	0.11-0.14 0.15-0.19 0.16-0.20
WoB – Windthorst	1-5	C	0-8 8-33	Very Fine Sandy Loam	2.0-6.0 0.20-0.6 0.20-0.6	0.10-0.17 0.10-0.20 0.10-0.20

As depicted in Table 1, the soils illustrate slow water movement in the lower profiles. Care will be taken to ensure that these limitations are considered when calculating the application rates of specific irrigation areas. Specifically, application rates per application event will be decreased with an increase in the total number of events to ensure that the crops' nutrient and water demands are met.

Currently agricultural practices are in place to maximize crop yields and the ability for the soil to retain and store water. Furthermore, deep tillage occurs periodically, and the soils of the A and B horizons have been mixed thoroughly enough that the surface soils may not resemble those listed in Table 1. Generally, the soil in the area to be used for irrigation illustrates a loamy surface layer (A horizon) underlain by sandy clay loam or clay loam (B horizon). The interface between the A and B horizons is generally abrupt and smooth. In native conditions, this boundary may impede water movement under irrigation, therefore affecting the ability to leach potentially detrimental constituents, such as salts contained in the effluent. Due to these characteristics, the subsoil will be ripped or deep-plowed as needed. It is preferable to rip or deep plow during periods of low soil moisture and just before planting to increase the fracturing of the subsoils, thus increasing the ability of the soils to absorb water (fresh) into the deeper profiles for storage.



Map Generated 8/13/2024

LEGEND:

- Denotes Fresh Water Pond
- Denotes 100–ft. Buffer Zone
- Denotes Borrow Area
- Denotes Well with Buffer

N
W E
S

600' 0 1200' 600'

SCALE: 1" = 1200'

Source: USDA–NRCS. Geospatial Data Gateway. Available at: http://datagateway.nrcs.usda.gov/. Digital Raster Graphic County Mosaic by NRCS – Accessed December 2016.

Vanden Berge Farms Stephenville, TX Erath County	Land Application Map Figure 1.1 Page 5	ENVIRO–AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

Effluent Characteristics

Wastewater Storage

The treated effluent from Schreiber Foods, Inc. will be pumped to the storage lagoon and routed to the land application fields.

Effluent Quality

For the purposes of this plan, the Total Nitrogen content of the effluent to be land-applied is 1.81 lb./ac-in TKN. The Total Phosphorus is 4.10 lb./ac-in as P2O5, based on the effluent samples collected at Schrieber Foods, Inc. Based on the geographical location of the facility and farm practices, the permittee estimates 80% of the total nitrogen is available after volatilization and mineralization.

Effluent Quantity

The average annual amount of effluent available for irrigation is projected to be 70 million gallons (215 ac-ft/yr.).

Annual Cropping Plan

Crop Selection

Vanden Berge Farms aims to grow any of the permitted crops listed in Attachment A. Table 2 illustrates the amount of effluent to be applied based on nitrogen. The total ac-in was derived based upon a crop rotation that depicts the acreages planted to various permitted crops.

The following formula will be utilized to determine the annual application rates based on the effluent's most limiting nutrient content, nutrients in the soil, and crop requirements.

Total nutrient required by crop ((lb./ac)- Soil Test (lb./ac))/ ((lb. per Ac-in of Nut. in Effl x 0.80)) = Annual Application Rate (Ac-in)

Other Crop Inputs

Supplemental fertilizers may be needed to achieve yield goals, but determinations will be made annually on a field-by-field basis using soil test results. Based on the effluent pH, EC,PAg and sodium content, soil amendments such as elemental sulfur, gypsum, or other inputs may be used to help manage soil pH and salinity.

Vanden Berge Farms
Nutrient Budget
Table 2

ENVIRO-AG ENGINEERING, INC.

Field ID	Planned Crop Rotation	Crop Yield (1)	Crop Salt Tolerances (2)	Crop N Requirement lb./Ac (3)	0-6" Soil N Residual lb./Ac (4)	Crop N required lb./Ac (5)	Wastewater Analysis N lb./Ac-in (6)	Adjusted Plant Available N lb./ Ac-in (7)	Ac-In/Ac of Wastewater to apply (8)	Total Gallons/Field (9)
WDA #1 (35 acres) Summer	Coastal Hay	3 Cut	8.0-12.0	300	23	277	2.27	1.81	152.9	145,285,889
WDA #2 (67 acres) Summer	Coastal Hay	3 Cut	8.0-12.0	300	11	289	2.27	1.81	159.5	290,167,164
WDA #3 (43 acres) Summer	Sorghum Hay	5 Tons	6.0-8.0	240	4	236	2.27	1.81	130.2	152,074,389
WDA #4 (41 acres) Summer	Coastal Grazing	3 Cut	8.0-12.0	300	13	287	2.27	1.81	158.4	176,336,158
WDA #5 (37 acres) Summer	Coastal Grazing	3 Cut	8.0-12.0	300	2	298	2.27	1.81	164.5	165,231,790

Notes:
(1) Expected yields based on historical data from facility.
(2) Taken from 30 TAC 309.20(b)(3)(B) Table 3.
(3) From USDA-NRCS Code 590/633 "S Crops" database.
(4) Taken from annual soil test results from August 2024. All fields will be re-sampled and the annual cropping plan will be updated prior to waste application. It is assumed that residual N will be utilized with the first crop rotation.
(5) Remainder N required to meet crop demands (crop requirement - residual N).
(6) Estimated N concentration based on wastewater analysis.
(7) Availability of N is calculated utilizing 30 TAC 309C.
(8) Acre inch of wastewater to be applied based lb./ac-n available N (remainder crop N divided by adjusted plant N). No additional fertilizer is required at this rate.
(8) Application rate to meet crop N requirement.
(9) Total Gallons/Field to be applied (Ac-In/Ac of wastewater x 27154 x Ac = Total Gallons).

Alternative Crop List
Attachment A
Vanguard Organics, LLC

Crop and Yield Goal	Nitrogen		P2O5	
	Requirement	Removal	Requirement	Removal
Alfalfa Hay 10 Tons	530	532	180	101
Alfalfa Hay 12 Tons	640	638	180	121
Alfalfa Hay 2 Tons	120	106	35	20
Alfalfa Hay 4 Tons	210	213	80	40
Alfalfa Hay 6 Tons	300	319	130	60
Alfalfa Hay 8 Tons	420	426	180	81
Bahia 2 Cut Hay 7000 #	140	89	70	21
Bahia 3 Cut Hay 8000 #	210	102	80	24
Bahia 4 Cut Hay 9000 #	280	114	115	27
Bahia Grazing + 1 Hay	110	83	70	19
Bahia Grazing 1 AU/1 ac	260	114	70	27
Bahia Grazing 1 AU/2 ac	220	108	45	25
Bahia Grazing 1 AU/3 ac	180	102	45	24
Bahia Grazing 1 AU/4 ac	140	95	45	22
Bahia Grazing 1 AU/5 ac	100	79	45	18
Bahia Grazing 1 AU/6 ac	60	65	45	15
Cantaloupes 15-20 tons	120	88	105	82
Coastal 2 Cut + Graze	260	198	125	62
Coastal 2 Cut Hay	200	169	125	39
Coastal 3 Cut + Graze	360	257	125	80
Coastal 3 Cut Hay	300	238	125	74
Coastal 4 Cut Hay	400	257	170	80
Coastal 5-6 Cut Hay	500	297	170	93
Coastal Grazing + 1 Hay	160	145	70	34
Coastal Grazing 1 AU/0.5 ac	300	218	70	68
Coastal Grazing 1 AU/1 ac	240	198	70	62
Coastal Grazing 1 AU/2 ac	200	169	70	39
Coastal Grazing 1 AU/3 ac	160	145	70	34
Coastal Grazing 1 AU/4 ac	120	120	70	28
Coastal Grazing 1 AU/5 ac	90	103	70	24
Coastal Grazing 1 AU/6 ac	60	86	70	20
Coastal GC (30%DM) 21-23 Ton	400	345	170	95
Coastal GC (30%DM) 18-20 Ton	350	300	170	82
Coastal GC (30%DM) 15-17 Ton	300	255	125	70
Coastal GC (30%DM) 9-11 Ton	200	170	125	47
Common 2 Cut Hay 6000 #	140	113	80	26
Common 3 Cut Hay 7400 #	210	141	80	46
Common 4 Cut Hay 8000 #	280	152	80	49
Common 5-6 Cut Hay 9000 #	350	171	80	56
Common Grazing + 1 Hay	110	100	70	23
Common Grazing + 2 Hay	180	132	80	30
Common Grazing + 3 Hay	250	148	80	48
Common Grazing 1 AU/1ac	260	152	70	49
Common Grazing 1 AU/2 ac	220	143	45	46
Common Grazing 1 AU/3 ac	180	132	45	30
Common Grazing 1 AU/4 ac	140	113	45	26
Common Grazing 1 AU/5 ac	100	94	45	22
Common Grazing 1 AU/6 ac	60	79	45	18

Crop and Yield Goal	Nitrogen		P2O5	
	Requirement	Removal	Requirement	Removal
Corn 111 - 130 bu	144	117	105	47
Corn 131 - 150 bu	164	135	105	54
Corn 151 - 170 bu	180	153	130	61
Corn 171 - 190 bu	210	171	130	68
Corn 191 - 210 bu	250	189	130	75
Corn 211 - 230 bu	280	207	130	83
Corn 231 - 250 bu	300	225	130	90
Corn 250 - 275 bu	325	243	130	97
Corn 276 - 300 bu	350	261	130	104
Corn 301 - 350 bu	375	279	130	111
Corn 50 - 70 bu	70	63	80	25
Corn 71 - 90 bu	90	81	80	32
Corn 91 - 110 bu	120	99	105	39
Cotton 0.5 Bale	25	18	30	9
Cotton 1.0 Bale	50	36	55	18
Cotton 2.0 Bale	100	71	105	35
Cotton 3.0 Bale	150	107	105	53
Cotton 3.5 Bale	175	125	105	62
Cotton 4.0 Bale	200	142	105	71
Cotton 4.5 Bale	225	160	105	80
Cotton 5.0 Bale	250	178	105	89
Eastern gamagrass- 3000 #	80	57	40	21
Eastern gamagrass- 6000 #	120	114	60	41
Fescue, Tall Hay/Graze 7000#	150	140	80	42
Grain Sorg. 1000 #	20	17	30	8
Grain Sorg. 10000 #	200	167	130	82
Grain Sorg. 1500 #	30	25	30	12
Grain Sorg. 2000 #	40	33	30	16
Grain Sorg. 3000 #	60	50	55	25
Grain Sorg. 4000 #	80	67	55	33
Grain Sorg. 5000 #	100	84	80	41
Grain Sorg. 6000 #	120	100	80	49
Grain Sorg. 7000 #	140	117	130	58
Grain Sorg. 8000 #	160	134	130	66
Grain Sorg. 9000 #	180	150	130	74
Guar 3500 lbs	25	22	80	76
Johnsongrass Hay 6000 #	140	101	80	32
Klein 3 Cut Hay 7200 #	150	83	55	16
Klein 4 Cut Hay 7800 #	150	90	55	18
Klein Grazing + 1 Hay	80	69	55	14
Klein Grazing 1 AU/1.5 ac	150	90	80	18
Klein Grazing 1 AU/2.5 ac	80	69	55	14
Klein Grazing 1 AU/6 ac	40	58	55	11
Legume Overseeded	80	60	105	15
Legume w/ryegrass	160	94	160	38
Midland Bermuda 4000 #	120	75	80	17
Midland Bermuda 6000 #	150	113	105	26
Midland Bermuda 8000 #	200	150	105	35

Alternative Crop List
Attachment A
Vanguard Organics, LLC

Crop and Yield Goal	Nitrogen		P2O5	
	Requirement	Removal	Requirement	Removal
Native Grazing or Hay 4000#	80	44	70	34
Native Grazing or Hay 3000#	40	33	55	25
Native Grazing or Hay 1500#	20	17	27	13
Native Grazing or Hay 750#	10	8	13	6
Oat Light Grazing	120	107	55	40
Oat Moderate Grazing	160	110	80	41
Oats Hay 2-3 tons	120	100	55	37
Oats Heavy Grazing plus Hay	200	117	80	43
Old World Bluestem- 3000 #	40	33	55	25
Old World Bluestem- 6000 #	80	66	55	51
Peanut Hay Dryland 1 Ton	50	47	70	11
Peanut Hay Dryland 2 Tons	100	93	70	22
Peanut Hay Irrigated 3 Tons	150	140	95	33
Peanuts Irrigated 4500 #	180	162	95	18
Rice Early 7500 #	195	104	45	41
Rice Late 7500 #	180	104	45	41
Rice plus Ratoon Early 10000 #	295	139	60	55
Rice plus Ratoon Late 10000 #	280	139	60	55
Rye Forage 5000 #	140	84	55	31
Rye Forage 7000 #	240	117	80	43
Ryegrass Hay 6000	140	100	55	37
Ryegrass Heavy Grazing	200	117	80	43
Ryegrass Moderate Grazing	140	84	55	31
SG Green Chop(25% DM) 8 to 9 tons	260	203	90	73
SG Green Chop(25% DM) 6 to 7 tons	200	158	80	57
SG Green Chop(25% DM) 4 to 5 tons	135	113	60	41
SG Green Chop(25% DM) 2 to 3 tons	75	68	40	24
SG Silage(35% DM) 12 to 14 tons	160	128	90	67
SG Silage(35% DM) 10 to 11 tons	120	101	70	53
SG Silage(35% DM) 8 to 9 tons	95	83	40	43
SG Silage(35% DM) 5 to 7 tons	70	64	30	34
Silage - Corn(35% DM) 11 - 15 Ton	140	119	80	58
Silage - Corn(35% DM) 16 - 20 Ton	240	183	100	77
Silage - Corn(35% DM) 21 - 25 Ton	350	263	105	96
Silage - Corn(35% DM) 26 - 30 Ton	420	315	135	115
Silage - Corn(35% DM) 7 - 10 Ton	85	79	60	38
Silage - Sorg(35% DM) 11 - 15 Ton	200	179	75	55
Silage - Sorg(35% DM) 16 - 20 Ton	280	238	95	74
Silage - Sorg(35% DM) 21 - 25 Ton	360	298	115	92
Silage - Sorg(35% DM) 26 - 30 Ton	380	315	130	111
Silage - Sorg(35% DM) 31 - 40 Ton	450	364	155	135
Silage - Sorg(35% DM) 41 - 50 Ton	580	455	190	168
Silage - Sorg(35% DM) 51 - 60 Ton	700	550	220	202
Silage - Sorg(35% DM) 7 - 10 Ton	125	119	60	37
Small Grain Heavy Grazing	240	112	105	41
Small Grain Light Grazing	60	75	80	28
Small Grain Moderate Grazing	160	97	105	36
Sorg. - Sudan Hay/Graze 11000 #	240	219	105	83

Crop and Yield Goal	Nitrogen		P2O5	
	Requirement	Removal	Requirement	Removal
Sorg. - Sudan Hay/Graze 7500 #	160	149	55	57
Sorg Forage Hay/Graze 11000 #	240	219	105	83
Sorg Forage Hay/Graze 7500 #	160	151	55	57
Soybean 30 bu	110	119	60	24
Soybean 50 bu	180	180	80	40
Sunflower 2000#	100	71	56	30
Sunflower 3000#	175	107	65	45
Triticale Graze or Hay 7000 #	160	117	105	43
Triticale Graze or Hay 9000 #	240	150	105	56
Watermelons 12 tons	80	53	55	49
Weeping Lovegrass 3500 #	70	39	55	30
Wheat Forage 2000 #	60	33	80	12
Wheat Forage 4000 #	160	67	105	25
Wheat Forage 6000 #	240	100	105	37
Wheat Grain 20 - 30 bu + Grazing	60	58	55	40
Wheat Grain 20 - 30 bu	45	37	55	26
Wheat Grain 31 - 40 bu + Grazing	80	71	75	48
Wheat Grain 31 - 40 bu	60	50	75	34
Wheat Grain 41 - 50 bu + Grazing	100	83	75	57
Wheat Grain 41 - 50 bu	75	62	75	43
Wheat Grain 51 - 60 bu + Grazing	120	96	90	65
Wheat Grain 51 - 60 bu	90	75	90	51
Wheat Grain 61 - 70 bu + Grazing	140	108	90	74
Wheat Grain 61 - 70 bu	105	87	90	60
Wheat Grain 71 - 80 bu + Grazing	160	121	95	82
Wheat Grain 71 - 80 bu	120	100	95	68
Wheat Grain 81 - 90 bu + Grazing	180	133	95	91
Wheat Grain 81 - 90 bu	135	112	95	77
Wheat Grain 91 - 100 bu + Grazing	200	146	95	99
Wheat Grain 91 - 100 bu	150	125	95	85
Wheat Heavy Grazing	240	114	105	42
Wheat Light Grazing	60	75	80	28
Wheat Moderate Grazing	160	97	105	36
Millet GC (25% DM) 18 - 24 Ton	180	140	60	46
Millet Hay/Graze 11000 #	150	95	45	40
Silage - Millet(35% DM) 15 - 18 Ton	190	139	60	46
Popcorn Shelled 3000 - 4000 #	80	74	80	27
Popcorn Shelled 4000 - 5000 #	100	92	80	33
Popcorn Shelled 5000 - 6000 #	120	110	80	40
Vetch Hay 1 Ton	70	60	105	14
Vetch Hay 2 Tons	140	120	105	28
Vetch Green chop(25%DM) 4 Tons	70	56	105	7
Vetch Green chop(25%DM) 8 Tons	140	112	105	14
Winter Pea Hay 5000#	140	137	105	35
Winter Pea Green chop(25%DM)8-9 Tons	140	123	105	32
Cowpea Hay 2 Tons	140	120	105	26
Cowpea GreenChop 8Tons(25%DM) Tons	140	120	105	26

Application Methods & Timing

Land Application Methods

The application methods at this facility include center pivot and reel gun irrigation systems. Treated effluent is distributed to the irrigation systems via existing and proposed pumping plants and underground irrigation piping. The irrigation systems are designed to ensure uniform distribution of effluent without the creation of tailwater or runoff.

Irrigation Water Management

Irrigation water management is the process of determining and controlling the volume, frequency, and application rate of irrigation water in a planned, efficient manner. Day-to-day management decisions will be based on the water and nutrient needs of the crops, harvest schedules, and soil moisture.

Soil Moisture Monitoring

The most important aspect of irrigation water management is properly evaluating and monitoring the available soil moisture. Soil moisture in the land application fields is monitored by the feel and appearance method, using USDA guidance.

Irrigation Scheduling

The amount of effluent applied in each irrigation event will be based on soil moisture, crop nutrient requirements, and weather conditions at the time of application.

The irrigation systems should be operated in accordance with the TLAP and with the following Best Management Practices (BMPs):

- Effluent irrigation will not occur when the ground is frozen or saturated within 3 feet of the surface or during rainfall events unless necessary to prevent imminent overflow of the storage pond.
- Effluent irrigation will not exceed maximum crop nutrient requirements.
- Effluent irrigation will not occur to fallow lands, with the exception of pre-watering, as described in the previous section. Application to dormant perennial or winter crops shall be limited to the planned rate shown in the NMP.
- Irrigation practices will minimize the ponding and puddling of effluent and prevent tailwater and the occurrence of nuisance conditions.
- Records of the amount of effluent applied, the crops grown, the planting and harvest dates, and crop yields are maintained for each field.
- Personnel whose job responsibilities require the handling, storage, or land application of effluent should be trained to ensure proper procedures are followed and appropriate records are kept.

Monitoring

Monitoring of irrigation operations should occur before, during, and after effluent application to ensure proper operation and avoid over-application of nutrients. No puddling or runoff should occur. A visual inspection should be performed during operation to determine if any puddling or irrigation-induced erosion occurs. Corrective actions include, but are not limited to:

- Cease irrigation.
- Increase the speed of the reel gun sprinkler to reduce the application rate.
- Reduce the "on" time interval and increase the "off" time interval for surface irrigated fields.

Monitoring of soil moisture, rainfall, and crop ET should occur at least every week during the growing season.

As part of the monitoring, the annual soil tests will be reviewed. The following best management practices may be utilized to monitor leaching of nitrate-nitrogen:

- Apply effluent during optimal growing and in response to plant needs.
- Use of conventional N fertilizers applied close to peak crop N uptake.
- Split commercial fertilizer applications and use a conservative approach to pre-plant N rate.
- Retain crop residue.
- Regularly adjust irrigation schedules to reflect changes in weather and plant needs or monitor soil moisture values.
- Incorporate organic amendments to improve water-holding capacity and prevent excessive leaching.
- Double cropping with a cover crop or forage crop.
- Use of N inhibitors for reduced leaching from April to June.

Soil samples will be collected from each field in accordance with the TLAP. Sampling will be conducted within the timeframe specified in the TLAP. Effluent samples will be collected as specified in the TLAP to verify nutrient application via irrigation.

System Maintenance

The irrigation systems are operated and maintained in accordance with the manufacturer's recommendations. The system's life can be assured and usually increased by carrying out a good operation and maintenance program. The irrigation system is inspected periodically to ensure proper operation of the pumps, pipelines, and sprinklers.

All measuring devices, valves, nozzle heads, surface pipelines, and other mechanical parts of the system are checked periodically, and worn or damaged parts are repaired or replaced as needed. Worn or improper functioning nozzles are replaced with the same design, size, and type. Nozzle heads operate efficiently and provide uniform application when they are plumb, in good operating condition, and operated at the planned pressure.

Maintain all pumps, piping, valves, and electrical and mechanical equipment in accordance with manufacturer recommendations. Check and clean screens and filters to prevent unnecessary hydraulic friction loss and maintain water flow necessary for efficient pump operation. Protect the pumping plant and all associated electrical and mechanical controls from damage by rodents, insects, heat, water, flooding, lightning, sudden power failure, and sudden water source loss. Ensure that all electrical fittings are

secure and safe. Always replace worn or excessively weathered electric cables, wires, gas tubing, and fittings when first noticed. Check periodically for undesirable stray currents and leaks. Display appropriate bilingual operating instructions and warning signs as necessary. During non-seasonal use, drain pipelines and valves, and secure and protect all movable equipment.

Pollution hazards to ground and surface water can be minimized when good irrigation water management practices are followed. Losses of irrigation water to deep percolation and runoff should be minimized. Deep percolation and runoff from irrigation can carry nutrients and pesticides into ground and surface water. Avoiding spills from agricultural chemicals, fuels, and lubricants will also minimize potential pollution hazards to ground and surface water.

8.0 REFERENCES

Information used to develop this plan was obtained, in part, from the following sources:

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USDA – NRCS Web Soil Survey, Erath County, accessed September 2024.

USDA – NRCS (2012/2013 TLAP Permit List). Texas Waste Utilization and Nutrient Management 590-633 Plan. Version 5, S Tables.

SOIL ANALYSIS REPORT

CLIENT:	ENVIRO-AG ENGINEERING INC 3404 AIRWAY BLVD AMARILLO, TX 79118
6224	

Servi-Tech Laboratories
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6921 S. Bell
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LAB NO:	55081 - 55090
INVOICE NO:	172720
DATE RECEIVED:	8/16/2024
DATE REPORTED:	08/20/2024

SOIL ANALYSIS RESULTS FOR: VANDEN BERGE FARMS **FIELD IDENTIFICATION:** RICHARD GEORGE

METHOD USED:			1:2 Soil-Water		1:2 Soil-Water	XSL(i)	LOI(r)	Cd Reduction		Mehlich 3 ICP										
Lab Number	Sample ID	Sample Depth	Soil pH	Buffer pH	Sol. Salts mmho/cm	Excess Lime	% Organic Matter	Nitrate-Nitrogen ppm	Nitrate-Nitrogen lb. N/A	Phosphorus ppm P	Potassium ppm K	Sulfur ppm	Sulfur lb. S/A	Calcium ppm Ca	Magnesium ppm Mg	Sodium ppm Na	Zinc ppm Zn	Iron ppm Fe	Manganese ppm Mn	Copper ppm Cu	Boron ppm B
55081	WDA 1	0 - 6	8.2		0.21	Hi	3.0	12.6	23	195	654	20	36	6210	387	63					
55082	WDA 1	6 - 18	8.4		0.25	Hi	1.4	5.9	21	26	492	21	76	9880	374	103					
55083	WDA 1	18 - 30	8.4		0.30	Hi	1.6	5.1	18	16	238	29	104	10900	318	196					
55084	WDA 2	0 - 6	8.0		0.17	Lo	2.1	6.0	11	225	515	20	36	5150	230	48					
55085	WDA 2	6 - 18	8.2		0.16	Lo	1.0	2.5	9	137	479	12	43	4870	338	33					
55086	WDA 2	18 - 30	8.1		0.18	No	0.9	5.3	19	31	432	22	79	3080	378	60					
55087	WDA 3	0 - 6	8.0		0.16	Hi	1.9	2.4	4	81	281	9	16	6210	331	30					
55088	WDA 3	6 - 18	8.2		0.20	Hi	1.2	<1.0	<4	16	231	10	36	7630	372	60					
55089	WDA 3	18 - 30	8.4		0.18	Hi	0.9	1.5	5	9	211	25	90	6620	484	209					
55090	WDA 4	0 - 6	7.8		0.18	Lo	1.5	7.4	13	10	229	14	25	4770	228	86					

METHOD USED:			KCl Extr.		Calculated	TKN	Sat. Paste														
Lab Number	Sample ID	Sample Depth	Ammonium Nitrogen ppm	Ammonium Nitrogen lb. /A	Total N ppm	TKN ppm	Saturation % Sat	Electrical Conductivity mmho/cm	Calcium mg/L Ca	Magnesium mg/L Mg	Sodium mg/L Na	Sodium Adsorption Ratio									
55081	WDA 1	0 - 6	4	7	1862	1849	51	0.88	106	18	40	0.9									
55082	WDA 1	6 - 18	3	11	886	880	47	0.95	101	15	64	1.6									
55083	WDA 1	18 - 30	3	11	745	740	49	0.89	91	9	95	2.5									
55084	WDA 2	0 - 6	4	7	1594	1588	47	0.73	100	10	37	0.9									
55085	WDA 2	6 - 18	3	11	761	758	46	0.47	69	10	15	0.4									
55086	WDA 2	18 - 30	3	11	652	647	45	0.69	82	16	37	1.0									
55087	WDA 3	0 - 6	5	9	1355	1353	50	0.47	89	9	11	0.3									
55088	WDA 3	6 - 18	3	11	763	762	52	0.40	61	7	22	0.7									
55089	WDA 3	18 - 30	4	14	566	564	54	0.55	39	6	77	3.0									
55090	WDA 4	0 - 6	5	9	1003	996	41	1.10	155	14	64	1.3									

Analyses are representative of the samples submitted Samples are retained 30 days after report of analysis Explanations of soil analysis terms are available upon request

Reviewed and Approved By: Ashleigh Laugesen Signer

SOIL ANALYSIS REPORT

CLIENT:	ENVIRO-AG ENGINEERING INC 3404 AIRWAY BLVD AMARILLO, TX 79118
6224	

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LAB NO:	55081 - 55090
INVOICE NO:	172720
DATE RECEIVED:	8/16/2024
DATE REPORTED:	08/20/2024

SOIL ANALYSIS RESULTS FOR: VANDEN BERGE FARMS **FIELD IDENTIFICATION:** RICHARD GEORGE

FERTILIZER RECOMMENDATIONS: POUNDS ACTUAL NUTRIENT PER ACRE

Lab Number	Sample ID	Crop To Be Grown	Yield Goal	Lime, ECC Tons/A to raise pH to: 6.0	6.5	7.0	N	P2O5	K2O	Zn	S	Mn	Cu	MgO	B	Ca	Cl	Cation Exchange Capacity: CEC	%H	%K	%Ca	%Mg	%Na
55081	WDA 1																	30	0	6	83	11	1
55082	WDA 1																	30	0	4	84	10	2
55083	WDA 1																	29	0	2	86	9	3
55084	WDA 2																	28	0	5	88	7	1
55085	WDA 2																	29	0	4	85	10	1
55086	WDA 2																	20	0	6	77	16	1
55087	WDA 3																	29	0	3	87	10	0
55088	WDA 3																	29	0	2	86	11	1
55089	WDA 3																	30	0	2	82	13	3
55090	WDA 4																	27	0	2	89	7	1

SPECIAL COMMENTS AND SUGGESTIONS:

Lab Number(s): 55081, 55082, 55083, 55087, 55088, 55089

The CEC value calculated by cation summation has been adjusted to compensate for the presence of excess lime (reactive carbonates).

Lab Number(s): 55081, 55084, 55087, 55090

Servi-Tech Laboratory fertilizer recommendations were not requested.

Analyses are representative of the samples submitted

Samples are retained 30 days after report of analysis

Explanations of soil analysis terms are available upon request

Reviewed and Approved By: Ashleigh Laugesen, Signer

SOIL ANALYSIS REPORT

CLIENT:	ENVIRO-AG ENGINEERING INC 3404 AIRWAY BLVD AMARILLO, TX 79118
6224	

Servi-Tech Laboratories
www.servitechlabs.com

6921 S. Bell
Amarillo, TX 79109
800.557.7509
806.677.0093
Fax 806.677.0329

LAB NO:	55091 - 55095
INVOICE NO:	172720
DATE RECEIVED:	8/16/2024
DATE REPORTED:	08/20/2024

SOIL ANALYSIS RESULTS FOR: VANDEN BERGE FARMS **FIELD IDENTIFICATION:** RICHARD GEORGE

METHOD USED:			1:2 Soil-Water		1:2 Soil-Water	XSL(i)	LOI(r)	Cd Reduction		Mehlich 3 ICP											
Lab Number	Sample ID	Sample Depth	Soil pH	Buffer pH	Sol. Salts mmho/cm	Excess Lime	% Organic Matter	Nitrate-Nitrogen ppm	lb. N/A	Phosphorus ppm P	Potassium ppm K	Sulfur ppm	lb. S/A	Calcium ppm Ca	Magnesium ppm Mg	Sodium ppm Na	Zinc ppm Zn	Iron ppm Fe	Manganese ppm Mn	Copper ppm Cu	Boron ppm B
55091	WDA 4	6 - 18	7.9		0.19	Lo	0.9	9.8	35	3	236	11	40	6610	368	85					
55092	WDA 4	18 - 30	8.3		0.17	Lo	0.8	10.5	38	3	193	9	32	5600	467	219					
55093	WDA 5	0 - 6	7.2		0.10	No	1.7	<1.0	<2	70	241	10	18	2020	148	59					
55094	WDA 5	6 - 18	7.9		0.15	No	0.9	<1.0	<4	13	356	7	25	3860	349	74					
55095	WDA 5	18 - 30	8.1		0.21	Lo	0.8	<1.0	<4	5	225	14	50	6850	509	150					

METHOD USED:			KCl Extr.		Calculated	TKN	Sat. Paste														
Lab Number	Sample ID	Sample Depth	Ammonium Nitrogen ppm	lb. /A	Total N ppm	TKN ppm	Saturation % Sat	Electrical Conductivity mmho/cm	Calcium mg/L Ca	Magnesium mg/L Mg	Sodium mg/L Na	Sodium Adsorption Ratio									
55091	WDA 4	6 - 18	5	18	500	490	47	0.71	97	11	41	1.1									
55092	WDA 4	18 - 30	6	22	415	404	47	0.71	54	9	91	3.0									
55093	WDA 5	0 - 6	5	9	1261	1260	43	0.71	100	12	48	1.2									
55094	WDA 5	6 - 18	3	11	493	492	45	0.56	65	10	39	1.2									
55095	WDA 5	18 - 30	5	18	517	516	44	0.67	59	13	73	2.2									

FERTILIZER RECOMMENDATIONS: POUNDS ACTUAL NUTRIENT PER ACRE

Lab Number	Sample ID	Crop To Be Grown	Yield Goal	Lime, ECC Tons/A to raise pH to: 6.0	6.5	7.0	N	P2O5	K2O	Zn	S	Mn	Cu	MgO	B	Ca	Cl
55091	WDA 4																
55092	WDA 4																
55093	WDA 5																
55094	WDA 5																
55095	WDA 5																

Cation Exchange Capacity

CEC	%H	%K	%Ca	%Mg	%Na
29	0	2	86	11	1
30	0	2	82	13	3
12	0	5	83	10	2
23	0	4	82	12	1
30	0	2	82	14	2

SPECIAL COMMENTS AND SUGGESTIONS:

Analyses are representative of the samples submitted. Samples are retained 30 days after report of analysis. Explanations of soil analysis terms are available upon request.

Reviewed and Approved By: Ashleigh Laugesen, Signer

SOIL ANALYSIS REPORT

CLIENT: 6224	ENVIRO-AG ENGINEERING INC 3404 AIRWAY BLVD AMARILLO, TX 79118

Servi-Tech Laboratories
www.servitechlabs.com

6921 S. Bell
Amarillo, TX 79109
800.557.7509
806.677.0093
Fax 806.677.0329

LAB NO:	55091 - 55095
INVOICE NO:	172720
DATE RECEIVED:	8/16/2024
DATE REPORTED:	08/20/2024

SOIL ANALYSIS RESULTS FOR: VANDEN BERGE FARMS **FIELD IDENTIFICATION:** RICHARD GEORGE

Lab Number(s): 55093

Servi-Tech Laboratory fertilizer recommendations were not requested.

Analyses are representative of the samples submitted Samples are retained 30 days after report of analysis Explanations of soil analysis terms are available upon request

Reviewed and Approved By: Ashleigh Laugesen Signer

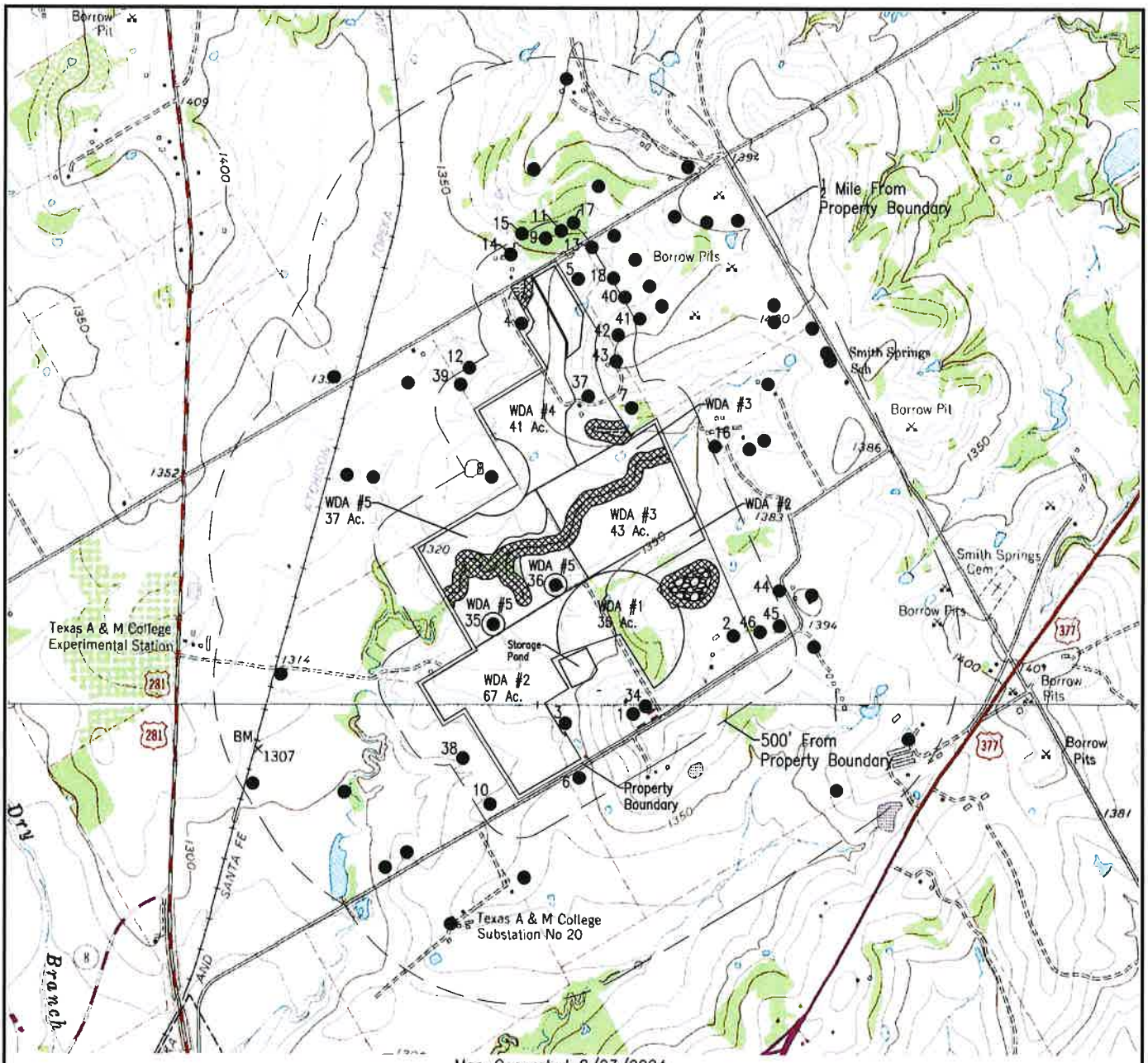
T.E: WATER WELL INFORMATION

T.E.1 Water Well Map

Figure T.E.1, Water Well Map, shows the locations of water wells within ½ mile of the property boundary.

T.E.2 Water Well Information

Water well data was obtained from a variety of sources, including on-site inspections, Research, a database research firm in Toronto, ON-Canada, and the Texas Water Development Board (TWDB) Water Data Interactive (WDI) online database. The information provided by Environmental Risk Information Services (ERIS) was obtained from a variety of public sources. ERIS does not ensure and makes no warranty or representation as to the accuracy, reliability, quality, or errors occurring from data conversion or the interpretation of their report. The TWDB WDI database includes data from the TWDB Groundwater Database and Submitted Driller's Reports.



Map Generated 8/23/2024

Legend:

● Denotes Water Well

N
W E
S

1,000' 0 1,000' 2,000'

SCALE: 1" = 2,000'

Source: USDA–NRCS. Geospatial Data Gateway. Available at: http://datagateway.nrcs.usda.gov/. Digital Raster Graphic County Mosaic by NRCS – Accessed December 2016.

Vanden Berge Farms Stephenville, TX Erath County	Water Well Map Figure T.E.1 Page 11	ENVIRO–AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

TEXAS WATER WELL REPORT

Project Property:	*Schreiber Foods, Inc.* *Schreiber Foods, Inc.* *Stephenville TX 76401*
Project No:	
Order No:	*24081500488*
Requested by:	*Enviro-Ag Engineering, Inc.*
Date Completed:	*August 19, 2024*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Table of Contents

Executive Summary

Property Information:

Project Property:	*Schreiber Foods, Inc.* *Schreiber Foods, Inc. Stephenville TX 76401*
Project No:	
Coordinates:	
Latitude:	*32.2527179*
Longitude:	*-98.18102533*
UTM Northing:	*3,569,015.69*
UTM Easting:	*577,439.76*
UTM Zone:	*14S*
Target Property Geometry:	*POLYGON*
County/Parish Covered:	*Erath (TX)*
Zipcode(s) Covered:	*Stephenville TX: 76401*
State(s) Covered:	*TX*

Executive Summary: Report Summary

Database	Searched	Project Property	Within 0.50mi	Total
Federal				
FED USGS	Y	0	0	0
State				
TCEQ WELL LOGS	Y	3	18	21
SDRW WELLS	Y	0	17	17
GWDB	Y	0	4	4
WW FORT BEND	Y	0	0	0
WW HIGH PLAINS	Y	0	0	0
WW HARRIS GAL	Y	0	0	0
WUD	Y	0	3	3
	Total:	**3**	**42**	**45**

PO – Property Only

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Page Number
1	TCEQ WELL LOGS	ROBERT CAUDLE	TX	SSE	0.00 / 0.00	15
			***Grid No** | **Owners Name:** 31-55-2 | ROBERT CAUDLE*			
2	TCEQ WELL LOGS	VELON REESE	TX	ESE	0.00 / 0.00	18
			***Grid No** | **Owners Name:** 31-55-2Y | VELON REESE*			
3	TCEQ WELL LOGS	RONNIE QUARLES	TX	S	0.00 / 0.00	21
			***Grid No** | **Owners Name:** 31-55-2 | RONNIE QUARLES*			

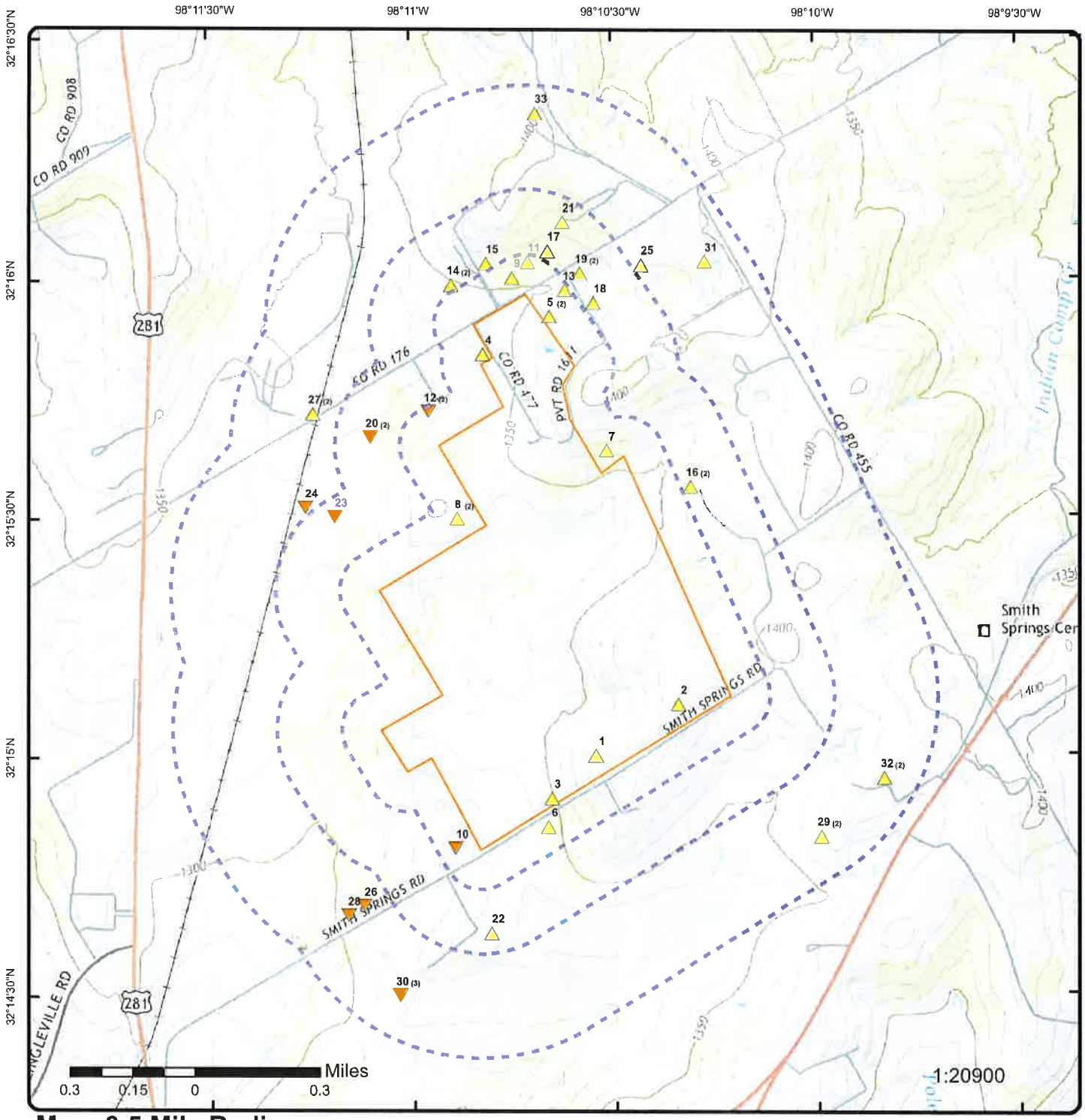
Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Page Number
4	TCEQ WELL LOGS	KELLY CASSTEVENS	TX	NNW	0.02 / 80.81	23
			***Grid No** | **Owners Name:** 31-47-8 | KELLY CASSTEVENS*			
5	SDRW WELLS	Cory Pipal	690 CR 477 Stephenville TX 76401	N	0.02 / 94.37	25
			***Track NO:** 660142*			
5	SDRW WELLS	Cory Pipal	2220 CR 176 Stephenville TX 76401	N	0.02 / 94.37	26
			***Track NO:** 659976*			
6	TCEQ WELL LOGS	DONNEL GAINES	TX	S	0.04 / 192.45	27
			***Grid No** | **Owners Name:** 31-55-2 | DONNEL GAINES*			
7	TCEQ WELL LOGS	BERT WRIGHT	TX	NNE	0.04 / 194.64	30
			***Grid No** | **Owners Name:** 31-47-8 | BERT WRIGHT*			
8	WUD	SCHREIBER FOODS	TX	NW	0.05 / 269.79	33
			***Utility Name** | **WTRSRC:** SCHREIBER FOODS INC | G0720026B*			
8	SDRW WELLS	Schreiber Foods	923 CR 176 Well #2 Stephenville TX 76401	NW	0.05 / 269.79	34
			***Track NO:** 646869*			
9	SDRW WELLS	Nick Braun	TBD CR 176 Stephenville TX 76401	N	0.05 / 277.73	35
			***Track NO:** 543960*			
10	TCEQ WELL LOGS	DONNEL GAINES	TX	SSW	0.05 / 278.35	36
			***Grid No** | **Owners Name:** 31-55-2 | DONNEL GAINES*			
11	SDRW WELLS	Nick Braun	TBD CR 176 Stephenville TX 76401	N	0.08 / 415.88	39
			***Track NO:** 560730*			
12	TCEQ WELL LOGS	MONTY NEEB	TX	NW	0.08 / 445.55	40
			***Grid No** | **Owners Name:** 31-47-8 | MONTY NEEB*			
12	SDRW WELLS	Gordon Carroll	1602 CR 176 Stephenville TX 76401	NW	0.08 / 445.55	43
			***Track NO:** 635195*			
13	TCEQ WELL LOGS	TOBY STONE	TX	N	0.09 / 449.98	44

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Page Number
			***Grid No** | **Owners Name:** 31-47-8M | TOBY STONE*			
14	TCEQ WELL LOGS	DON COAN	TX	NNW	0.11 / 588.80	47
			***Grid No** | **Owners Name:** 31-47-8 | DON COAN*			
14	TCEQ WELL LOGS	A T GORDON	TX	NNW	0.11 / 588.80	50
			***Grid No** | **Owners Name:** 31-47-8M | A T GORDON*			
15	SDRW WELLS	Nick Braun	TBD CR 176 Stephenville TX 76401	N	0.11 / 599.80	52
			***Track NO:** 543961*			
16	SDRW WELLS	Kenneth Gifford	4171 CR 177 stephenville TX 76401	NE	0.12 / 615.92	53
			***Track NO:** 329374*			
16	TCEQ WELL LOGS	BERT WRIGHT	TX	NE	0.12 / 615.92	54
			***Grid No** | **Owners Name:** 31-47-8 | BERT WRIGHT*			
17	SDRW WELLS	Nick Braun	TBD CR 176 Stephenville TX 76401	N	0.12 / 627.49	57
			***Track NO:** 560729*			
18	SDRW WELLS	James Sommer	325 CR 477 Stephenville TX 76401	N	0.12 / 656.82	58
			***Track NO:** 203770*			
19	SDRW WELLS	Elizabeth Tatsch	2488 CR 176 Stephenville TX 76401	N	0.14 / 725.99	59
			***Track NO:** 335178*			
19	TCEQ WELL LOGS	ED TATSCH	TX	N	0.14 / 725.99	60
			***Grid No** | **Owners Name:** 31-47-8 | ED TATSCH*			
20	TCEQ WELL LOGS	LOUIS BOLLINGEL	TX	NW	0.17 / 880.64	62
			***Grid No** | **Owners Name:** 31-47-8 | LOUIS BOLLINGEL*			
20	SDRW WELLS	CDS STXDC 2021 LLC	923 County Road 176 Stephenville TX 76401	NW	0.17 / 880.64	65
			***Track NO:** 605326*			
21	SDRW WELLS	RANDY TATSCH	3055 CR 176 STEPHENVILLE TX 76401	N	0.20 / 1,034.32	66
			***Track NO:** 562001*			
22	SDRW WELLS	Texas Agrilife Research	Off of Smith's Springs Road Stephenville TX	SSW	0.20 / 1,062.96	67
			***Track NO:** 336732*			

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Page Number
23	SDRW WELLS	CDS STXDC 2021, LLC	1356 CR 176 Stephenville TX 76401 ***Track NO:*** *598115*	WNW	0.21 / 1,100.01	68
24	SDRW WELLS	CDS STXDC 2021, LLC	1356 CR 176 Stephenville TX 76401 ***Track NO:*** *598116*	WNW	0.27 / 1,413.71	69
25	TCEQ WELL LOGS	GORDON TAYLOR	TX ***Grid No*** **|** ***Owners Name:*** *31-47-8* | *GORDON TAYLOR*	NNE	0.27 / 1,430.68	70
26	TCEQ WELL LOGS	DAVID HALFORD	TX ***Grid No*** **|** ***Owners Name:*** *31-55-2* | *DAVID HALFORD*	SW	0.31 / 1,646.44	73
27	GWDB	AMPI Cheese Plant	TX ***State Well No*** **|** ***Owner Name:*** *3147802* | *AMPI Cheese Plant*	NW	0.31 / 1,659.38	75
27	WUD	SCHREIBER FOODS	TX ***Utility Name*** **|** ***WTRSRC:*** *SCHREIBER FOODS INC* | *G0720026A*	NW	0.31 / 1,659.38	83
28	WUD	WHITE HORSE CHRISTIAN ACADEMY	TX ***Utility Name*** **|** ***WTRSRC:*** *WHITE HORSE CHRISTIAN ACADEMY* | *G0720063A*	SW	0.36 / 1,883.88	84
29	TCEQ WELL LOGS	TROY GORDON #1	TX ***Grid No*** **|** ***Owners Name:*** *31-55-2U* | *TROY GORDON #1*	SE	0.40 / 2,115.18	85
29	TCEQ WELL LOGS	TROY GORDON	TX ***Grid No*** **|** ***Owners Name:*** *31-55-2U* | *TROY GORDON*	SE	0.40 / 2,115.18	87
30	GWDB	Texas A&M University Tarleton Experiment	TX ***State Well No*** **|** ***Owner Name:*** *3155201* | *Texas A&M University Tarleton Experiment*	SSW	0.40 / 2,115.30	89
30	GWDB	Tarleton College Exp. Station	TX ***State Well No*** **|** ***Owner Name:*** *3155210* | *Tarleton College Exp. Station*	SSW	0.40 / 2,115.30	98
30	TCEQ WELL LOGS	TILL STONE	TX ***Grid No*** **|** ***Owners Name:*** *31-55-2* | *TILL STONE*	SSW	0.40 / 2,115.30	101
31	SDRW WELLS	James Young	2703 CR 455 Stephenville TX 76401 ***Track NO:*** *425567*	NNE	0.40 / 2,117.54	103
32	GWDB	Poston Farms	TX	ESE	0.42 / 2,211.76	104

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Page Number
			***State Well No** | **Owner Name:** 3155304 | Poston Farms*			
32	TCEQ WELL LOGS	TOBY STONE	TX	ESE	0.42 / 2,211.76	108
			***Grid No** | **Owners Name:** 31-55-2U | TOBY STONE*			
33	TCEQ WELL LOGS	F. E. SUTTON	TX	N	0.43 / 2,293.38	110
			***Grid No** | **Owners Name:** 31-47-8 | F. E. SUTTON*			



Map: 0.5 Mile Radius
Order Number: 24081500488
Address: Schreiber Foods, Inc., Stephenville, TX

ERIS

Plotted Water Wells

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- Eris Areas with Higher Elevation
- Eris Areas with Same Elevation
- Eris Areas with Lower Elevation
- Eris Areas with Unknown Elevation

Source: © US Geological Survey

Aerial Year: 2022

Order Number: 24081500488

Address: Schreiber Foods, Inc., Stephenville, TX

Source: ESRI World Imagery

If **yes**, list and describe each change individually.

Click to enter text.

c. Is the facility requesting any **minor modifications** to the permit?

☐ Yes ☒ No

If **yes**, list and describe each change individually.

Click to enter text.

Item 14. Laboratory Accreditation (Instructions, Page 49)

All laboratory tests performed must meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification*, which includes the following general exemptions from National Environmental Laboratory Accreditation Program (NELAP) certification requirements:

- The laboratory is an in-house laboratory and is:
  - periodically inspected by the TCEQ; or
  - located in another state and is accredited or inspected by that state; or
  - performing work for another company with a unit located in the same site; or
  - performing pro bono work for a governmental agency or charitable organization.
- The laboratory is accredited under federal law.
- The data are needed for emergency-response activities, and a laboratory accredited under the Texas Laboratory Accreditation Program is not available.
- The laboratory supplies data for which the TCEQ does not offer accreditation.

The applicant should review *30 TAC Chapter 25* for specific requirements.

The following certification statement shall be signed and submitted with every application. See the *Signature Page* section in the Instructions, for a list of designated representatives who may sign the certification.

CERTIFICATION:

I certify that all laboratory tests submitted with this application meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification.*

Printed Name: Click to enter text.

Title: Click to enter text.

Signature: _____

Date: 11-8-24

Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
1	1 of 1	SSE	0.00 / 0.00	ROBERT CAUDLE TX	TCEQ WELL LOGS

Grid No:	31-55-2
Date Drilled:	09/09/1987
Owners Name:	ROBERT CAUDLE
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	260
Depth Drilled:	340
Latitude:	32.249996
Longtiude:	-98.1757746

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

Please use black ink.
Send original copy by certified mail to the Texas Water Commission P.O. Box 13087 Austin, Texas 78711

State of Texas
WATER WELL REPORT

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

Texas Water Well Drillers Board
P. O. Box 13087
Austin, Texas 78711

1) OWNER Robert Caudle (Name) Address 1221 Mayfield (Street or RFD) Garland (City) Tx. (State) 75041 (Zip)

2) LOCATION OF WELL: County Erath 6 miles in E (N.E., S.W., etc.) direction from Stephenville (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form. 1261

☐ Legal description:
Section No. _____ Block No. _____ Township _____
Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
☒ See attached map. on 31-54-3

3) TYPE OF WORK (Check): ☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): ☒ Domestic ☐ Industrial ☐ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ Other _____

5) DRILLING METHOD (Check): ☐ Driven ☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☐ Bored ☒ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started 9/8 1987 Completed 9/9 1987

DIAMETER OF HOLE Dia. (in.)	From (ft.)	To (ft.)
6 1/2	Surface 0	340

From (ft.)	To (ft.)	Description and color of formation material
0	15	Topsoil
15	40	Yellow Clay
40	90	Red clay
90	110	SAND
110	140	blue clay
140	180	Shale
180	210	SAND
210	240	Clay
240	280	SAND
280	300	Clay
300	340	SAND & Gravel

RECEIVED
SEP 06 1988
TEXAS WATER COMMISSION

(Use reverse side if necessary)

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 280 ft. to 340 ft.

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mgf., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
4	N	PVC perf.	0	340	

9) CEMENTING DATA (Rule 319.44(b))
Cemented from _____ ft. to _____ ft. No. of Sacks Used _____
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Pour
Cemented by Dowell Well Service, Inc.

10) SURFACE COMPLETION
☒ Specified Surface Slab Installed (Rule 319.44(c))
☐ Pitless Adapter Used (Rule 319.44(d))
☐ Approved Alternative Procedure Used (Rule 319.71)

11) WATER LEVEL:
Static level 260 ft. below land surface Date 9/9/87
Artesian flow _____ gpm. Date _____

12) PACKERS: Type _____ Depth _____

13) TYPE PUMP:
☐ Turbine ☐ Jet ☒ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) WELL TESTS:
Type Test: ☐ Pump ☐ Bailer ☒ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☒ No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☒ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 12 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Dowell Well Service Inc. (Type or Print) Water Well Driller's License No. 1891

ADDRESS P.O. Box 558 (Street or RFD) Stephenville (City) Texas (State) 76401 (Zip)

(Signed) Mark Dowell (Licensed Water Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only
Well No. 37 55-2
Located on map _____

WWD-012 (Rev.01-28-87) TEXAS WATER COMMISSION COPY

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
2	1 of 1	ESE	0.00 / 0.00	VELON REESE TX	TCEQ WELL LOGS

Grid No:	31-55-2Y
Date Drilled:	09/22/1979
Owners Name:	VELON REESE
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	60
Depth Drilled:	120
Latitude:	32.2517676
Longtiude:	-98.1723629

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

Dust

Send original copy by certified mail to the Texas Department of Water Resources P. O. Box 13087 Austin, Texas 78711

State of Texas
WATER WELL REPORT

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

For TDWR use only
Well No. 31-55-24
Located on map Yes
Received: C.F.S.

1) OWNER Velon Reese (Name) Address Box 330 (Street or RFD) Stephenville (City) Tex (State) 76401 (Zip)

2) LOCATION OF WELL: County ERATH 3 miles in E (N.E., S.W., etc.) direction from // // (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

140

☐ Legal description:
Section No. _____ Block No. _____ Township _____
Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
☑ See attached map. mapon 31-55-1a

3) TYPE OF WORK (Check): ☐ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): ☑ Domestic ☐ Industrial ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Other _____

5) DRILLING METHOD (Check): ☐ Mud Rotary ☐ Air Hammer ☐ Driven ☐ Bored ☑ Air Rotary ☐ Cable Tool ☐ Jetted ☐ Other _____

6) WELL LOG:

Date drilled 9-22-79

DIAMETER OF HOLE Dia. (in.)	From (ft.)	To (ft.)
6¾	Surface 0	120

From (ft.)	To (ft.)	Description and color of formation material
0	5	Top Soil
5	20	Chalk
20	60	Blue Clay
60	75	Sandy Clay
75	120	Sand

(Use reverse side if necessary)

7) BOREHOLE COMPLETION: ☐ Open Hole ☐ Straight Wall ☐ Underreamed ☑ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 80 ft. to 120 ft.

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfr., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
4½	N	PVC, perf			50 #40

CEMENTING DATA
Cemented from 0 ft. to 80 ft.
Method used Poured
Cemented by Dowell Well Service Inc. (Company or Individual)

9) WATER LEVEL:
Static level 60 ft. below land surface Date 9-22-79
Artesian flow _____ gpm Date _____

10) PACKERS: Type Depth

11) TYPE PUMP: ☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder ☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

12) WELL TESTS: ☐ Type Test: ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with 20 ft. drawdown after 1 hrs.

13) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☑ No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☑ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

MAR 15 1982

NAME Mark A. Dowell (Type or Print) Water Well Drillers Registration No. 1891

ADDRESS PO Box 538 (Street or RFD) Stephenville (City) Tex (State) 76401 (Zip)

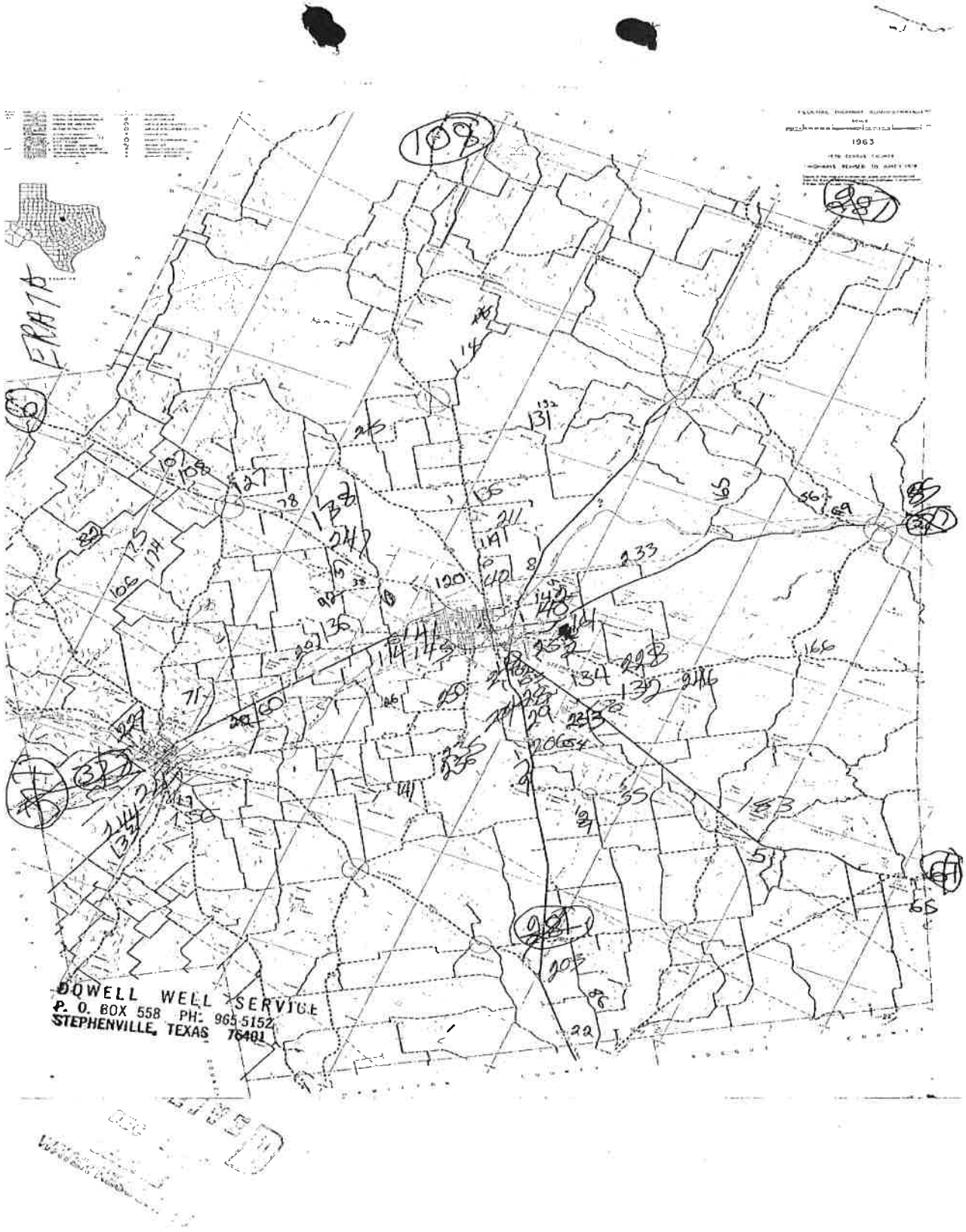
(Signed) Mark Dowell (Water Well Driller) Dowell Well Service Inc. (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TDWR-0392 (Rev. 1-12-79)

DEPARTMENT OF WATER RESOURCES COPY

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB



Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
3	1 of 1	S	0.00 / 0.00	RONNIE QUARLES TX	TCEQ WELL LOGS

Grid No:	31-55-2
Date Drilled:	10/02/1981
Owners Name:	RONNIE QUARLES
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	170
Depth Drilled:	240
Latitude:	32.2485077
Longtiude:	-98.1776157

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

RUP

Send original copy by certified mail to the Texas Department of Water Resources P. O. Box 13087 Austin, Texas 78711

State of Texas
WATER WELL REPORT

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

For TDWR use only
Well No. 31-55-2Y
Located on map YPS
Received: C.F.S.

1) OWNER Ronnie Quarles (Name) Address 813 E. Washington (Street or RFD) Stephenville (City) Tex. (State) 76401 (Zip)

2) LOCATION OF WELL County Erath .02 miles in E (N.E., S.W., etc.) direction from Stephenville (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form. 499

☐ Legal description:
Section No. _____ Block No. _____ Township _____
Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____

☒ See attached map. Mapon 31-47-3E

3) TYPE OF WORK (Check):
☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check):
☒ Domestic ☐ Industrial ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Other _____

5) DRILLING METHOD (Check):
☐ Mud Rotary ☐ Air Hammer ☐ Driven ☐ Bored ☒ Air Rotary ☐ Cable Tool ☐ Jetted ☐ Other _____

6) WELL LOG:

Date drilled 10-2-81

Dia. (in.)	From (ft.)	To (ft.)
	Surface	
6¼	0	240

From (ft.)	To (ft.)	Description and color of formation material
00	20	Dark Clay
20	120	Dirty Shale & Limestone
120	140	Dark Green Clay
140	180	Dark & Dirty Clay
180	200	Dark
200	240	Gravel

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 240 ft. to 140 ft.

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mgf., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
4 1/2	N	PVC, perf.	240	200	sch40

CEMENTING DATA
Cemented from 140 ft. to 0 ft.
Method used Poured
Cemented by Dowell Well Service, Inc. (Company or Individual)

9) WATER LEVEL:
Static level 120 ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

10) PACKERS: Type Depth

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DEPT. OF WATER RESOURCES

(Use reverse side if necessary)

11) TYPE PUMP:
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

12) WELL TESTS:
☐ Type Test: ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 20 gpm with 0 ft. drawdown after 1 hrs.

13) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☒ No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☒ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

NAME W. D. Dowell (Type or Print) Water Well Drillers Registration No. 1268

ADDRESS P. O. Box 558 (Street or RFD) Stephenville (City) Texas (State) 76401 (Zip)

(Signed) W D Dowell (Water Well Driller) Dowell Well Service, Inc. (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TDWR-0392 (Rev. 1-12-79)

DEPARTMENT OF WATER RESOURCES COPY

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
4	1 of 1	NNW	0.02 / 80.81	KELLY CASSTEVENS TX	TCEQ WELL LOGS

Grid No:	31-47-8
Date Drilled:	12/18/2000
Owners Name:	KELLY CASSTEVENS
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	265
Depth Drilled:	440
Latitude:	32.2640276
Longtiude:	-98.1803452

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

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
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

1) OWNER

Name	Address	City	State	Zip
Kelly Cassteevens	CR 176	Stephenville	TX	76401

2) WELL LOCATION

County	Physical Address	City	State	Zip
Erath	Same			

Lat. | Long. | Grid # 31-47-8

3) Type of Work
☒ New Well ☐ Reconditioning ☐ Replacement ☐ Deepening

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☒ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell ☐ Rig Supply
If Public Supply well, were plans submitted? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 12/16 100
Completed 12/18 100

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
6 7/2	0	440

7) Drilling Method (check) ☐ Driven ☒ Air Rotary ☐ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
0	10	Red Clay
10	205	Blue Clay, Shale, Limestone
205	220	Sand
220	240	Red Clay
240	250	Blue Clay & sand
250	330	Sand & Gravel
330	335	Red Clay
335	370	Sand
370	~~375~~ 410	Red Clay
410	440	Tan clay

(Use reverse side of Well Owner's Copy, if necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☒ Gravel Packed ☐ Other
If Gravel Packed give the interval from 200 ft. to 440 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing Screen
4	N	PVC	0	440	

9) Cementing Data
Cementing from 0 ft. to 200 ft. # of sacks used 25
ft. to ft. # of sacks used
Method Used Pour
Cementing By Dowell Well Service
Distance to septic system field or other concentrated contamination ___ ft.
Method of verification of above distance

13) Plugged ☐ Well plugged within 48 hours
Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Sacks used

10) Surface Completion
☒ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☐ Pitless Adapter Used
☐ Approved Alternative Procedure Used

14) Type Pump
☐ Turbine ☐ Jet ☒ Submersible ☐ Cylinder
☐ Other
Depth to pump bowls, cylinder, jet etc., ft.

11) Water Level
Static level 265 ft. below Date 12-7-00
Artesian Flow gpm. Date

15) Water Test
Typetest ☐ Pump ☐ Bailer ☒ Jetted ☐ Estimated
Yield: gpm with ft. drawdown after hrs.

12) Packers

16) Water Quality
Did you knowingly penetrate a strata which contain undesirable constituents.
☐ YES ☒ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water Depth of Strata
Was a chemical analysis made ☐ Yes ☒ No

RECEIVED FEB 14 2001 COMMENT

Company or individual's Name (type or print) Dowell Well Servic Lic. No. 1891
Address P.O. Box 402 City Stephenville State TX Zip 76401
Signature Mark Dowell Licensed Driller/Pump Installer Date 2/9/01
Signature Date

TDLR FORM 6001WWD White - TDLR Yellow - Owner Pink - Driller/Pump Installer

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
5	1 of 2	N	0.02 / 94.37	Cory Pipal 690 CR 477 Stephenville TX 76401	SDRW WELLS

Track NO: 660142
Date Submitted: 2024-02-23
Owner Name: Cory Pipal
Owner Address: 690 CR 477
Owner Address2:
Owner City: Stephenville
Owner State: TX
Owner Zip: 76401
County: Erath
Type of Work: New Well
Typ of Wrk Oth Descr:
Proposed Use: Domestic
Prop Use Oth Descr:
Latitude: 32.264233
Longitude: -98.177
Drilling Date Started: 2024-02-22
Drilling Date Completed: 2024-02-22
Chemical Analysis: No
Company Name: Dowell Well Service
Company Address: PO Box 402
CompanyAddress2:
Company City: Stephenville
Company State: TX
Company Zip:
Company Country:
Data Source: Full SDR Database
Report Link: https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=660142&Type=SDR-Well

Well Borehole Information

Top Depth: 0
Bottom Depth: 455

Well Levels

Measurement: 335
Measurement Date: 2024-02-22

Well Strata

Water Type:

Trinity

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
5	2 of 2	N	0.02 / 94.37	Cory Pipal 2220 CR 176 Stephenville TX 76401	SDRW WELLS

Track NO:	659976
Date Submitted:	2024-02-21
Owner Name:	Cory Pipal
Owner Address:	2220 CR 176
Owner Address2:	
Owner City:	Stephenville
Owner State:	TX
Owner Zip:	76401
County:	Erath
Type of Work:	New Well
Typ of Wrk Oth Descr:	
Proposed Use:	Domestic
Prop Use Oth Descr:	
Latitude:	32.265533
Longitude:	-98.1777
Drilling Date Started:	2024-02-21
Drilling Date Completed:	2024-02-21
Chemical Analysis:	No
Company Name:	Dowell Well Service
Company Address:	PO Box 402
CompanyAddress2:	
Company City:	Stephenville
Company State:	TX
Company Zip:	
Company Country:	
Data Source:	Full SDR Database
Report Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=659976&Type=SDR-Well

Well Borehole Information

Top Depth:	0
Bottom Depth:	435

Well Levels

Measurement:	320
Measurement Date:	2024-02-21

Well Strata

Water Type:

Trinity

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
6	1 of 1	S	0.04 / 192.45	DONNEL GAINES TX	TCEQ WELL LOGS

Grid No:	31-55-2
Date Drilled:	02/16/1987
Owners Name:	DONNEL GAINES
County:	ERATH
Water Usage:	IRRIGATION
Static Level:	340
Depth Drilled:	420
Latitude:	32.2475232
Longtiude:	-98.1777498

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

Please use black ink. Send original copy by certified mail to the Texas Water Commission P.O. Box 13087 Austin, Texas 78711

State of Texas
WATER WELL REPORT
ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

Texas Water Well Drillers Board P. O. Box 13087 Austin, Texas 78711

1) OWNER Donnel Gaines (Name) Address Rt. 1, Box 85C, Stephenville, TX. 76401 (Street or RFD) (City) (State) (Zip)

2) LOCATION OF WELL: County Erath 1 miles in N (N.E., S.W., etc.) direction from Stephenville (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form. 1216

☐ Legal description:
Section No. _____ Block No. _____ Township _____
Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
☒ See attached map. ON 31-55-2

3) TYPE OF WORK (Check): ☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): ☐ Domestic ☐ Industrial ☐ Monitor ☐ Public Supply ☒ Irrigation ☐ Test Well ☐ Injection ☐ Other _____

5) DRILLING METHOD (Check): ☐ Driven ☒ Mud Rotary ☐ Air Hammer ☐ Jetted ☐ Bored ☐ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started _____ 19 Completed 7/26 1987

DIAMETER OF HOLE Dia. (in.)	From (ft.)	To (ft.)
12¼	Surface 0	420

From (ft.)	To (ft.)	Description and color of formation material
0	5	Topsoil
5	25	Sand
25	180	Shale
180	210	Sand
210	265	Shale
265	300	Gravel
300	370	Shale
370	400	Gravel
400	410	Red Clay

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 350 ft. to 410 ft.

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mgf., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
7"	N.	Steel slotted	0	420	188

9) CEMENTING DATA [Rule 319.44(b)]
Cemented from 0 ft. to 350 ft. No. of Sacks Used 10
ft. to _____ ft. No. of Sacks Used _____
Method used Pour
Cemented by Dowell Well Service, Inc.

10) SURFACE COMPLETION
☒ Specified Surface Slab Installed [Rule 319.44(c)]
☐ Pitless Adapter Used [Rule 319.44(d)]
☐ Approved Alternative Procedure Used [Rule 319.71]

11) WATER LEVEL:
Static level 340 ft. below land surface Date 2/16/87
Artesian flow _____ gpm. Date _____

12) PACKERS: Type _____ Depth _____

13) TYPE PUMP:
☐ Turbine ☐ Jet ☒ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) WELL TESTS:
Type Test: ☐ Pump ☐ Bailer ☒ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

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SEP 06 1988
TEXAS WATER COMMISSION

(Use reverse side if necessary)

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☒ No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☒ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 12 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Dowell Well Service Inc (Type or Print) Water Well Driller's License No. 1891

ADDRESS P.O. Box 558 (Street or RFD) Stephenville (City) TX (State) 76401 (Zip)

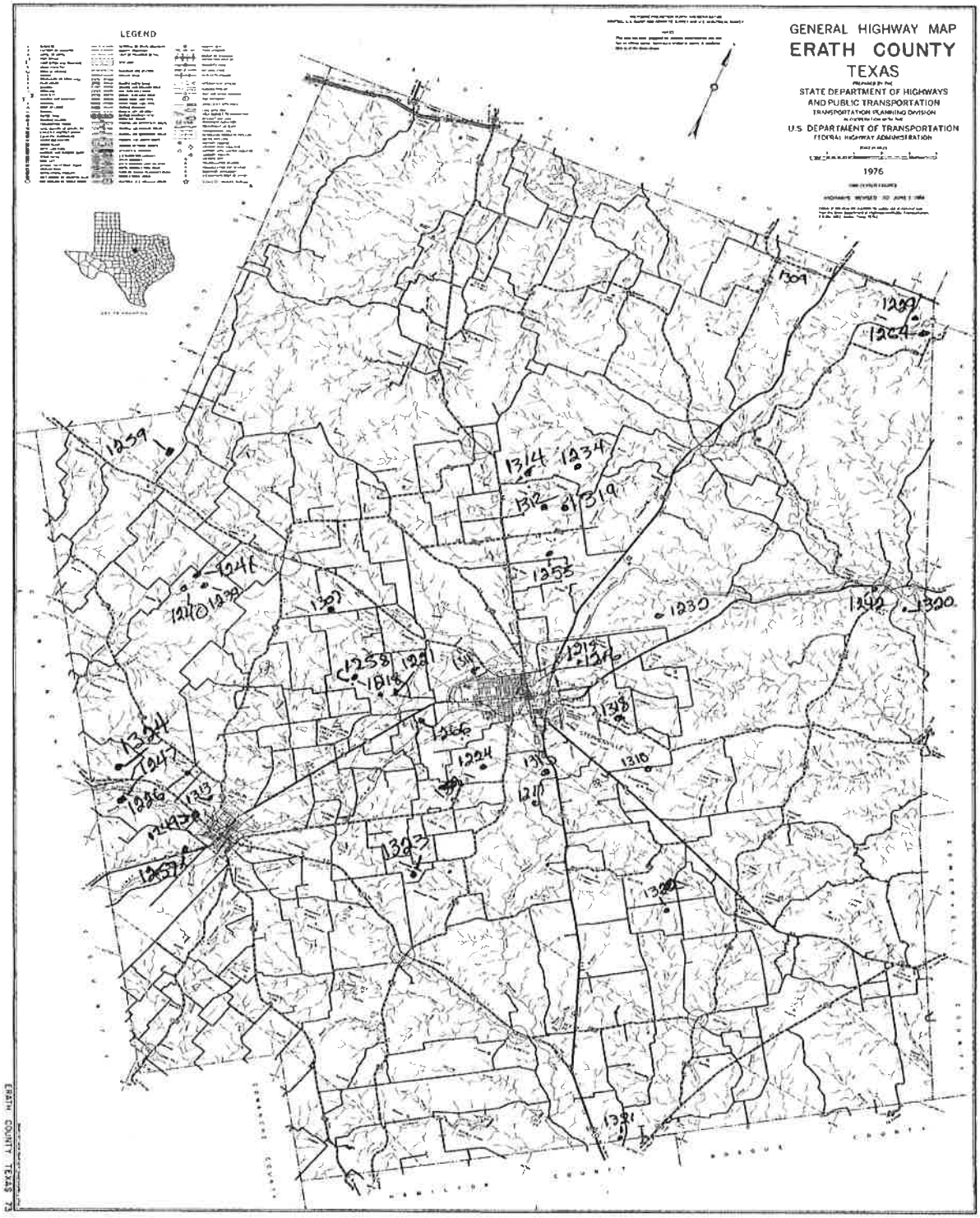
(Signed) Mark Dowell (Licensed Water Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only
Well No. 31-55-2
Located on map _____

TWC-0392 (Rev. 08-10-85) TEXAS WATER COMMISSION COPY

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB



Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
7	1 of 1	NNE	0.04 / 194.64	BERT WRIGHT TX	TCEQ WELL LOGS

Grid No:	31-47-8
Date Drilled:	10/23/1989
Owners Name:	BERT WRIGHT
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	301
Depth Drilled:	429
Latitude:	32.2606338
Longtiude:	-98.1752611

Send original copy by certified mail to: Texas Water Con. ..ion, P.O. Box 13087, Austin, Texas 78711 — Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas
WELL REPORT

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) OWNER Bert Wright (Name) ADDRESS Rt 2 (Street or RFD) Stephenville (City) TX (State) 76401 (Zip)

2) LOCATION OF WELL: County Erath . 7 miles in NE (NE, SW, etc.) direction from Stephenville (Town)

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ LEGAL DESCRIPTION:
Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
☑ SEE ATTACHED MAP #10 · on 31-48-6

3) TYPE OF WORK (Check): ☑ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): ☑ Domestic ☐ Industrial ☐ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

5) DRILLING METHOD (Check): ☐ Driven ☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☐ Bored ☐ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started 10-18 19 89 Completed 10-23 19 89

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
6¾	Surface	429

7) BOREHOLE COMPLETION: ☑ Open Hole ☐ Straight Wall ☐ Underreamed ☐ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from _____ ft. to _____ ft.

From (ft.)	To (ft.)	Description and color of formation material
0	6	Top Soil
6	39	Caliche & Sand Rock
39	70	Blue Shale
70	214	Limestone
214	265	Blue Shale
265	280	Water Sand
280	294	Blue Shale
294	330	Water Sand & Gravel
330	385	Blue & Grey Shale
385	427	Water Sand & Gravel
427	429	Blue Shale

(attach additional sheet if necessary)

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing	Gage Screen
4½	N	Steel	0	429	256	
		Slotted	404	429		5/32

9) CEMENTING DATA (Rule 287.44(1))
Cemented from 120 ft. to 0 ft. No. of Sacks Used 10
ft. to ft. No. of Sacks Used
Method used 12 Sacks Water 44 lbs cement
Cemented by _____

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed [Rule 287.44(2)(A)]
☐ Pitless Adapter Used [Rule 287.44(3)(B)]
☐ Approved Alternative Procedure Used [Rule 287.71]

11) WATER LEVEL:
Static level 30' ft. below land surface Date 10-23-89
Artesian flow _____ gpm. Date _____

12) PACKERS: Type Duckbill Depth 120'

13) TYPE PUMP:
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., 399 ft.

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APR 4 1990
TEXAS WATER COMMISSION

14) WELL TESTS:
Type Test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with 0 ft. drawdown after 4 hrs.

15) WATER QUALITY:
Did the drilling penetrate any strata which contained undesirable constituents?
☐ Yes ☐ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Brackish Depth of strata _____
Was a chemical analysis made? ☐ Yes ☑ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Riley Drilling (Type or print) WELL DRILLER'S LICENSE NO. 1252

ADDRESS 1330 W McNeil (Street or RFD) Stephenville (City) TX (State) 76401 (Zip)

(Signed) Tommy Riley (Licensed Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

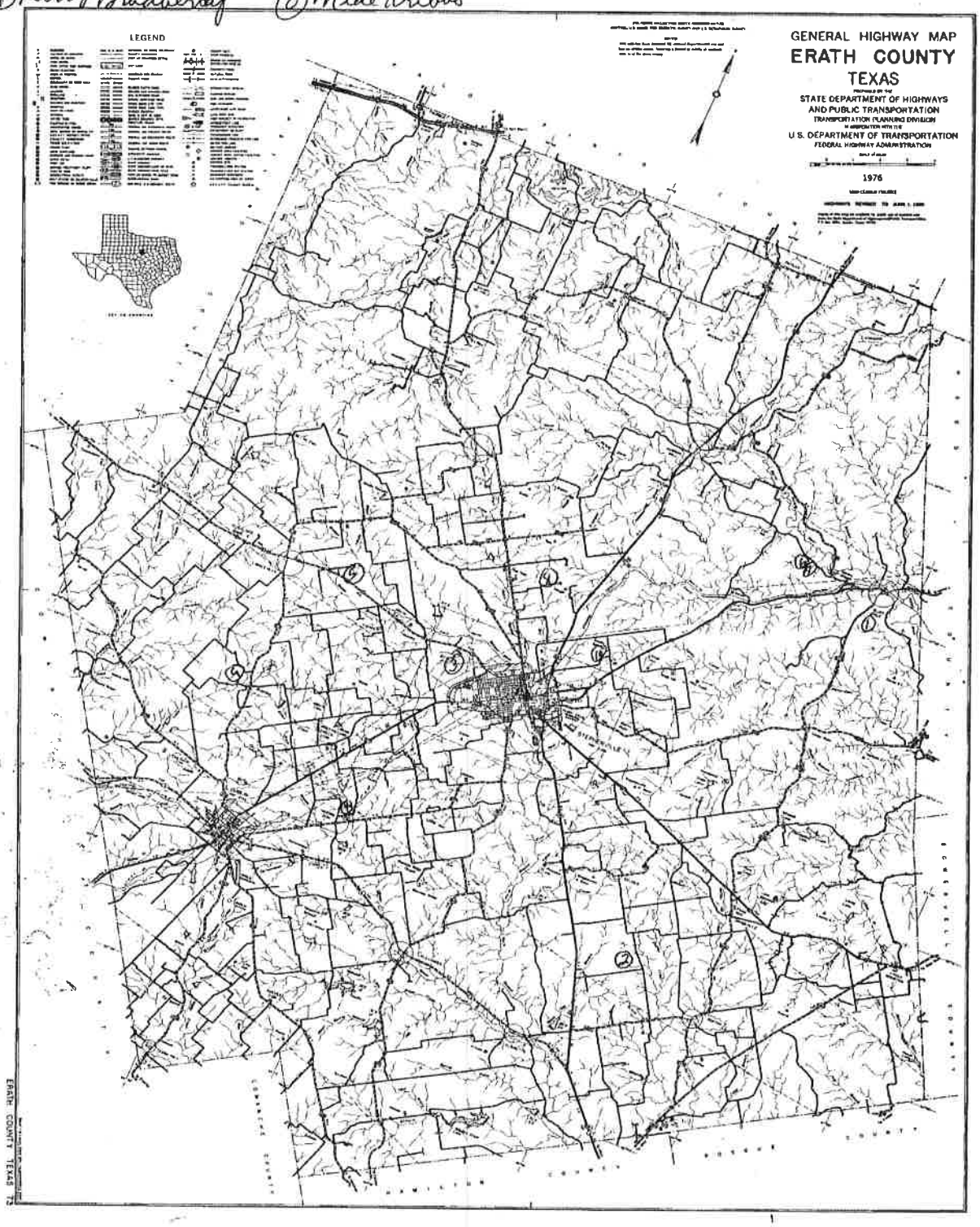
For TWC use only: Well No. 31-47-8 Located on map _____

WWD-012 (Rev. 09/21/88)

TEXAS WATER COMMISSION COPY

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

① Mrs E L Rhoades
② B W Frey
③ Gary Chandler
④ Harry Bradberry
⑤ Bessie Joner
⑥ JH Cantrell
⑦ Thomas Cantrell
⑧ Mike Hibbs
⑨ Gordon Reeder
⑩ Bert Wright



Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
8	1 of 2	NW	0.05 / 269.79	SCHREIBER FOODS TX	WUD

Primary Co:	JUSTIN GROTE
Contact Ti:	OPERATOR
Operating Status:	OPERATIONAL
PWSID:	0720026
Source ID:	G0720026B
Utility Name:	SCHREIBER FOODS INC
WTRSRC:	G0720026B
Date Drilled:	09/10/2010
Well Depth:	462
Screen Top:	317
Screen Bottom:	397
Water Usage:	ACTIVE - PERMANENT
Gallons Per Minute:	60
CCN:	N/A
Latitude:	32.25827778
Longitude:	-98.18144444
System Status:	ACTIVE

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
8	2 of 2	NW	0.05 / 269.79	Schreiber Foods 923 CR 176 Well #2 Stephenville TX 76401	SDRW WELLS

Track NO: 646869
Date Submitted: 2023-08-25
Owner Name: Schreiber Foods
Owner Address: 502 North Madison Street
Owner Address2:
Owner City: Green Bay
Owner State: WI
Owner Zip: 54301
County: Erath
Type of Work: New Well
Typ of Wrk Oth Descr:
Proposed Use: Public Supply
Prop Use Oth Descr:
Latitude: 32.258278
Longitude: -98.181444
Drilling Date Started: 2010-07-19
Drilling Date Completed: 2010-09-10
Chemical Analysis: Yes
Company Name: Associated Well Services, Inc.
Company Address: PO Box 16
CompanyAddress2:
Company City: Stephenville
Company State: TX
Company Zip: 76401
Company Country:
Data Source: Full SDR Database; SDRDB Well Location (Map)
Report Link: https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=646869&Type=SDR-Well

Well Borehole Information

Top Depth: 0
Bottom Depth: 4

Top Depth: 321
Bottom Depth: 462

Top Depth: 4
Bottom Depth: 321

Top Depth:
Bottom Depth: 462.0

Well Levels

Measurement: 308
Measurement Date: 2010-09-10

Well Strata

Water Type:

Trinity

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
9	1 of 1	N	0.05 / 277.73	Nick Braun TBD CR 176 Stephenville TX 76401	SDRW WELLS

Track NO:	543960
Date Submitted:	2020-05-22
Owner Name:	Nick Braun
Owner Address:	5411 CR 522
Owner Address2:	
Owner City:	Stephenville
Owner State:	TX
Owner Zip:	76401
County:	Erath
Type of Work:	New Well
Typ of Wrk Oth Descr:	
Proposed Use:	Domestic
Prop Use Oth Descr:	
Latitude:	32.266639
Longitude:	-98.178833
Drilling Date Started:	2020-05-15
Drilling Date Completed:	2020-05-15
Chemical Analysis:	No
Company Name:	Dowell Well Service
Company Address:	PO Box 402
CompanyAddress2:	
Company City:	Stephenville
Company State:	TX
Company Zip:	
Company Country:	
Data Source:	Full SDR Database; SDRDB Well Location (Map)
Report Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=543960&Type=SDR-Well

Well Borehole Information

Top Depth:	
Bottom Depth:	415.0
Top Depth:	0
Bottom Depth:	415

Well Levels

Measurement:	310
Measurement Date:	2020-05-15

Well Strata

Water Type:

Trinity

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
10	1 of 1	SSW	0.05 / 278.35	DONNEL GAINES TX	TCEQ WELL LOGS

Grid No:	31-55-2
Date Drilled:	02/15/1987
Owners Name:	DONNEL GAINES
County:	ERATH
Water Usage:	IRRIGATION
Static Level:	325
Depth Drilled:	410
Latitude:	32.2467769
Longtiude:	-98.1816091

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

Please type or print in black ink. Send original copy by certified mail to the Texas Water Commission P.O. Box 13087 Austin, Texas 78711

State of Texas
WATER WELL REPORT

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

Texas Water Well Drillers Board P. O. Box 13087 Austin, Texas 78711

1) OWNER Donnel Gaines (Name) Address Rt. 1 Box 85C (Street or RFD) Stephenville (City) Tx (State) 76401 (Zip)

2) LOCATION OF WELL: County Erath 1 miles in N (N.E., S.W., etc.) direction from Stephenville (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form. 1215

☐ Legal description:
Section No. _____ Block No. _____ Township _____
Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____

☒ See attached map.

3) TYPE OF WORK (Check): ☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): ☐ Domestic ☐ Industrial ☐ Monitor ☐ Public Supply ☒ Irrigation ☐ Test Well ☐ Injection ☐ Other _____

5) DRILLING METHOD (Check): ☐ Driven ☒ Mud Rotary ☐ Air Hammer ☐ Jetted ☐ Bored ☐ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started _____ 19 Completed 2/15 19 87

DIAMETER OF HOLE Dia. (in.)	From (ft.)	To (ft.)
12¼	Surface 0	410

From (ft.)	To (ft.)	Description and color of formation material
0	5	Topsoil
5	85	Sand
85	190	Shale
190	210	Sand
210	265	Shale
265	320	Gravel
320	370	Shale
370	400	Gravel
400	410	Red Clay

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 350 ft. to 410 ft.

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfr., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
7"	N	Steel Slotted	0	410	188

9) CEMENTING DATA (Rule 319.44(b))
Cemented from 300 ft. to 350 ft. No. of Sacks Used 20
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Pour
Cemented by Dowell Well Service, Inc.

10) SURFACE COMPLETION
☒ Specified Surface Slab Installed (Rule 319.44(c))
☐ Pitless Adapter Used (Rule 319.44(d))
☐ Approved Alternative Procedure Used (Rule 319.71)

11) WATER LEVEL:
Static level 325 ft. below land surface Date 2/15-87
Artesian flow _____ gpm. Date _____

12) PACKERS: Type X Depth X

13) TYPE PUMP:
☐ Turbine ☐ Jet ☒ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) WELL TESTS:
Type Test: ☐ Pump ☐ Bailer ☒ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

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TEXAS WATER COMMISSION

(Use reverse side if necessary)

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☒ No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☒ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 12 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Dowell Well Service, Inc. (Type or Print) Water Well Driller's License No. 1891

ADDRESS P.O. Box 559 (Street or RFD) Stephenville (City) Tx (State) 76401 (Zip)

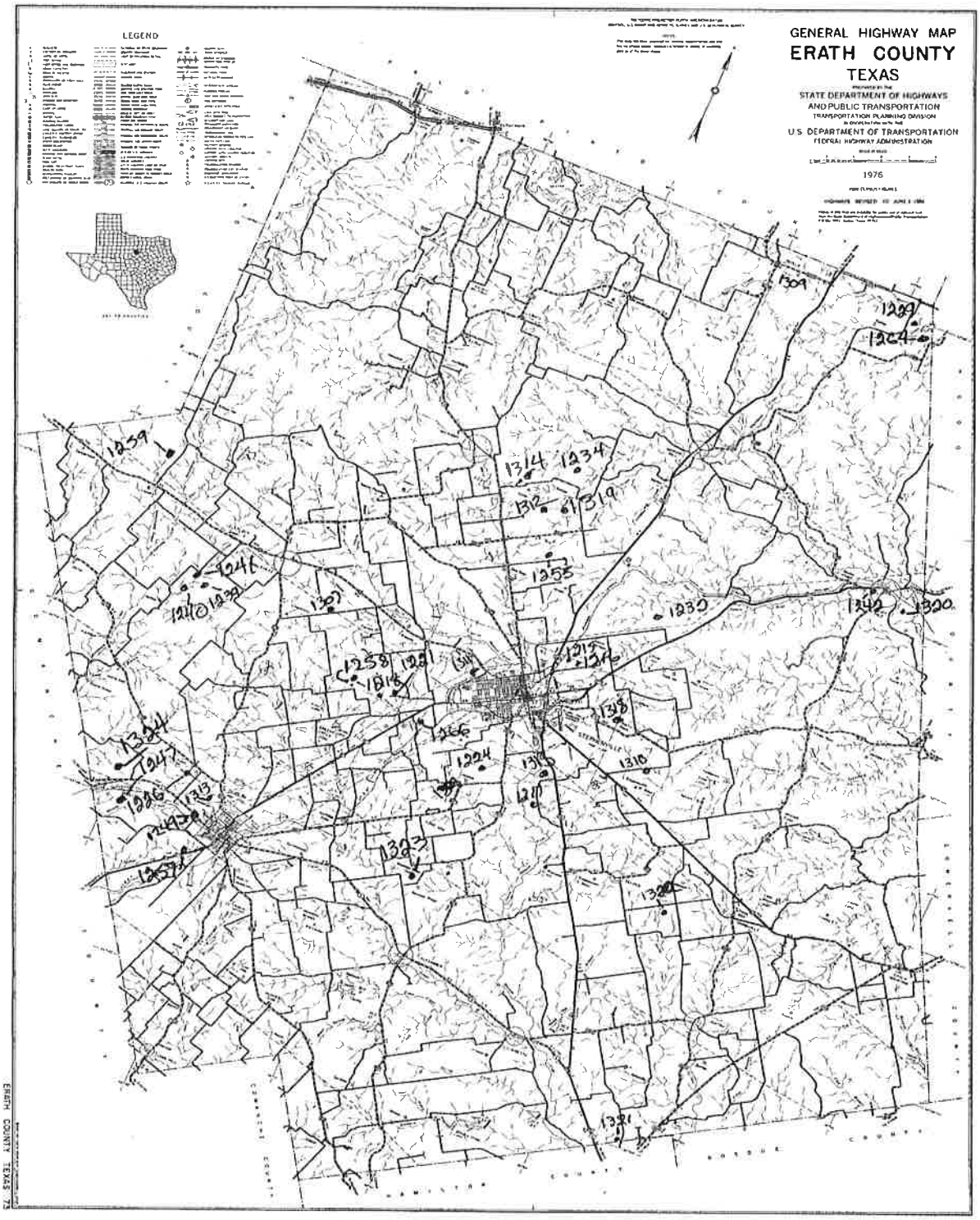
(Signed) Mark Dowell (Licensed Water Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only
Well No. 31-55-2
Located on map _____

TWC-0392 (Rev. 06-10-86) TEXAS WATER COMMISSION COPY

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB



Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
11	1 of 1	N	0.08 / 415.88	Nick Braun TBD CR 176 Stephenville TX 76401	SDRW WELLS

Track NO:	560730
Date Submitted:	2020-12-04
Owner Name:	Nick Braun
Owner Address:	TBD CR 176
Owner Address2:	
Owner City:	Stephenville
Owner State:	TX
Owner Zip:	76401
County:	Erath
Type of Work:	New Well
Typ of Wrk Oth Descr:	
Proposed Use:	Domestic
Prop Use Oth Descr:	
Latitude:	32.267425
Longitude:	-98.178392
Drilling Date Started:	2020-11-16
Drilling Date Completed:	2020-11-16
Chemical Analysis:	No
Company Name:	Dowell Well Service
Company Address:	PO Box 402
CompanyAddress2:	
Company City:	Stephenville
Company State:	TX
Company Zip:	
Company Country:	
Data Source:	Full SDR Database; SDRDB Well Location (Map)
Report Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=560730&Type=SDR-Well

Well Borehole Information

Top Depth:	0
Bottom Depth:	435
Top Depth:	
Bottom Depth:	435.0

Well Levels

Measurement:	330
Measurement Date:	2020-11-16

Well Strata

Water Type:

Trinity

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
12	1 of 2	NW	0.08 / 445.55	MONTY NEEB TX	TCEQ WELL LOGS

Grid No:	31-47-8
Date Drilled:	12/23/1987
Owners Name:	MONTY NEEB
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	NOT REPORTED
Depth Drilled:	357
Latitude:	32.2620272
Longtiude:	-98.1826036

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

Please use black ink. Send original copy by certified mail to the Texas Water Commission P.O. Box 13087 Austin, Texas 78711

State of Texas
WATER WELL REPORT
ATTENTION OWNER: Confidentiality Privilege Notice on Reverse Side

Texas Water Well Drillers Board
P. O. Box 13087
Austin, Texas 78711

1) OWNER Monty Neel (Name) Address Rt 2 (Street or RFD) Stephenville (City) Tex (State) 76401 (Zip)

2) LOCATION OF WELL: County Erath N miles in 4 (N.E., S.W., etc.) direction from Stephenville (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ Legal description:
Section No. _____ Block No. _____ Township _____
Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____

#18 ☑ See attached map. on 31-54-2

3) TYPE OF WORK (Check): ☑ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): ☑ Domestic ☐ Industrial ☐ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ Other _____

5) DRILLING METHOD (Check): ☐ Driven ☑ Mud Rotary ☐ Air Hammer ☐ Jetted ☐ Bored ☐ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling Started 12-20 1987 Completed 12-23 1987

Dia. (in.)	From (ft.)	To (ft.)
7 7/8	Surface	90
6 1/4	90	357

7) BOREHOLE COMPLETION: ☐ Open Hole ☐ Straight Wall ☐ Underreamed ☐ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from _____ ft. to _____ ft.

From (ft.)	To (ft.)	Description and color of formation material
0	6	Top Soil
6	24	Sand Rock
24	60	Blue Shale
60	69	Sand
69	85	Blue Shale
85	220	Limestone
220	300	Blue Sandy Shale ← 5 ft Red Bed
300	356	Water Sand + Gravel

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
4½	N	Steel	0	357	156
		Slotted	337	357	5/32

9) CEMENTING DATA (Rule 319.44(b))
Cemented from 120 ft. to 0 ft. No. of Sacks Used 24
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Tabs Water 94 Cement (Pumped)
Cemented by Us

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed (Rule 319.44(c))
☐ Pitless Adapter Used (Rule 319.44(d))
☑ Approved Alternative Procedure Used (Rule 319.71)

11) WATER LEVEL:
Static level _____ ft. below land surface Date 12-23-87
Artesian flow _____ gpm. Date _____

12) PACKERS: Type Ducking Depth 120

13) TYPE PUMP:
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., 336 ft.

14) WELL TESTS:
Type Test: ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 10 gpm with 0 ft. drawdown after 2 hrs.

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JAN 11 1988

(Use reverse side if necessary)

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☑ No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☑ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 12 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Riley Drilling (Type or Print) Water Well Driller's License No. 1252

ADDRESS 1330 W Mc Neil (Street or RFD) Stephenville (City) Tex (State) 76401 (Zip)

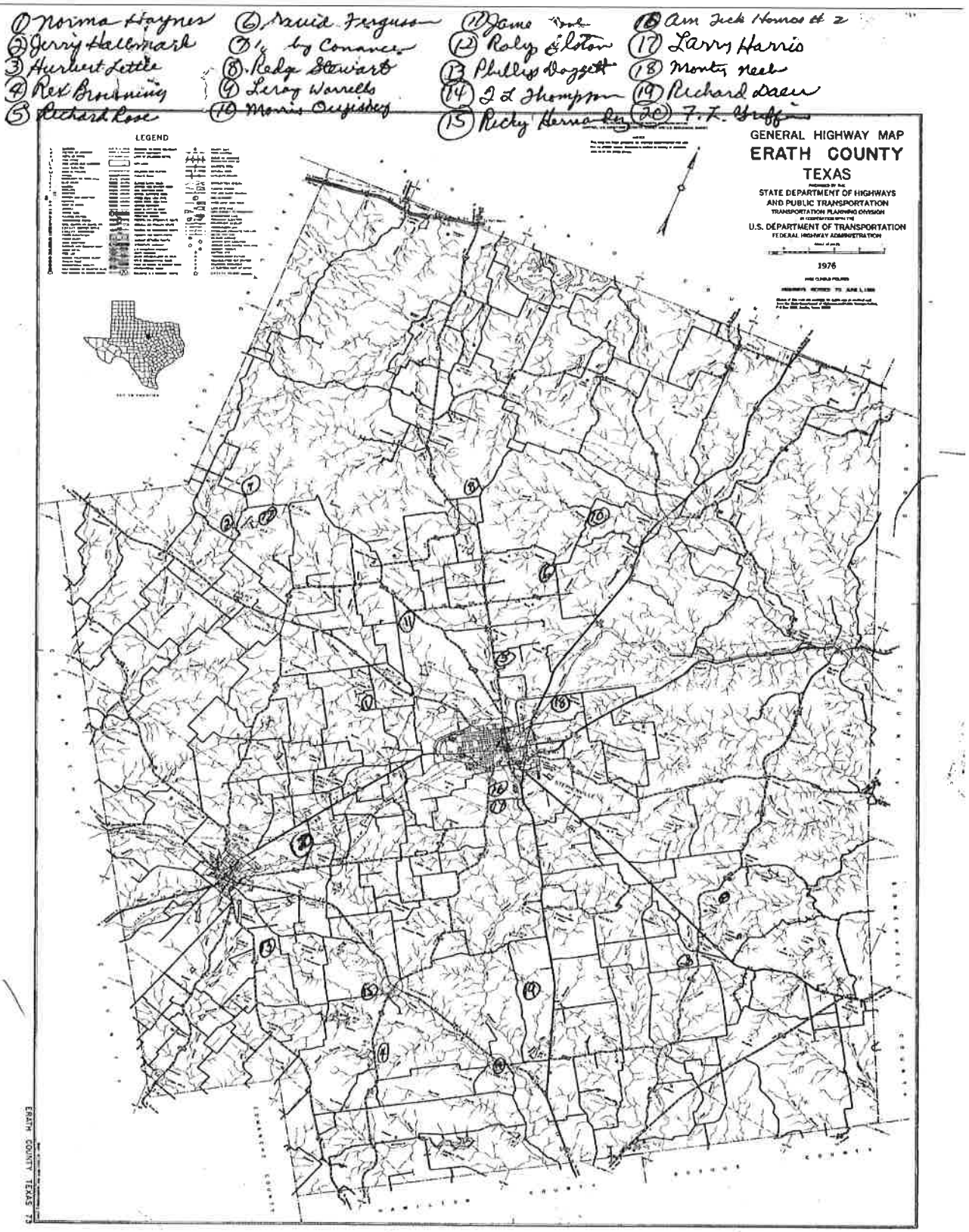
(Signed) Jimmy Riley (Licensed Water Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only
Well No. 31-47-8
Located on map _____

TWC-0392 (Rev. 06-10-86) TEXAS WATER COMMISSION COPY

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB



Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
12	2 of 2	NW	0.08 / 445.55	Gordon Carroll 1602 CR 176 Stephenville TX 76401	SDRW WELLS

Track NO:	635195
Date Submitted:	2023-03-29
Owner Name:	Gordon Carroll
Owner Address:	1602 CR 176
Owner Address2:	
Owner City:	Stephenville
Owner State:	TX
Owner Zip:	76401
County:	Erath
Type of Work:	Replacement
Typ of Wrk Oth Descr:	
Proposed Use:	Domestic
Prop Use Oth Descr:	
Latitude:	32.261917
Longitude:	-98.182611
Drilling Date Started:	2023-03-20
Drilling Date Completed:	2023-03-20
Chemical Analysis:	No
Company Name:	Dowell Well Service
Company Address:	PO Box 402
CompanyAddress2:	
Company City:	Stephenville
Company State:	TX
Company Zip:	
Company Country:	
Data Source:	Full SDR Database; SDRDB Well Location (Map)
Report Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=635195&Type=SDR-Well

Well Borehole Information

Top Depth:	
Bottom Depth:	435.0
Top Depth:	0
Bottom Depth:	435

Well Levels

Measurement:	300
Measurement Date:	2023-03-20

Well Strata

Water Type:

Trinity

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
13	1 of 1	N	0.09 / 449.98	TOBY STONE TX	TCEQ WELL LOGS

Grid No:	31-47-8M
Date Drilled:	09/05/1975
Owners Name:	TOBY STONE
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	280
Depth Drilled:	320
Latitude:	32.2662598
Longtiude:	-98.1769442

8M

Send original copy by certified mail to the Texas Water Development Board P. O. Box 13087 Austin, Texas 78711

State of Texas

WATER WELL REPORT

For TWDB use only
Well No. 31-47-8M
Located on map yes
Received 76
LC

1) OWNER:
Person having well drilled Toby Stone (Name) Address (Huckabay Hwy) (Street or RFD) Stephenville (City) Tx. (State)

Landowner Same (Name) Address Same (Street or RFD) Stephenville (City) Tx (State)
2120 OAK LAWN, DR.

2) LOCATION OF WELL:
County ERATH , miles in (N.E., S.W., etc.) direction from (Town)

Locate by sketch map showing landmarks, roads, creeks, hiway number, etc.*

OVER

North

(Use reverse side if necessary)

or Give legal location with distances and directions from adjacent sections or survey lines.

Labor League
Block Survey
Abstract No.
(NW¼ NE¼ SW¼ SE¼) of Section

3) TYPE OF WORK (Check):
✓New Well | Deepening | Reconditioning | Plugging

4) PROPOSED USE (Check):
✓Domestic | Industrial | Municipal | Irrigation | Test Well | Other

5) TYPE OF WELL (Check):
✓Rotary | Driven | Dug | Cable | Jetted | Bored

6) WELL LOG:
Diameter of hole 6 3/4 in. Depth drilled 320 ft. Depth of completed well 320 ft. Date drilled 9-5-75
All measurements made from 0 ft. above ground level.

From (ft.)	To (ft.)	Description and color of formation material
0	3	Top soil
3	40	Clay
40	60	Limestone
60	200	Blue Shale & Clay
200	240	Blue Clay
240	255	Sand
255	280	Sandy Clay & Coal
280	300	Gravel & Clay
300	320	? Lost Circulation

(Use reverse side if necessary)

9) Casing:
Type: Old | ✓New | Steel | ✓Plastic | Other
Cemented from 0 ft. to 60 ft.

Diameter (inches)	Setting From (ft.)	To (ft.)	Gage
4½	0	~~300~~ 320	SCH 40

10) SCREEN:
Type
✓Perforated | Slotted

Diameter (inches)	Setting From (ft.)	To (ft.)	Slot Size

7) COMPLETION (Check):
Straight wall | ✓Gravel packed | Other
Under reamed | Open Hole

8) WATER LEVEL:
Static level 280 ft. below land surface Date 9-5-75
Artesian pressure lbs. per square inch Date
Depth to pump bowls, cylinder, jet, etc., 300 ft. below land surface.

11) WELL TESTS:
Was a pump test made? Yes , No If yes, by whom?
Yield: gpm with ft. drawdown after hrs.
Bailer test 20 gpm with 18 ft. drawdown after 1 hrs.
Artesian flow gpm
Temperature of water

12) WATER QUALITY:
Was a chemical analysis made? Yes No
Did any strata contain undesirable water? Yes ✓
Type of water? depth of strata

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

NAME W. D. Dowell (Type or Print) Water Well Drillers Registration No. 1268

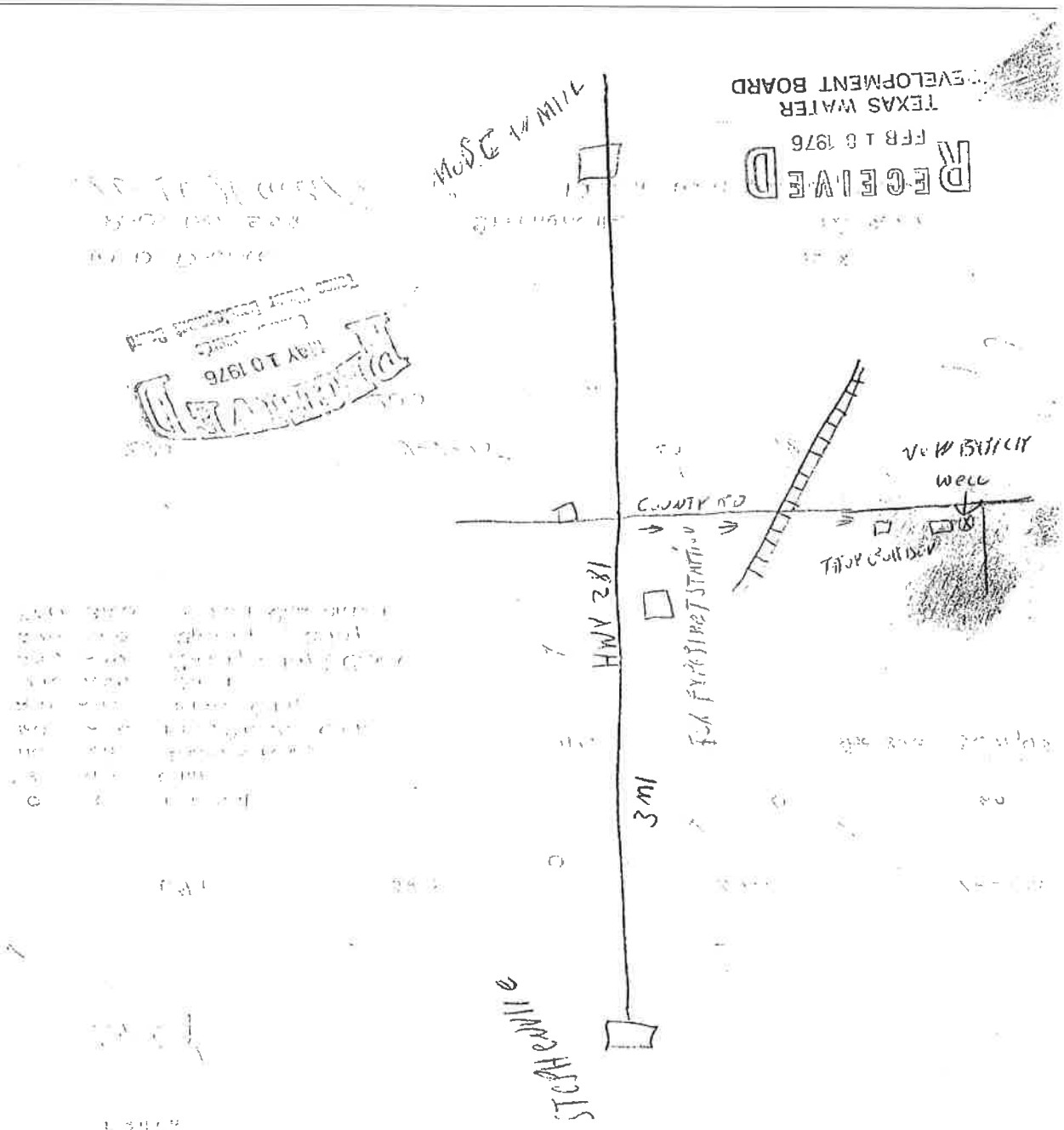
ADDRESS P. O. Box 558 (Street or RFD) Stephenville (City) Tx. 76401 (State)

(Signed) W D Dowell (Water Well Driller) Dowell Well Service, Inc. (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

*Additional instructions on reverse side.

TWDB-WD-8



2)LOCATION OF WELL:

The sketch showing the well location must be as accurate as possible, showing landmarks, in sufficient detail so that the well may be plotted on a General Highway Map of the county in which the well is located.

Reference points from which distances are measured and directions given should be of a permanent nature (e.g. highway intersections, center of towns, river and creek bridges, railroad crossings). The distance and direction from the nearest town should always be indicated.

When giving a legal description include a sketch showing location of the well within the described area. e.g. survey abstract.

Information furnished in Section 2) of the TWDBR-CW-53 is very important. Unless the well can be accurately located on a map the value of the other data contained in the Report is greatly reduced.

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
14	1 of 2	NNW	0.11 / 588.80	DON COAN TX	TCEQ WELL LOGS

Grid No:	31-47-8
Date Drilled:	01/24/1990
Owners Name:	DON COAN
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	310
Depth Drilled:	400
Latitude:	32.2664453
Longtiude:	-98.181638

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

d original copy by certified mail to: Texas Water Com ion, P.O. Box 13087, Austin, Texas 78711 — *Please use black ink.*

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas
WELL REPORT #1444

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) OWNER Dr. Cass (Name) ADDRESS P.O. Box 71 (Street or RFD) Stephenville (City) TX (State) 76401 (Zip)

2) LOCATION OF WELL: County Erath . 4 miles in E (NE, SW, etc.) direction from Stephenville (Town)

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ LEGAL DESCRIPTION:
Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
☐ SEE ATTACHED MAP on 31-55-7

3) TYPE OF WORK (Check): ☑ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): ☑ Domestic ☐ Industrial ☐ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

5) DRILLING METHOD (Check): ☐ Driven ☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☐ Bored ☑ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started _____ 19__ Completed 1-24 19 90

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
4	Surface 0	400

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☑ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 340 ft. to 400 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	7	Topsoil
7	30	Caliche
30	210	Grey Shale
210	230	Sand
230	280	Blue Clay
280	310	Sand
310	370	Red Blue Clay
370	400	Gravel

(Use reverse side if necessary)

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
4	N	SCH 40 PVC	0	400	

9) CEMENTING DATA [Rule 287.44(1)]
Cemented from 0 ft. to 340 ft. No. of Sacks Used 15
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Poured
Cemented by Dowell Well Service

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed [Rule 287.44(2)(A)]
☐ Pitless Adapter Used [Rule 287.44(3)(B)]
☑ Approved Alternative Procedure Used [Rule 287.71]

13) TYPE PUMP:
☐ Turbine ☐ Jet ☑ Submersible ☐ Other
☐ Other _____
Depth to pump bowls, cylinder, jet, etc. _____ ft.

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SEP 5 1990
TEXAS WATER COMMISSION

14) WELL TESTS:
Type Test: ☐ Pump ☐ Bailer ☑ Jetted ☐ Estimated
Yield: 15 gpm with _____ ft. drawdown after _____ hrs.

11) WATER LEVEL:
Static level 310 ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

15) WATER QUALITY:
Did the drilling penetrate any strata which contained undesirable constituents?
☐ Yes ☑ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☑ No

12) PACKERS: Type _____ Depth _____

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME DOWELL WELL SERVICE (Type or print) WELL DRILLER'S LICENSE NO. 1891

ADDRESS P.O. BOX 557 (Street or RFD) STEPHENVILLE (City) TX (State) 76401 (Zip)

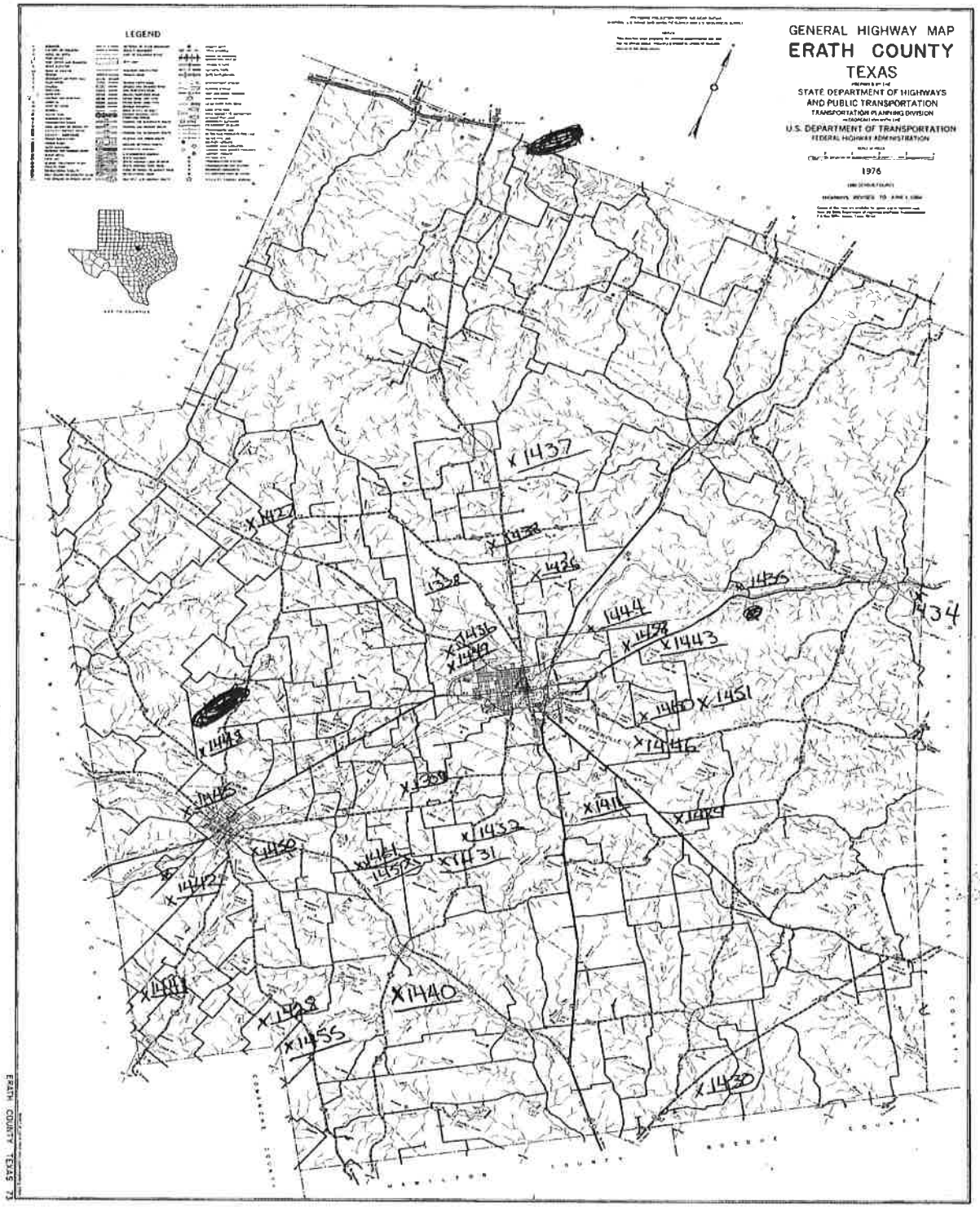
(Signed) Mark Dowell (Licensed Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only: Well No. 31-47.8 Located on map _____

WWD-012 (Rev. 09/21/88)

TEXAS WATER COMMISSION COPY


LEGEND
GENERAL HIGHWAY MAP
ERATH COUNTY
TEXAS
STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
TRANSPORTATION PLANNING DIVISION
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
1976
ERATH COUNTY TEXAS '76
X1437
X1427
X1426
X1434
X1443
X1451
X1446
X1440
X1455
X1430

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
14	2 of 2	NNW	0.11 / 588.80	A T GORDON TX	TCEQ WELL LOGS

Grid No:	31-47-8M
Date Drilled:	10/12/1978
Owners Name:	A T GORDON
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	260
Depth Drilled:	320
Latitude:	32.2664453
Longtiude:	-98.181638

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

8M

Send original copy by certified mail to the Texas Water Development Board P. O. Box 13087 Austin, Texas 78711

State of Texas

WATER WELL REPORT

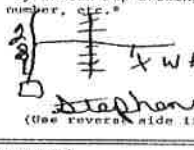
For TWDB use only
Well No. 31-47-8M
Located on map
Received:

1) OWNER:
Person having well drilled A. T. Gordon (Name) Address Rt 2 Stephenville (Street or RFD) (City) Texas (State)

Landowner Same (Name) Address (Street or RFD) (City) (State)

2) LOCATION OF WELL:
County ERATH, 2 miles in NE (N.E., S.W., etc.) direction from Stephenville (Town)

Locate by sketch map showing landmarks, roads, creeks, hiway number, etc.*



(Use reverse side if necessary)

or Give legal location with distances and directions from adjacent sections or survey lines.

Labor _____ League _____
Block _____ Survey _____
Abstract No. _____
(NW¼ NE¼ SW¼ SE¼) of Section _____

3) TYPE OF WORK (Check): New Well ✓ Deepening / Reconditioning / Plugging

4) PROPOSED USE (Check): Domestic / Industrial / Municipal / Irrigation / Test Well / Other

5) TYPE OF WELL (Check): Rotary / Driven / Dug / Cable / Jetted / Bored

6) WELL LOG:
Diameter of hole 6¼ in. Depth drilled 320 ft. Depth of completed well 320 ft. Date drilled 10-12-78
All measurements made from 1 ft. above ground level.

From (ft.)	To (ft.)	Description and color of formation material
0	5	TS
5	35	Caliche
35	220	Shale
220	235	Sand
235	280	Blue Clay
280	320	Gravel

(Use reverse side if necessary)

9) Casing:
Type: Old / New / Steel / PVC Plastic ✓ / Other
Cemented from 0 ft. to 220 ft.

Diameter (inches)	Setting From (ft.)	To (ft.)	Gage
4 I.D.	0	320	Sch 40

10) SCREEN:
Type
Perforated ✓ / Slotted

Diameter (inches)	Setting From (ft.)	To (ft.)	Slot Size
4	280	320	3/16

7) COMPLETION (Check):
Straight wall / Gravel packed ✓ / Other
Under reamed / Open Hole

8) WATER LEVEL:
Static level 260 ft. below land surface Date 10-12-78
Artesian pressure ~~25~~ lbs. per square inch Date
Depth to pump bowls, cylinder, jet, etc., No Pump ft. below land surface.

11) WELL TESTS:
Was a pump test made? Yes / No ✓ If yes, by whom?
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.
Bailer test 15 gpm with 20 ft. drawdown after 1 hrs.
Artesian flow _____ gpm
Temperature of water _____

12) WATER QUALITY:
Was a chemical analysis made? Yes / No ✓
Did any strata contain undesirable water? Yes / No ✓
Type of water? _____ depth of strata _____

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

NAME W. D. Dowell (Type or Print) Water Well Drillers Registration No. 1268

ADDRESS P. O. Box 558 (Street or RFD) Stephenville (City) Texas 76401 (State)

(Signed) W D Dowell (Water Well Driller) Dowell Well Service Inc. (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

*Additional instructions on reverse side.

TWDB-WQ-8

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
15	1 of 1	N	0.11 / 599.80	Nick Braun TBD CR 176 Stephenville TX 76401	SDRW WELLS

Track NO:	543961
Date Submitted:	2020-05-22
Owner Name:	Nick Braun
Owner Address:	5411 CR 522
Owner Address2:	
Owner City:	Stephenville
Owner State:	TX
Owner Zip:	76401
County:	Erath
Type of Work:	New Well
Typ of Wrk Oth Descr:	
Proposed Use:	Domestic
Prop Use Oth Descr:	
Latitude:	32.267111
Longitude:	-98.180167
Drilling Date Started:	2020-05-20
Drilling Date Completed:	2020-05-20
Chemical Analysis:	No
Company Name:	Dowell Well Service
Company Address:	PO Box 402
CompanyAddress2:	
Company City:	Stephenville
Company State:	TX
Company Zip:	
Company Country:	
Data Source:	Full SDR Database; SDRDB Well Location (Map)
Report Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=543961&Type=SDR-Well

Well Borehole Information

Top Depth:	0
Bottom Depth:	435
Top Depth:	
Bottom Depth:	435.0

Well Levels

Measurement:	325
Measurement Date:	2020-05-20

Well Strata

Water Type:

Trinity

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
16	1 of 2	NE	0.12 / 615.92	Kenneth Gifford 4171 CR 177 stephenville TX 76401	SDRW WELLS

Track NO:	329374
Date Submitted:	2013-08-01
Owner Name:	Kenneth Gifford
Owner Address:	4171 CR 177
Owner Address2:	
Owner City:	Stephenville
Owner State:	TX
Owner Zip:	76401
County:	Erath
Type of Work:	New Well
Typ of Wrk Oth Descr:	
Proposed Use:	Domestic
Prop Use Oth Descr:	
Latitude:	32.259167
Longitude:	-98.170278
Drilling Date Started:	2013-07-31
Drilling Date Completed:	2013-07-31
Chemical Analysis:	No
Company Name:	Dowell Well Service
Company Address:	P.O. Box 402
CompanyAddress2:	
Company City:	Stephenville
Company State:	TX
Company Zip:	76401
Company Country:	
Data Source:	Full SDR Database; SDRDB Well Location (Map)
Report Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=329374&Type=SDR-Well

Well Borehole Information

Top Depth:	
Bottom Depth:	115.0
Top Depth:	0
Bottom Depth:	115

Well Levels

Measurement:	60
Measurement Date:	2013-07-31

Well Strata

Water Type:

Fresh

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
16	2 of 2	NE	0.12 / 615.92	BERT WRIGHT TX	TCEQ WELL LOGS

Grid No:	31-47-8
Date Drilled:	10/23/1989
Owners Name:	BERT WRIGHT
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	301
Depth Drilled:	429
Latitude:	32.2593622
Longtiude:	-98.1718074

Send original copy by certified mail to: Texas Water Con. ...ion, P.O. Box 13087, Austin, Texas 78711 — Please use black ink.

ATTENTION OWNER: Confidentiality Privilege Notice on Reverse Side

State of Texas
WELL REPORT

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) OWNER Bert Wright (Name) ADDRESS Rt 2 Stephenville TX 76401 (Street or RFD) (City) (State) (Zip)

2) LOCATION OF WELL: County Erath 7 miles in NE (NE, SW, etc.) direction from Stephenville (Town)

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ LEGAL DESCRIPTION:
Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
☑ SEE ATTACHED MAP #10 on 31-48-6

3) TYPE OF WORK (Check): ☑ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): ☑ Domestic ☐ Industrial ☐ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

5) DRILLING METHOD (Check): ☐ Driven ☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☐ Bored ☐ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started 10-18 19 89 Completed 10-23 19 89

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
6¾	Surface	429

7) BOREHOLE COMPLETION: ☑ Open Hole ☐ Straight Wall ☐ Underreamed ☐ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from _____ ft. to _____ ft.

From (ft.)	To (ft.)	Description and color of formation material
0	6	Top Soil
6	39	Caliche & Sand Rock
39	70	Blue Shale
70	214	Limestone
214	265	Blue Shale
265	280	Water Sand
280	294	Blue Shale
294	330	Water Sand & Gravel
330	385	Blue & Grey Shale
385	427	Water Sand & Gravel
427	429	Blue Shale

(attach additional sheet if necessary)

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing	Gage Screen
4½	N	Steel	0	429	156	
		Slotted	404	429		5/32

9) CEMENTING DATA [Rule 287.44(1)]
Cemented from 120 ft. to 0 ft. No. of Sacks Used 10
ft. to ft. No. of Sacks Used
Method used T-Subs Water 44 lbs Cement
Cemented by _____

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TEXAS WATER COMMISSION

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed [Rule 287.44(2)(A)]
☐ Pitless Adapter Used [Rule 287.44(3)(B)]
☐ Approved Alternative Procedure Used [Rule 287.71]

11) WATER LEVEL:
Static level 30' ft. below land surface Date 10-23-89
Artesian flow _____ gpm. Date _____

12) PACKERS: Type Duckbill Depth 120'

13) TYPE PUMP:
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder ☐ Other _____
Depth to pump bowls, cylinder, jet, etc., 399 ft.

14) WELL TESTS:
Type Test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with 0 ft. drawdown after 4 hrs.

15) WATER QUALITY:
Did the driller penetrate any strata which contained undesirable constituents? ☐ Yes ☐ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Brackish Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Riley Drilling (Type or print) WELL DRILLER'S LICENSE NO. 1252
ADDRESS 1330 W McNeil (Street or RFD) Stephenville (City) TX (State) 76401 (Zip)
(Signed) Tommy Riley (Licensed Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

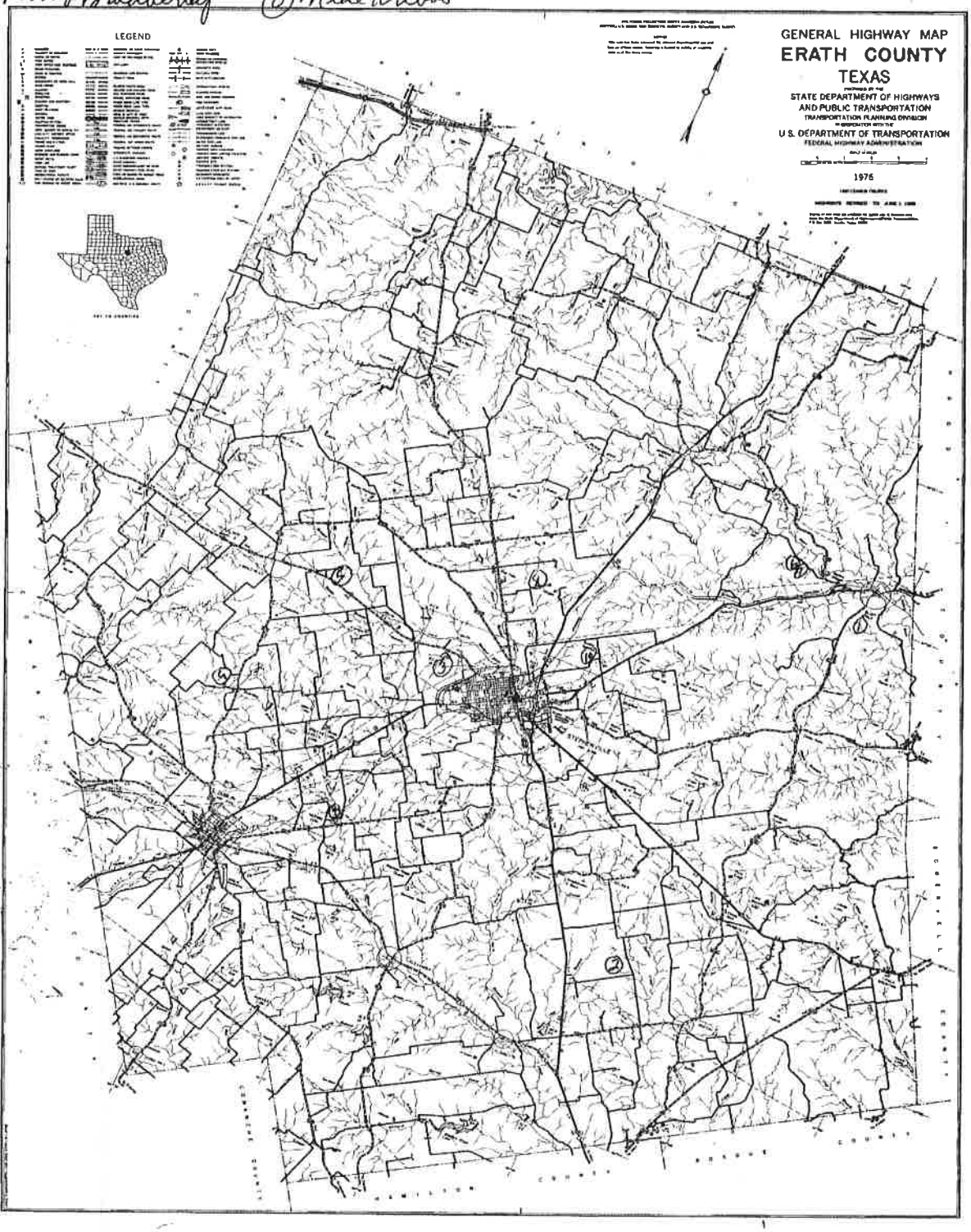
For TWC use only: Well No. 31-47-8 Located on map _____

WWD-012 (Rev. 09/21/88)

TEXAS WATER COMMISSION COPY

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

(1) Mrs E L Rhoades
(2) B W Frey
(3) Gary Chandler
(4) Harry Bradberry
(5) Bessie Jones
(6) J H Cantrell
(7) Thomas Cantrell
(8) Mike Kibbs
(9) Gordon Reeder
(10) Bert Wright



Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
17	1 of 1	N	0.12 / 627.49	Nick Braun TBD CR 176 Stephenville TX 76401	SDRW WELLS

Track NO:	560729
Date Submitted:	2020-12-04
Owner Name:	Nick Braun
Owner Address:	TBD CR 176
Owner Address2:	
Owner City:	Stephenville
Owner State:	TX
Owner Zip:	76401
County:	Erath
Type of Work:	New Well
Typ of Wrk Oth Descr:	
Proposed Use:	Domestic
Prop Use Oth Descr:	
Latitude:	32.267778
Longitude:	-98.1775
Drilling Date Started:	2020-11-12
Drilling Date Completed:	2020-11-12
Chemical Analysis:	No
Company Name:	Dowell Well Service
Company Address:	PO Box 402
CompanyAddress2:	
Company City:	Stephenville
Company State:	TX
Company Zip:	
Company Country:	
Data Source:	Full SDR Database; SDRDB Well Location (Map)
Report Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=560729&Type=SDR-Well

Well Borehole Information

Top Depth:	0
Bottom Depth:	435
Top Depth:	
Bottom Depth:	435.0

Well Levels

Measurement:	325
Measurement Date:	2020-11-12

Well Strata

Water Type:

Trinity

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
18	1 of 1	N	0.12 / 656.82	James Sommer 325 CR 477 Stephenville TX 76401	SDRW WELLS

Track NO:	203770
Date Submitted:	2010-01-06
Owner Name:	James Sommer
Owner Address:	325 CR 477
Owner Address2:	
Owner City:	Stephenville
Owner State:	TX
Owner Zip:	76401
County:	Erath
Type of Work:	Replacement
Typ of Wrk Oth Descr:	
Proposed Use:	Domestic
Prop Use Oth Descr:	
Latitude:	32.265834
Longitude:	-98.175555
Drilling Date Started:	2009-12-28
Drilling Date Completed:	2009-12-29
Chemical Analysis:	No
Company Name:	Dowell Well Service
Company Address:	PO Box 402
CompanyAddress2:	
Company City:	Stephenville
Company State:	TX
Company Zip:	76401
Company Country:	
Data Source:	Full SDR Database; SDRDB Well Location (Map)
Report Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=203770&Type=SDR-Well

Well Borehole Information

Top Depth:	0
Bottom Depth:	395
Top Depth:	
Bottom Depth:	395.0

Well Levels

Measurement:	275
Measurement Date:	2009-12-29

Well Strata

Water Type:

fresh

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
19	1 of 2	N	0.14 / 725.99	Elizabeth Tatsch 2488 CR 176 Stephenville TX 76401	SDRW WELLS

Track NO:	335178
Date Submitted:	2013-08-15
Owner Name:	Elizabeth Tatsch
Owner Address:	2488 CR 176
Owner Address2:	
Owner City:	Stephenville
Owner State:	TX
Owner Zip:	76401
County:	Erath
Type of Work:	Replacement
Typ of Wrk Oth Descr:	
Proposed Use:	Domestic
Prop Use Oth Descr:	
Latitude:	32.266667
Longitude:	-98.176111
Drilling Date Started:	2012-05-23
Drilling Date Completed:	2012-05-23
Chemical Analysis:	No
Company Name:	
Company Address:	
CompanyAddress2:	
Company City:	
Company State:	
Company Zip:	
Company Country:	
Data Source:	Full SDR Database; SDRDB Well Location (Map)
Report Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=335178&Type=SDR-Well

Well Borehole Information

Top Depth:	
Bottom Depth:	430.0
Top Depth:	5
Bottom Depth:	430
Top Depth:	0
Bottom Depth:	5

Well Levels

Measurement:	350
Measurement Date:	2012-05-23

Well Strata

Water Type:

Trinity

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
19	2 of 2	N	0.14 / 725.99	ED TATSCH TX	TCEQ WELL LOGS

Grid No:	31-47-8
Date Drilled:	09/06/2001
Owners Name:	ED TATSCH
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	330
Depth Drilled:	537
Latitude:	32.2668439
Longtiude:	-98.1763323

ATTENTION OWNER: Confidentiality Privilege Notice on Reverse Side

STATE OF TEXAS
WATER WELL REPORT

1) OWNER: TATSCH, ED ADDRESS: 2488 CR 176 CITY: STEPHENVILLE STATE: TX ZIP: 76401-

2) ADDRESS OF WELL:
County: ERATH GRID # 31-47-8
Street or RFD: SMITH SPRINGS RD
City, State, Zip code: STEPHENVILLE , TX 76401-

3) TYPE OF WORK: NEW WELL 4) PROPOSED USE: DOMESTIC
If Public Supply well, were plans submitted to the TNRCC?

5)

6) WELL LOG: 00789
DATE DRILLING:
STARTED: 09/06/01
COMPLETED: 09/06/01

DIAMETER OF HOLE

DIAMETER	FROM	TO
6.75	SUR	537

7) DRILLING METHOD: AIR ROTARY

8) BOREHOLE COMPLETION:
GRAVEL PACKED
IF GRAVEL... FROM 287 FT. TO 537 FT.
FROM FT. TO FT.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

DIA	NEW/USED	DESCRIPTION	FROM	TO	GAGE CASING SCREEN
4	N	PLASTIC, BLANK	0	477	SCH40
4	N	PLASTIC, SLOTTED	477	537	SCH40

GEOLOGICAL DESCRIPTION:

FROM	TO	DESCRIPTION
0	1	TOP SOIL
1	30	SANDY CLAY CALICHE SAND
30	150	RED AND BLUE CLAY SAND SANDY CLAY
150	195	RED AND BLUE CLAY
195	220	BLUE AND GREY CLAY LIMESTONE-SHALE
220	275	SANDY CLAY SAND
275	325	BLUE SANDY CLAY RED CLAY
325	335	SAND-GRAVEL
335	347	BLUE SANDY CLAY SANDSTONE
347	425	SAND-GRAVEL
425	435	RED AND BLUE CLAY SANDY CLAY
435	498	SAND-GRAVEL
498	537	CLAY SHALE

9) CEMENTING DATA:
Cemented from No. of Sacks Used
0 FT. TO 287 FT. 30
FT. TO FT.
Method used: CEMENT-PUMPED
Cemented by: GARY
Distance to septic field lines: 100+ ft.
Method of verification of above distance: CUSTOMER

10) SURFACE COMPLETION:
SPEC. STEEL SLEAVE

11) WATER LEVEL:
STATIC LEVEL : 330 FT. DATE: 09/06/01
ARTESIAN FLOW: GPM. DATE:

12) PACKERS: TYPE DEPTH

13) TYPE PUMP:
SUBMERSIBLE
DEPTH TO PUMP: 380

14) WELL TEST:
PUMP
YIELD: 16 GPM WITH UNKN FT DRAWDOWN AFTER 24 HRS

15) WATER QUALITY:
TYPE OF WATER: DEPTH OF STRATA: NO CHEMICAL ANALYSIS MADE
NO STRATA OF UNDESIRABLE WATER PENETRATED

COMPANY NAME: ASSOCIATED SERVICES WATER WELL DRILLER'S LICENSE NO.: 2404
ADDRESS: P.O. BOX 16 CITY: STEPHENVILLE STATE: TX ZIP CODE: 76401

FOR TWC USE ONLY
WELL NO. _____
LOCATED ON MAP _____

I HEREBY CERTIFY THAT THIS WELL WAS DRILLED BY ME (OR UNDER MY SUPERVISION) AND THAT EACH AND ALL OF THE STATEMENTS HEREIN ARE TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF. I UNDERSTAND THAT FAILURE TO COMPLETE ITEMS 1 THRU 15 WILL RESULT IN THE LOG(S) BEING RETURNED FOR COMPLETION AND RESUBMITTAL.

(signed) _____ (LICENSED WATER WELL DRILLER)

(signed) _____ (REGISTERED DRILLER TRAINEE)

SEQ # FILE ID DESC CD EMP # OCT 0 9 2001 OB COMMENT

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
20	1 of 2	NW	0.17 / 880.64	LOUIS BOLLINGEL TX	TCEQ WELL LOGS

Grid No:	31-47-8
Date Drilled:	04/14/1993
Owners Name:	LOUIS BOLLINGEL
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	31
Depth Drilled:	75
Latitude:	32.261111
Longtiude:	-98.185

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

Send original copy by certified mail to: Texas Water Cor ...ion, P.O. Box 13087, Austin, Texas 78711 — Please use black ink.

ATTENTION OWNER: Confidentiality Privilege Notice on Reverse Side

State of Texas WELL REPORT

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) OWNER LOUIS BOLLINGEL (Name) ADDRESS P. O. Box 149, Morgan Mill, TX 76465 (Street or RFD) (City) (State) (Zip)

2) LOCATION OF WELL: County Erath , 4 miles in N (NE, SW, etc.) direction from Stephenville (Town)

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ LEGAL DESCRIPTION:
Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
☒ SEE ATTACHED MAP

3) TYPE OF WORK (Check): ☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): ☒ Domestic ☐ Industrial ☐ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

6) DRILLING METHOD (Check): ☐ Driven ☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☐ Bored ☒ Air Rotary ☐ Cable Tool ☐ Other _____

5) WELL LOG:
Date Drilling: Started 4/14 1993 Completed 4/14 1993

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
7-7/8	Surface	75

7) BOREHOLE COMPLETION: ☐ Open Hole ☐ Straight Wall ☐ Underreamed ☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 20 ft. to 75 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	21	Clay
21	34	Lime
34	49	Clay
49	51	Tan Sand
51	61	Clay
61	75	Shale

RECEIVED MAY 25 1993 TEXAS WATER COMMISSION

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
[illegible]	N	Plastic	0	75	

(Use reverse side if necessary)

9) CEMENTING DATA [Rule 287.44(1)]
Cemented from 0 ft. to 20 ft. No. of Sacks Used 3
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Conventional
Cemented by Company

13) TYPE PUMP: ☐ Turbine ☐ Jet ☒ Submersible ☐ Cylinder ☐ Other _____
Depth to pump bowls, cylinder, jet, etc., 60 ft.

14) WELL TESTS: Type Test: ☐ Pump ☐ Bailer ☐ Jetted ☒ Estimated
Yield: 10 gpm with 5 ft. drawdown after 1 hrs.

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed [Rule 287.44(2)(A)]
☑ Specified Steel Sleeve Installed [Rule 287.44(3)(A)]
☐ Pitless Adapter Used [Rule 287.44(3)(B)]
☐ Approved Alternative Procedure Used [Rule 287.71]

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☒ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

11) WATER LEVEL:
Static level 31 ft. below land surface Date 4/14/93
Artesian flow _____ gpm. Date _____

12) PACKERS: Type Depth

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Double Diamond Drilling (Type or print) WELL DRILLER'S LICENSE NO. 2682

ADDRESS P. O. Box 518 (Street or RFD) Granbury, (City) TX (State) 76048 (Zip)

(Signed) James E. Williams (Licensed Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only: Well No. _____ Located on map 31.47.8

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

TEXAS WATER COMMISSION COPY


LEGEND
GENERAL HIGHWAY MAP
ERATH COUNTY
TEXAS
STATE DEPARTMENT OF HIGHWAYS
AND PUBLIC TRANSPORTATION
U.S. DEPARTMENT OF TRANSPORTATION
1976
LOUIS BOLLINGER

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
20	2 of 2	NW	0.17 / 880.64	CDS STXDC 2021 LLC 923 County Road 176 Stephenville TX 76401	SDRW WELLS

Track NO:	605326
Date Submitted:	2022-05-17
Owner Name:	CDS STXDC 2021 LLC
Owner Address:	125 Camelot Drive
Owner Address2:	
Owner City:	Fon Du Lac
Owner State:	WI
Owner Zip:	54935
County:	Erath
Type of Work:	New Well
Typ of Wrk Oth Descr:	
Proposed Use:	Industrial
Prop Use Oth Descr:	
Latitude:	32.261111
Longitude:	-98.185
Drilling Date Started:	2022-05-11
Drilling Date Completed:	2022-05-16
Chemical Analysis:	No
Company Name:	Associated Well Services, Inc.
Company Address:	PO Box 16
CompanyAddress2:	
Company City:	Stephenville
Company State:	TX
Company Zip:	76401
Company Country:	
Data Source:	Full SDR Database; SDRDB Well Location (Map)
Report Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=605326&Type=SDR-Well

Well Borehole Information

Top Depth:	
Bottom Depth:	424.0
Top Depth:	0
Bottom Depth:	5
Top Depth:	5
Bottom Depth:	424

Well Levels

Measurement:	299
Measurement Date:	2022-05-16

Well Strata

Water Type:

2nd Trinity

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
21	1 of 1	N	0.20 / 1,034.32	RANDY TATSCH 3055 CR 176 STEPHENVILLE TX 76401	SDRW WELLS

Track NO:	562001
Date Submitted:	2020-12-20
Owner Name:	RANDY TATSCH
Owner Address:	3055 CR 176
Owner Address2:	
Owner City:	STEPHENVILLE
Owner State:	TX
Owner Zip:	76401
County:	Erath
Type of Work:	New Well
Typ of Wrk Oth Descr:	
Proposed Use:	Domestic
Prop Use Oth Descr:	
Latitude:	32.268056
Longitude:	-98.176667
Drilling Date Started:	2020-10-23
Drilling Date Completed:	2020-10-23
Chemical Analysis:	No
Company Name:	BENNETT WATER WELL DRILLING, INC.
Company Address:	7300 W. HWY 377
CompanyAddress2:	
Company City:	TOLAR
Company State:	TX
Company Zip:	76476
Company Country:	
Data Source:	Full SDR Database; SDRDB Well Location (Map)
Report Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=562001&Type=SDR-Well

Well Borehole Information

Top Depth:	0
Bottom Depth:	425
Top Depth:	
Bottom Depth:	425.0

Well Levels

Measurement:	340
Measurement Date:	2020-10-23

Well Strata

Water Type:

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
22	1 of 1	SSW	0.20 / 1,062.96	Texas Agrilife Research Off of Smith's Springs Road Stephenville TX	SDRW WELLS

Track NO: 336732
Date Submitted: 2013-08-20
Owner Name: Texas Agrilife Research
Owner Address: 1229 Hwy 281 N
Owner Address2:
Owner City: Stephenville
Owner State: TX
Owner Zip: 76401
County: Erath
Type of Work: Replacement
Typ of Wrk Oth Descr:
Proposed Use: Domestic
Prop Use Oth Descr:
Latitude: 32.243889
Longitude: -98.180278
Drilling Date Started: 2012-05-03
Drilling Date Completed: 2012-05-03
Chemical Analysis: No
Company Name: Associated Services
Company Address:
CompanyAddress2:
Company City:
Company State:
Company Zip:
Company Country:
Data Source: Full SDR Database; SDRDB Well Location (Map)
Report Link: https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=336732&Type=SDR-Well

Well Borehole Information

Top Depth:
Bottom Depth: 450.0

Top Depth: 0
Bottom Depth: 100

Top Depth: 100
Bottom Depth: 450

Well Levels

Measurement: 330
Measurement Date: 2012-05-03

Well Strata

Water Type:

Trinity

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
23	1 of 1	WNW	0.21 / 1,100.01	CDS STXDC 2021, LLC 1356 CR 176 Stephenville TX 76401	SDRW WELLS

Track NO:	598115
Date Submitted:	2022-02-26
Owner Name:	CDS STXDC 2021, LLC
Owner Address:	125 Camelot Dr
Owner Address2:	
Owner City:	Fond du Lac
Owner State:	WI
Owner Zip:	54935
County:	Erath
Type of Work:	New Well
Typ of Wrk Oth Descr:	
Proposed Use:	Irrigation
Prop Use Oth Descr:	
Latitude:	32.258379
Longitude:	-98.186473
Drilling Date Started:	2022-02-17
Drilling Date Completed:	2022-02-17
Chemical Analysis:	No
Company Name:	Moore's Water Well Service
Company Address:	3633 South Hwy 281
CompanyAddress2:	
Company City:	Mineral Wells
Company State:	TX
Company Zip:	76067
Company Country:	
Data Source:	Full SDR Database; SDRDB Well Location (Map)
Report Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=598115&Type=SDR-Well

Well Borehole Information

Top Depth:	
Bottom Depth:	440.0
Top Depth:	0
Bottom Depth:	440

Well Strata

Water Type:

Fresh

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
24	1 of 1	WNW	0.27 / 1,413.71	CDS STXDC 2021, LLC 1356 CR 176 Stephenville TX 76401	SDRW WELLS

Track NO:	598116
Date Submitted:	2022-02-26
Owner Name:	CDS STXDC 2021, LLC
Owner Address:	125 Camelot Dr
Owner Address2:	
Owner City:	Fond du Lac
Owner State:	WI
Owner Zip:	54935
County:	Erath
Type of Work:	New Well
Typ of Wrk Oth Descr:	
Proposed Use:	Irrigation
Prop Use Oth Descr:	
Latitude:	32.258686
Longitude:	-98.187693
Drilling Date Started:	2022-02-18
Drilling Date Completed:	2022-02-18
Chemical Analysis:	No
Company Name:	Moore's Water Well Service
Company Address:	3633 South Hwy 281
CompanyAddress2:	
Company City:	Mineral Wells
Company State:	TX
Company Zip:	76067
Company Country:	
Data Source:	Full SDR Database; SDRDB Well Location (Map)
Report Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=598116&Type=SDR-Well

Well Borehole Information

Top Depth:	
Bottom Depth:	440.0
Top Depth:	0
Bottom Depth:	440

Well Strata

Water Type:

Fresh

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
25	1 of 1	NNE	0.27 / 1,430.68	GORDON TAYLOR TX	TCEQ WELL LOGS

Grid No:	31-47-8
Date Drilled:	12/28/1985
Owners Name:	GORDON TAYLOR
County:	ERATH
Water Usage:	IRRIGATION
Static Level:	330
Depth Drilled:	430
Latitude:	32.2671213
Longtiude:	-98.1737924

[redacted] mi N/SL
1.3mi W/EL

Please use black ink. Send original copy by certified mail to the Texas Water Commission P.O. Box 13087 Austin, Texas 78711

State of Texas
WATER WELL REPORT

ATTENTION OWNER: Confidentiality Privilege Notice on Reverse Side

Texas Water Well Drillers Board P. O. Box 13087 Austin, Texas 78711

1) OWNER Gordon Taylor (Name) Address 955 Charlotte (Street or RFD) Stephenville (City) Tex (State) 76401 (Zip)

2) LOCATION OF WELL: County Erath 4 miles in NE (N.E., S.W., etc.) direction from Stephenville (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form. 7121

☐ Legal description:
Section No. _____ Block No. _____ Township _____
Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
☒ See attached map. 31-55-5

3) TYPE OF WORK (Check): ☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): ☐ Domestic ☐ Industrial ☐ Monitor ☐ Public Supply ☒ Irrigation ☐ Test Well ☐ Injection ☐ Other _____

5) DRILLING METHOD (Check): ☐ Driven ☒ Mud Rotary ☐ Air Hammer ☐ Jetted ☐ Bored ■ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started 12-27 1985 Completed 12-28 1985

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
10¼	Surface	0
	0	430

From (ft.)	To (ft.)	Description and color of formation material
0	4	Topsoil
4	20	Caliche
20	60	Sandy white Clay
60	240	Shale
240	260	Blue clay
260	290	Sand
240	310	Red Clay
310	350	Sand
350	400	Red Clay
400	430	Sand

7) BOREHOLE COMPLETION: ☐ Open Hole ☐ Straight Wall ☐ Underreamed ☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 370 ft. to 430 ft.

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfr., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
6¾	N	Steel Slotted	0	430	188

9) CEMENTING DATA [Rule 319.44(b)]
Cemented from 0 ft. to 20 ft. No. of Sacks Used 7
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Pour
Cemented by Dowell Well Service Inc.

10) SURFACE COMPLETION
☒ Specified Surface Slab Installed [Rule 319.44(c)]
☐ Pitless Adapter Used [Rule 319.44(d)]
☐ Approved Alternative Procedure Used [Rule 319.71]

11) WATER LEVEL:
Static level 340 ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) PACKERS: Type Depth

13) TYPE PUMP:
☐ Turbine ☐ Jet ☒ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) WELL TESTS:
Type Test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

RECEIVED
MAY 29 1986
TEXAS WATER COMMISSION

(Use reverse side if necessary)

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☒ No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☒ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 12 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Dowell Well Service Inc. (Type or Print) Water Well Driller's License No. 1891

ADDRESS P.O. Box 558 (Street or RFD) Stephenville (City) Tex. (State) 76401 (Zip)

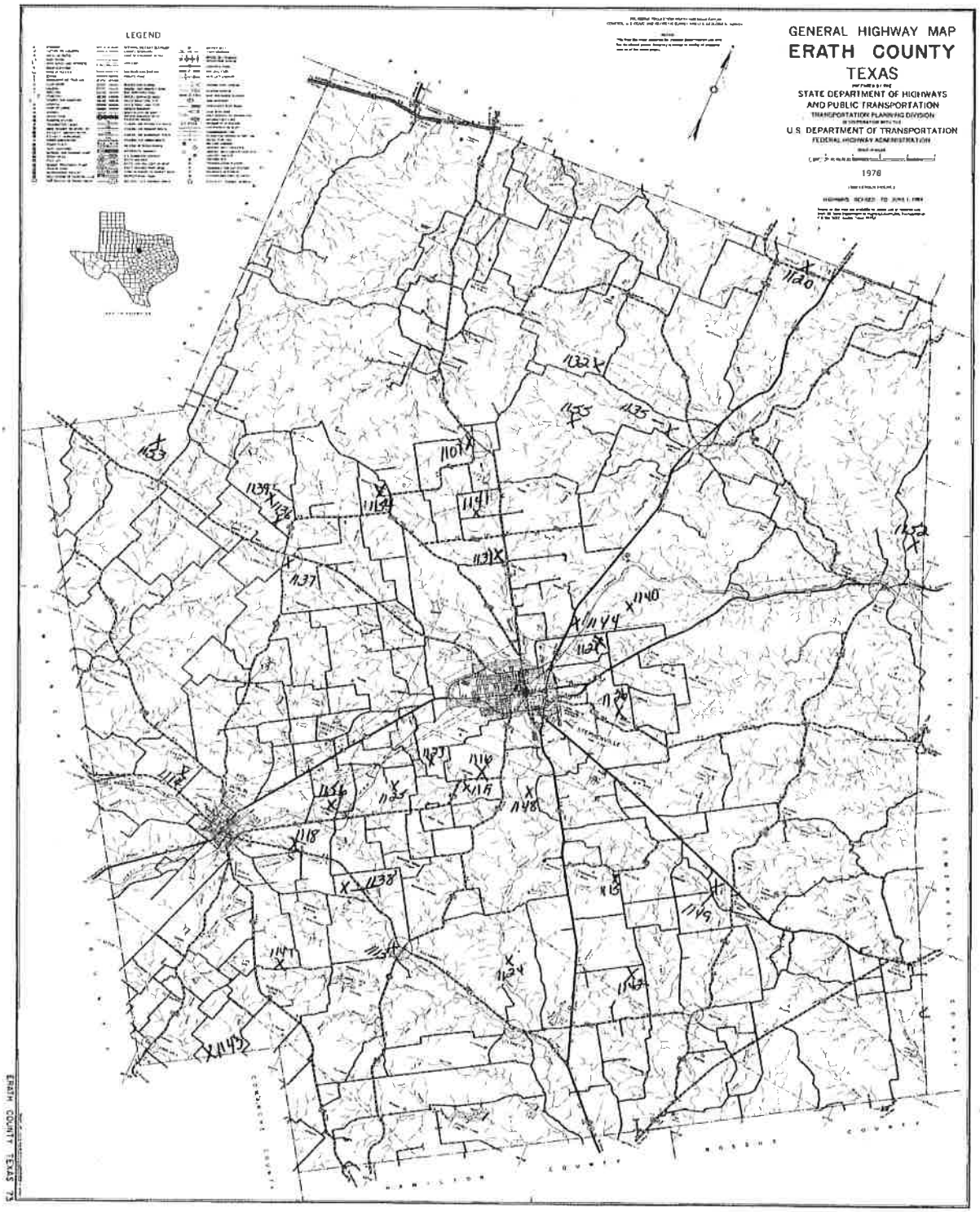
(Signed) Mark Dowell (Licensed Water Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only Well No. 31-47-8 Located on map _____

TWC-0392 (Rev. 06-10-85) TEXAS WATER COMMISSION COPY

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB



Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
26	1 of 1	SW	0.31 / 1,646.44	DAVID HALFORD TX	TCEQ WELL LOGS

Grid No:	31-55-2
Date Drilled:	08/21/2001
Owners Name:	DAVID HALFORD
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	290
Depth Drilled:	425
Latitude:	32.2447838
Longtiude:	-98.1853738

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

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
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well

WELL REPORT

WELL IDENTIFICATION AND LOCATION DATA

1) OWNER

Name	Address	City	State	Zip
David Halford	1817 CR 177	Stephenville	TX	76401

2) WELL LOCATION

County	Physical Address	City	State	Zip
Erath	3 mi NE of Stephenville			

Lat. Long. Grid # 31-55-2

3) Type of Work: ☒ New Well ☐ Reconditioning ☐ Replacement ☐ Deepening

4) Proposed Use (check): ☐ Monitor ☐ Environmental Soil Boring ☒ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell ☐ Rig Supply
If Public Supply well, were plans submitted? ☐ Yes ☐ No

5) NT X

6) Drilling Date: Started 8 / 21 /01 Completed 8 / 21 /01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
7-7/8		425

7) Drilling Method (check): ☐ Driven ☒ Air Rotary ☐ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

LOG OF FORMATIONS DRILLED

0	25	clay
25	80	shale
80	190	lime
190	220	shale
220	290	lime
290	415	sand
415	425	clay red

RECEIVED
TDLR MAIL ROOM
NOV 13 2001
RECEIPT # AMOUNT

(Use reverse side of Well Owner's copy, if necessary)

8) Borehole Completion: ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☒ Gravel Packed ☐ Other
If Gravel Packed give the interval from 290 ft. to 425 ft.

CASING, BLANK PIPE AND WELL SCREEN DATA

Dia (in)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfr., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing	Gage Screen
4	N	Plastic	0	425		

9) Cementing Data
Cementing from 0 ft. to 20 ft. # of sacks used 10
280 ft. to 290 ft. # of sacks used 2
Method Used Conventional
Cementing By Company
Distance to septic system field or other concentrated contamination NA
Method of verification of above distance

13) Plugged ☐ Well plugged within 48 hours
Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Sacks used

10) Surface Completion
☐ Specified Surface Slab Installed
☒ Specified Surface Sleeve Installed
☐ Pitless Adapter Used
☐ Approved Alternative Procedure Used

14) Type Pump
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other
Depth to pump bowls, cylinder, jet etc. ft.

11) Water Level
Static level 290 ft. below Date 8 21 01
Artesian Flow gpm. Date

15) Water Test
Typetest ☐ Pump ☐ Bailer ☐ Jetted ☒ Estimated
Yield: 20 gpm with 5 ft. drawdown after 1/4 hrs.

12) Packers

Type	Depth

16) Water Quality
Did you knowingly penetrate a strata which contain undesirable constituents.
☐ YES ☒ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water Depth of Strata
Was a chemical analysis made ☐ Yes ☐ No

Company or individual's Name (type or print)	BENNETT WATER WELL DRILLING INC.	Lic. No.
Address	7300 W. HWY 377 TOLAR, TX 76476	City / State / Zip
Signature	LICENSE # 4805	11/1/01

Licensed Driller/Pump Installer Date

Signature Apprentice Date

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
27	1 of 2	NW	0.31 / 1,659.38	AMPI Cheese Plant TX	GWDB

Well Rep Track No:	
State Well No:	3147802
Owner Name:	AMPI Cheese Plant
Drilling Start Dt:	
Drilling Month:	8
Drilling Day:	1
Drilling Year:	1988
Well Depth:	450
Well Usage:	Industrial
Water Level Status:	
Latitude:	32.2619450
Longitude:	-98.1888890
Data Source:	Groundwater Database (GWDB) Reports; GIS shapefile of GWDB well locations
Well Info Report:	https://www3.twdb.texas.gov/apps/waterdatainteractive//GetReports.aspx?Num=3147802&Type=GWDB
Document Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive//GetScannedImage.aspx?Num=3147802&Cnty=Erath

Texas Water Development Board
Well Schedule

State Well No. 31 47 802 Previous Well No. _____ County ERATH 143
River Basin BRAZOS 12 Zone 3 Lat. 32 15 42 Long. 98 11 19 Source of Coord. 1
Owner's Well No. _____ Location ____ 1/4, ____ 1/4, Section ____, Block ____, Survey ____

Owner AMPI CHEESE PLANT Driller DOWELL
Address 1600 E. LAMAR BLVD. P.O. BOX 5040 ARLINGTON 76005 Tenant/Oper. _____
Date Drilled 08 01 1988 Depth 450 Source of Depth Datum D Altitude 1338 Source of Alt. Datum M
Aquifer TWIN MOUNTAIN 218TWMT Well Type W User _____

Well Construction: Const. Method MUD ROTARY H; Casing Material STEEL S
Completion GRAVEL PACK 6; Screen Material STEEL S
Lift Data: Pump Mfr. _____ Type SUBM ☐ No. Stages _____
Bowls Diam. _____ in. Setting _____ ft. Column Diam. _____ in.
Motor Mfr. _____ Fuel or Power ELECT E Horsepower ____.__
Yield: Flow ____ GPM Pump ____ GPM Meas., Rept., Est. ____ Date ____
Performance Test: Date 1988 Length of Test ____ Production 150 GPM
Static Level 360 ft. Pumping Level ____ ft. Drawdown ____ ft. Sp. Cap. ____ GPM/ft.
Quality (Remarks) _____
Water Use: Primary INDUSTRIAL N Secondary ____ ☐ Tertiary ____ ☐
Other Data Available: Water Level N Water Quality N Logs ☐☐☐☐☐☐ Other Data ☐☐☐☐☐
Water Levels: Date ____ Meas. ____ . ____ ____
Date ____ Meas. ____ . ____ ____
Date ____ Meas. ____ . ____ ____

Casing or Blank Pipe (C)
Well Screen or Slotted Zone (S)
Open Hole (O)
Cemented from 0 to 400

		Diam. (in.)	From	To
1	C	8	0	400
2	S	8	400	450
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Recorded By BIRI Date Record Collected or Updated 07 20 1994 (20 max) Reporting Agency 01

Remarks
1
2
3
4
5
6

Aquifer 218TWMT
Well No. 31-47-802

93-0584
2/9/93

Water Quality Sampling Run

SWN: 31-47-802
County: ERATH
Aquifer(s): 218 TWMT

Name: AMPI CHEESE
Address: 1600 E. LAMAR BLVD.
BOX 5040
ARLINGTON 76005

Sample No. 1005
Date: 9-20-94
By: BIRI

	Bottle 1	Bottle 2	Bottle 3	Bottle 4	Bottle 5	Bottle 6	Bottle 7	Total SUB-Samples
	1 liter Anions	1 liter Cations	1 liter Radioactivity	500 ml Nitrate	1 Qt.(glass) (TOC)Organics			
Preserve with:		2 ml HNO (Nitric)	2 ml HNO (Nitric)	1 ml H SO (Sulfuric)				All filtered unless otherwise stipulated. All on ice.

Water Level: UTM LSD Remark:
Temperature (00010): 21.9 c
Specific Conductance (00094): 682 umhos/cm
pH (00400): 7.00
Eh (00090): -72.3 mv.
Phenol ALK (82244): 0 mg/l
Total ALK (39086): 282 mg/l
Carbonate (00452): meq/l 0 mg/l
Bicarbonate (00453): meq/l 344.1 mg/l
Total Cations(+):
Total Anions (-):
Total Hardness (46570): 325
Dissolved Solids(70301): 441

Time in: 1020
Time out: 1130
Weather: 80° DRY
Outside Temp: 80°
Sampling point: @ WELLHEAD

Starting pH: 7.11
14.10 ml. of 0.02N to
50 ml. of Sample
Ending pH: 4.50

Time:	1025	1035	1041	1051	1055		
pH:	6.76	6.92	6.97	7.00	7.00		
Temp:	22.0	21.8	21.8	21.9	21.9		
Eh:					-	72.3	
Cond.	683	682	682	682	682		

ml.	pH	ml.	pH	ml.	pH
0	7.11	10.00	6.38		
1.00	7.00	11.00	6.29		
2.00	6.90	12.00	6.12		
3.00	6.80	13.00	5.70		
4.00	6.65	14.00	4.83		
5.00	6.58	14.10	4.50		
6.00	6.52				
7.00	6.50				
8.00	6.48				
9.00	6.45				

INDUSTRIAL SUBM
FURNAS
150 gal/min est.
25 hp.

other notes: 8-1-88
450 FT.
32 15 45
98 11 16
ERROR MESSAGE

Texas Water Development Board

Chemical Water Analysis Report

HM- MB .1995. 1005
HM = Heavy Trace and Alkaline-Earth Metals

TWDB Use Only
Work No. 11220
IAC No. 3120

Send Reply To:
Ground Water Unit
Texas Water Development Board
P.O. Box 13231
Austin, Texas 78711

Attention: PHIL NORDSTROM
State Well Number: 31-47-802
County: ERATH
Date & Time: 9-20-94 @1100
Owner: AMPI CHEESE
☑ Send Copy To Owner
Address:
Sampled After Pumping: ____ Hours
Date Drilled: ____ Depth: ____
Yield: ____ GPM ☐ Measured ☐ Estimated
Collection Point: ____ pH ____
Use: ____ Temperature: ____ °C
By: BIRI
Specific Conductance: ____

Requested Chemical Analysis

Laboratory No. [redacted] Date Received: SEP 23 1994 Date Reported: OCT 31 1994

		mg/L			mg/L
Calcium	(00915)	77	Sodium	(00930)	40
Magnesium	(00925)	32	Potassium	(00935)	4.9
Lithium	(01130)	0.021	[Convert to µg/L for Data Entry]		
		µg/L			µg/L
Aluminum	(01106)	<20	Manganese	(01056)	14.4
Antimony	(01095)	<2.0	Mercury	(71890)	<0.13
Arsenic	(01000)	<2.0	Molybdenum	(01060)	<30
Barium	(01005)	127	Nickel	(01065)	<10
Beryllium	(01010)	<2.0	Selenium	(01145)	<4.0
Cadmium	(01025)	<0.5	Silver	(01075)	<10
Chromium	(01030)	<10	Strontium	(01080)	1400
Cobalt	(01035)	<10	Thallium	(01057)	~~<10~~ <2.0
Copper	(01040)	<4.0	Vanadium	(01085)	<10
Iron	(01046)	434	Zinc	(01090)	11.8
Lead	(01049)	<5.0			

10-24-94 DS

Note: Crossout those elements not to be analyzed.

Texas Water Development Board

Chemical Water Analysis Report

RAD - MB .1995.1005
RAD = Radioactivity Sample

TWDB Use Only
Work No. 11220
IAC No. 3120

Send Reply To:
Ground Water Monitoring Unit
Texas Water Development Board
P.O. Box 13231
Austin, Texas 78711

Attention: PHIL NORDSTROM
State Well Number: 31-47-802
County: ERATH
Date & Time: 9-20-94@1100
Owner: AMPI CHEESE
☑ Send Copy To Owner
Address:
Sampled After Pumping: ____ Hours
Date Drilled: ____ Depth: ____
Yield: ____ GPM ☐ Measured ☐ Estimated
Collection Point: ____ pH ____
Use: ____ Temperature: ____ °C
By: BIRI
Specific Conductance: ____

Requested Chemical Analysis

SEP 23 1994

Laboratory No.: [redacted]
Date Received: ____
Date Reported: NOV 21 1994

Alpha	(01503)	4.2 ± 2.5	pCi/l
Beta	(03503)	5.5 ± 1.2	pCi/l
	(09503)		pCi/l
	(81366)		pCi/l
	(11500)		pCi/l

94-0147-BJJ

Texas Water Development Board

Chemical Water Analysis Report

GWR- MB .1995.1005 (Anions)

TWDB Use Only
Work No. 11220
IAC No. 3120

Send Reply To:
Ground Water Unit
Texas Water Development Board
P.O. Box 13231
Austin, Texas 78711

Attention: PHIL NORDSTROM
County: ERATH
Owner: AMPI CHEESE
Address: BOX 5040 ARLINGTON 76005
Date Drilled: 8-1-88 Depth: 450
Collection Point: @ WELLHEAD pH 7.00
By: BIRI

State Well Number: 31-47-802
Date & Time: 9-20-94 @ 1100
☑ Send Copy To Owner
Sampled After Pumping: 2/3 Hours
Yield: 150 GPM ☐ Measured ☑ Estimated
Use: INDUSTRIAL Temperature: 21.9 °C
Specific Conductance: 682

Requested Chemical Analysis
Laboratory [redacted] Date Received: SEP 23 1994 Date Reported: OCT 10 1994

THD-Sample No. EB4 1738 Date Received 09/23/94 Date Reported 10/06/94

		MEQ/L	MG/L
Silica	(00955)		18
Sulfate	(00946)	0.32	14
Chloride	(00941)	1.64	58
Fluoride	(00950)	0.02	0.43
P.Alkalinity	(00415)	0.00	0
T.Alkalinity	(00410)	5.54	277
Boron	(*****)		0.23
Bromide	(71870)		0.32

* Convert mg/l Boron to µg/l for data entry.

880091:C

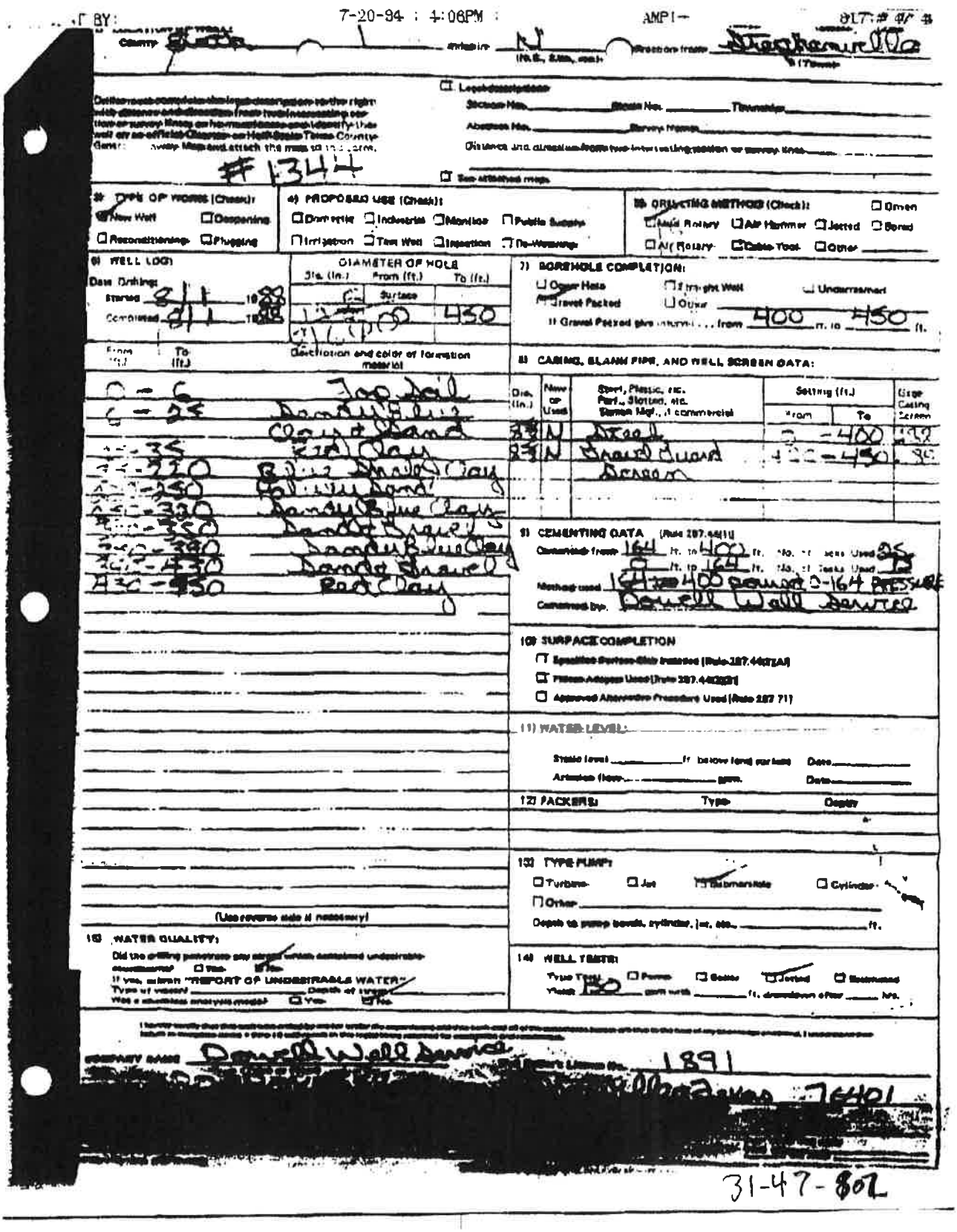
Specific Conductance:

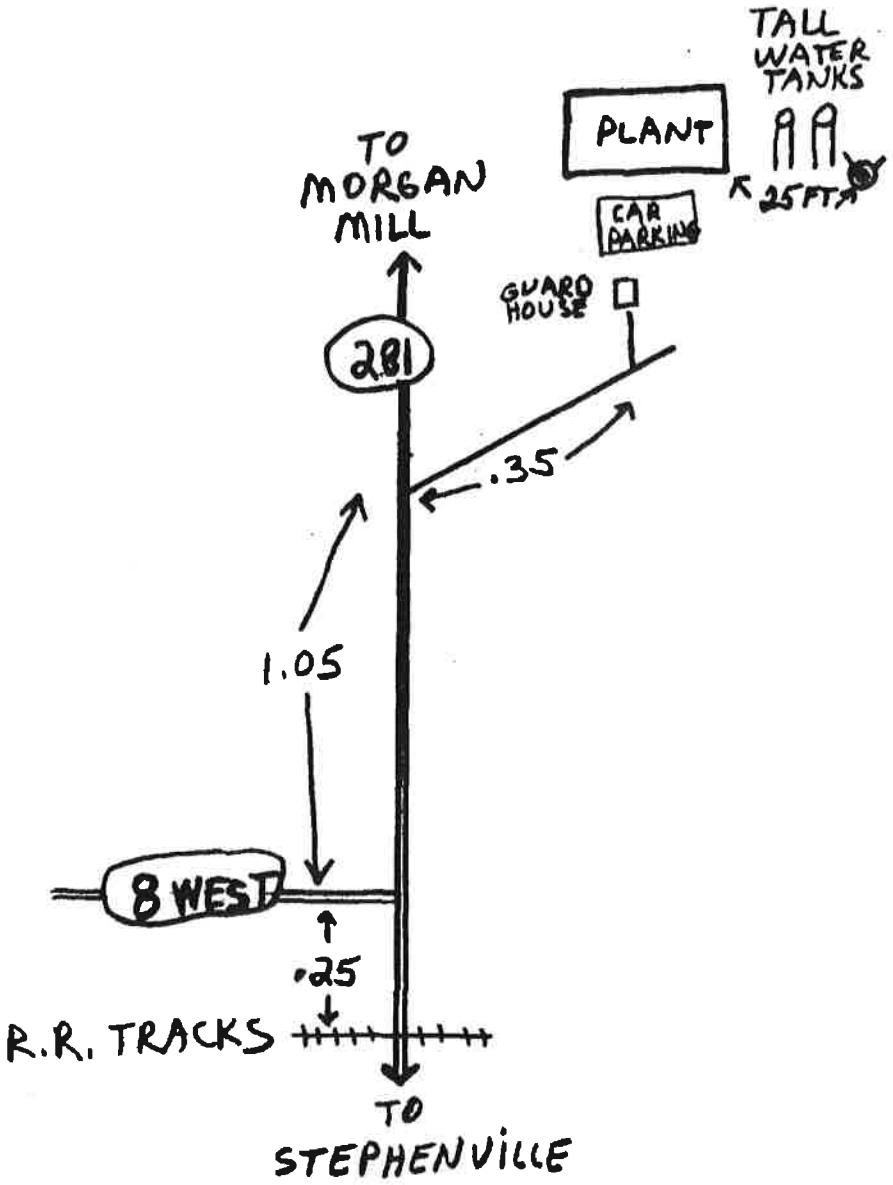
Requested C[redacted]
Laboratory No[redacted] Date Received: SEP 23 1994 Date Reported: SEP 30 1994

THD-Sample No. EB4 1751 Date Received 09/23/94 Date Reported 09/30/94

00623-	0.2	TKN as N mg/L
00608-	0.07	Ammonia as N mg/L
00613-	0.01	Nitrite as N mg/L
00618-	0.01	Nitrate as N mg/L

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB




TALL WATER TANKS
PLANT
25 FT
TO MORGAN MILL
CAR PARKING
GUARD HOUSE
281
.35
1.05
8 WEST
.25
R.R. TRACKS
TO STEPHENVILLE

31-47-802

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
27	2 of 2	NW	0.31 / 1,659.38	SCHREIBER FOODS TX	WUD

Primary Co:	JUSTIN GROTE
Contact Ti:	OPERATOR
Operating Status:	OPERATIONAL
PWSID:	0720026
Source ID:	G0720026A
Utility Name:	SCHREIBER FOODS INC
WTRSRC:	G0720026A
Date Drilled:	08/01/1988
Well Depth:	450
Screen Top:	400
Screen Bottom:	450
Water Usage:	ACTIVE - PERMANENT
Gallons Per Minute:	80
CCN:	N/A
Latitude:	32.26197222
Longitude:	-98.18736667
System Status:	ACTIVE

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
28	1 of 1	SW	0.36 / 1,883.88	WHITE HORSE CHRISTIAN ACADEMY TX	WUD

Primary Co:	OWNER
Contact Ti:	VANESSA B HALFORD
Operating Status:	OPERATIONAL
PWSID:	0720063
Source ID:	G0720063A
Utility Name:	WHITE HORSE CHRISTIAN ACADEMY
WTRSRC:	G0720063A
Date Drilled:	08/21/2001
Well Depth:	425
Screen Top:	0
Screen Bottom:	0
Water Usage:	ACTIVE - PERMANENT
Gallons Per Minute:	33
CCN:	N/A
Latitude:	32.24802
Longitude:	-98.182586
System Status:	ACTIVE

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
29	1 of 2	SE	0.40 / 2,115.18	TROY GORDON #1 TX	TCEQ WELL LOGS

Grid No:	31-55-2U
Date Drilled:	05/23/1978
Owners Name:	TROY GORDON #1
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	300
Depth Drilled:	380
Latitude:	32.2471405
Longtiude:	-98.1665066

Dup

Send original copy by certified mail to the Texas Water Development Board P. O. Box 13087 Austin, Texas 78711

State of Texas

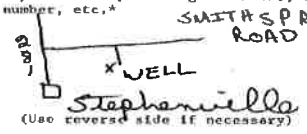
WATER WELL REPORT

For TWDB use only
Well No. 31-55-24
Located on map
Received: 7-9-79

1) OWNER:
Person having well drilled Troy Gordon #1 (Name) Address Box 470 (Street or RFD) Stephenville (City) Tx (State)
Landowner Same (Name) Address (Street or RFD) (City) (State)

2) LOCATION OF WELL:
County Erath 3 miles in NE (N.E., S.W., etc.) direction from STEPHENVILLE (Town)

Locate by sketch map showing landmarks, roads, creeks, hiway number, etc.*



(Use reverse side if necessary)

or Give legal location with distances and directions from adjacent sections or survey lines.

Labor League
Block Survey
Abstract No.
(NW¼ NE¼ SW¼ SE¼) of Section

3) TYPE OF WORK (Check): New Well ✓ Deepening / Reconditioning / Plugging

4) PROPOSED USE (Check): Domestic ✓ Industrial / Municipal / Irrigation / Test Well / Other

5) TYPE OF WELL (Check): Rotary ✓ Driven / Dug / Cable / Jetted / Bored

6) WELL LOG:
Diameter of hole 6¼ in. Depth drilled 380 ft. Depth of completed well 380 ft. Date drilled 5-23-79
All measurements made from ( ) ft. above ground level.

From (Ft.)	To (Ft.)	Description and color of formation material
0	5	TS
5	90	clay
90	260	shale
260	280	sand
280	360	clay
360	380	GRAVEL

9) Casing:
Type: Old / Steel / Plastic PVC ✓ / Other
Cemented from 0 ft. to 320 ft.

Diameter (inches)	Setting From (Ft.)	To (Ft.)	Gage
4 TD	0	380	Sch 40

10) SCREEN:
Type
Perforated ✓ / Slotted

Diameter (inches)	Setting From (Ft.)	To (Ft.)	Slot Size
11	340	380	3/16

(Use reverse side if necessary)

7) COMPLETION (Check):
Straight wall / Gravel packed ✓ / Other
Under reamed / Open hole

8) WATER LEVEL:
Static level 300 ft. below land surface Date 5-23-79
Artesian pressure lbs. per square inch Date
Depth to pump bowls, cylinder, jet, etc., No Pump ft. below land surface.

11) WELL TESTS:
Was a pump test made? Yes / No ✓ If yes, by whom?
Yield: gpm with ft. drawdown after hrs.
Bailer test 20 gpm with 15 ft. drawdown after 1 hrs.
Artesian flow gpm
Temperature of water

12) WATER QUALITY:
Was a chemical analysis made? Yes / No ✓
Did any strata contain undesirable water? Yes / No ✓
Type of water? depth of strata

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

NAME W. D. Dowell (Type or Print) Water Well Drillers Registration No. 1268
ADDRESS P. O. Box 558 (Street or RFD) Stephenville (City) Tex. (State) 76401
(Signed) W D Dowell (Water Well Driller) D Dowell Well Service Inc (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

*Additional instructions on reverse side.

TWDBE-WD-5

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
29	2 of 2	SE	0.40 / 2,115.18	TROY GORDON TX	TCEQ WELL LOGS

Grid No:	31-55-2U
Date Drilled:	05/25/1978
Owners Name:	TROY GORDON
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	300
Depth Drilled:	380
Latitude:	32.2471405
Longtiude:	-98.1665066

Dup

Send original copy by certified mail to the Texas Water Development Board
P. O. Box 13087
Austin, Texas 78711

State of Texas

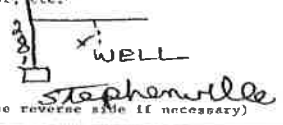
WATER WELL REPORT

For TWDB use only
Well No. 31-55-24
Located on map upa
Received: 7-30-58

1) OWNER:
Person having well drilled Troy Gordon + K Address Box 470 Stephenville Tex 76401
(Name) (Street or RFD) (City) (State)
Landowner Same Address
(Name) (Street or RFD) (City) (State)

2) LOCATION OF WELL:
County ERATH 3 miles in NE direction from Stephenville
(N.E., S.W., etc.) (Town)

Locate by sketch map showing landmarks, roads, creeks, hiway number, etc.*



(Use reverse side if necessary)

or Give legal location with distances and directions from adjacent sections or survey lines.

Labor League
Block Survey
Abstract No.
(NW¼ NE¼ SW¼ SE¼) of Section

3) TYPE OF WORK (Check):
New Well / Deepening / Reconditioning / Plugging

4) PROPOSED USE (Check):
Domestic / Industrial / Municipal / Irrigation / Test Well / Other

5) TYPE OF WELL (Check):
Rotary / Driven / Dug / Cable / Jetted / Bored

6) WELL LOG:
Diameter of hole 6¼ in. Depth drilled 380 ft. Depth of completed well 380 ft. Date drilled 3-25-58
All measurements made from 1 ft. above ground level.

From (ft.)	To (ft.)	Description and color of formation material
0	5	TS
5	45	colache
45	120	clay
120	240	shale
240	260	sand
260	340	clay
240	380	Shale

(Use reverse side if necessary)

9) Casing:
Type: Old / New / Steel / Plastic / Other
Cemented from 0 ft. to 320 ft.

Diameter (inches)	Setting From (ft.)	To (ft.)	Gage
4 7D	0	380	SCH 40

10) SCREEN:
Type
Perforated / Slotted

Diameter (inches)	Setting From (ft.)	To (ft.)	Slot Size
1	340	380	3/16

7) COMPLETION (Check):
Straight wall / Gravel pack / Other
Under reamed / Open Hole

8) WATER LEVEL:
Static level 300 ft. below land surface Date 5-25-58
Artesian pressure lbs. per square inch Date
Depth to pump bowls, cylinder, jet, etc., No PUMP ft. below land surface.

11) WELL TESTS:
Was a pump test made? Yes / No If yes, by whom?
Yield: gpm with ft. drawdown after hrs.
Bailer test 20 gpm with 25 ft. drawdown after 1 hrs.
Artesian flow gpm
Temperature of water

12) WATER QUALITY:
Was a chemical analysis made? Yes / No
Did any strata contain undesirable water? Yes No
Type of water? depth of strata

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

NAME W. D. Dowell (Type or Print) Water Well Drillers Registration No. D68
ADDRESS P.O. Box 558 (Street or RFD) Stephenville, Tex 76401 (City) (State)
(Signed) W D Dowell (Water Well Driller) Dowell Well Service Inc. (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

*Additional instructions on reverse side.

TWDB4-WD6

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
30	1 of 3	SSW	0.40 / 2,115.30	Texas A&M University Tarleton Experiment TX	GWDB

Well Rep Track No:	
State Well No:	3155201
Owner Name:	Texas A&M University Tarleton Experiment
Drilling Start Dt:	
Drilling Month:	
Drilling Day:	
Drilling Year:	1955
Well Depth:	440
Well Usage:	Irrigation
Water Level Status:	
Latitude:	32.2413890
Longitude:	-98.1836110
Data Source:	Groundwater Database (GWDB) Reports; GIS shapefile of GWDB well locations
Well Info Report:	https://www3.twdb.texas.gov/apps/waterdatainteractive//GetReports.aspx?Num=3155201&Type=GWDB
Document Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive//GetScannedImage.aspx?Num=3155201&Cnty=Erath

TEXAS WATER COMMISSION

WELL SCHEDULE

Aquifer Travis Peak Field No. State Well No. 31-55-201

Owner's Well No. County Erath Co.

University

1. Location: 1/4, 1/4 Sec., Block, Survey
NE edge of Stephenville

2. Owner: Texas A and M University - Tarleton Address: Stephenville, Tex.
Tenant: Mr. Langley, Experiment Station Address: Stephenville

* Driller: Jones Drlg Co. Address: Stephenville

3. Elevation of L S D is 1322 ft. above msl, determined by Stephenville Quad 1961

4. Drilled: ± 1955 Dug (Cable Tool) Rotary,

5. Depth: Rept. 440 ft. Meas. ft.

6. Completion: Open Hole (Straight Wall) Underreamed, Gravel Packed

7. Pump: Mfgr. Western Pump Co. Type Turbine
No. Stages, Bowls Diam. in., Setting ft.
Column Diam. in., Length Tailpipe ft.
NONE IN '72

8. Motor: Fuel elect. Make & Model U.S. Motors HP. 20

9. Yield: Flow gpm, Pump 120 (180) gpm, (Meas.) (Rept.) Est. 1-12-67

10. Performance Test: Date Length of Test Made by
Static Level ft. Pumping Level ft. Drawdown ft.
Production gpm Specific Capacity gpm/ft.

11. Water Level: 264.9 ft. (rept.) meas. 10-27-1960 above/below top of 8" csg which is 2.5 ft. above/below surface.
UTM ft. rept./meas. 6/22/1966 above/below (no opening into csg. Ear) which is ft. above/below surface.
269.94 ft. rept./meas. 11-13-1973 above/below E-line) Top of CASING which is 2.3 ft. above/below surface.
288.47 ft. rept./meas. 2-22-1971 above/below Top of csg which is 2.3 ft. above/below surface.

12. Use: Dom., Stock, Public Supply, Ind. (Irr.) Waterflooding Observation Not Used abandoned 1972

13. Quality: (Remarks on taste, odor, color, etc.)
Temp. °F, Date sampled for analysis 10-17-55 Laboratory Ex A&M
Temp. °F, Date sampled for analysis Laboratory
Temp. °F, Date sampled for analysis Laboratory

14. Other data available as circled: Driller's Log, (Radioactivity Log) Electric Log,
Formation Samples, Pumping Test, Power & yield Test

15. Record by: D. Thompson Date 10-27-1965
Source of Data U.S.G.S. Schedule Shelby Newman

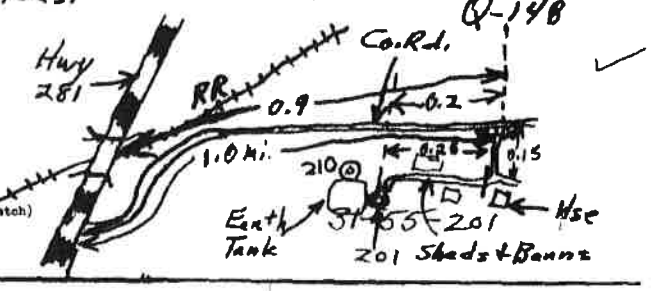
16. Remarks:
See USGS 1960 Schedule
* Jones supplied pump.
System is open discharge into earth tank with butane booster pumping from earth tank to sprinklers.

CASING & BLANK PIPE Cemented From ft. to ft.			
Diam. (in.)	Type	Setting, ft. From	to
8"	steel		

WELL SCREEN Screen Openings			
Diam. (in.)	Type	Setting, ft. From	to
8 ?	SS screen	? 350	? 430

In Fo. on Pump Data
Volts-220 440; RPM-1800

In Fo. on Elec. Meter
Meter No. - 8675200; Make-Duncan Type-HQ
Meter Reading on 6/22/66 was 50M x10 = 501M
(X10 Meter)
50 Amp., 60 cyc., 2 ph., 4 wire, Kh = 24

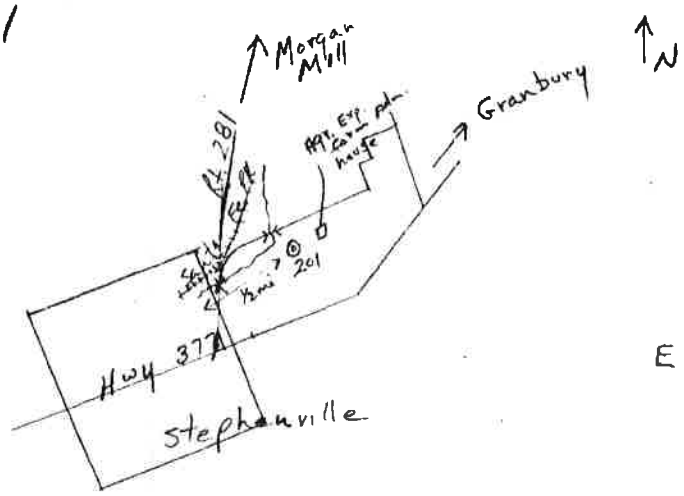


Form B-4 (62-1)

EXPERIMENTAL

EXPERIMENT station

31-55-201



Note: Not Tabulated because date conflicts with date well was drilled

Chem. Analysis 10-17-55

Ca - 93	CO_3 - 0
Mg - 18	HCO_3 - 185
Na - 68	SO_4 - 100
	Cl - 110

TDS - 581 Hardness - 16.6

KEY PUNCHED

[illegible] State Health Department
[illegible] Station, Texas

JP-31-55-201

Report of Water Analysis

Laboratory No. 50 — Received:

Submitted by: Texas Parks and Wildlife Dept. — Location: — Reported:
Box 108 — County:
Hockerville, Texas — Source:
Depth:

Chemical Analysis

			Cations:	p.p.m.	p.p.m.	Epm
Total Solids	[illegible]	Tons per acre-foot	Sodium	93	0	
			Magnesium		85	1
Total Solids*	581	ppm	Calcium	68	100	2
Total Hardness	16.60	Grains per gallon	[illegible]		170	
[illegible]			Total	1	355	

KEY PUNCHED

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer TWIN MOUNTAINS Field No. _____ State Well No 31-55-201

Owner's Well No. 1 County ERATH

1. Location: ___ 1/4, ___ 1/4 Sec. ____, Block _____ Survey _____

2. Owner: TARLETON EXPERIMENT STA Address: RT #2, STEPHENVILLE

Tenant: _____ Address: _____

Driller: _____ Address: _____

3. Elevation of CSD is 1322 ft. above msl, determined by TOPO

4. Drilled: _____ 1955; Dug, Cable Tool, Rotary, _____

5. Depth: Rept. 440 ft. Meas. _____ ft.

6. Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed _____

7. Pump: Mfgr. _____ Type NONE

No. Stages ____, Bowls Diam. ____ in., Setting _____ ft.

Column Diam. _____ in., Length Tailpipe _____ ft.

8. Motor: Fuel _____ Make & Model _____ HP. _____

9. Yield: Flow ____ gpm, Pump 120 gpm, Meas., Rept., Est. 7-12-67

10. Performance Test: Date _____ Length of Test _____ Made by _____

Static Level ____ ft. Pumping Level ____ ft. Drawdown ____ ft.

Production _____ gpm Specific Capacity _____ gpm/ft.

CASING & BLANK PIPE
Cemented From _____ ft. to _____ ft.

Diam. (in.)	Type	Setting, ft. from	to
8	STEEL	0	360 440
6			440

11. Water Level: _____ ft. rept. meas. _____ 19__ above below _____ which is ____ ft. above below surface.

_____ ft. rept. meas. _____ 19__ above below _____ which is ____ ft. above below surface.

_____ ft. rept. meas. _____ 19__ above below _____ which is ____ ft. above below surface.

_____ ft. rept. meas. _____ 19__ above below _____ which is ____ ft. above below surface.

12. Use: Dom., Stock, Public Supply, Ind., Irr., Waterflooding, Observation, Not Used, _____

13. Quality: (Remarks on taste, odor, color, etc.) _____

Temp. ___ °F, Date sampled for analysis _____ Laboratory _____

Temp. ___ °F, Date sampled for analysis _____ Laboratory _____

Temp. ___ °F, Date sampled for analysis _____ Laboratory _____

14. Other data available as circled: Driller's Log, Radioactivity Log, Electric Log, Q148

Formation Samples, Pumping Test, _____

WELL SCREEN
Screen Openings

Diam. (in.)	Type	Setting, ft. from	to
8	SCREEN	400 360	440 430

15. Record by: JOHN DORTON Date 4-20 1976

Source of Data TWDB SCHEDULE

16. Remarks: RECORDER INSTALLED by J.D+G.D 6-11-74

IF KEY NEEDED CALL: SHELBY NEWMAN 968-3492

PAUL JACKSON 968-6548

JODY WORTHINGTON 968-8072

MP = Top of Csg +2.30'

RECORDER

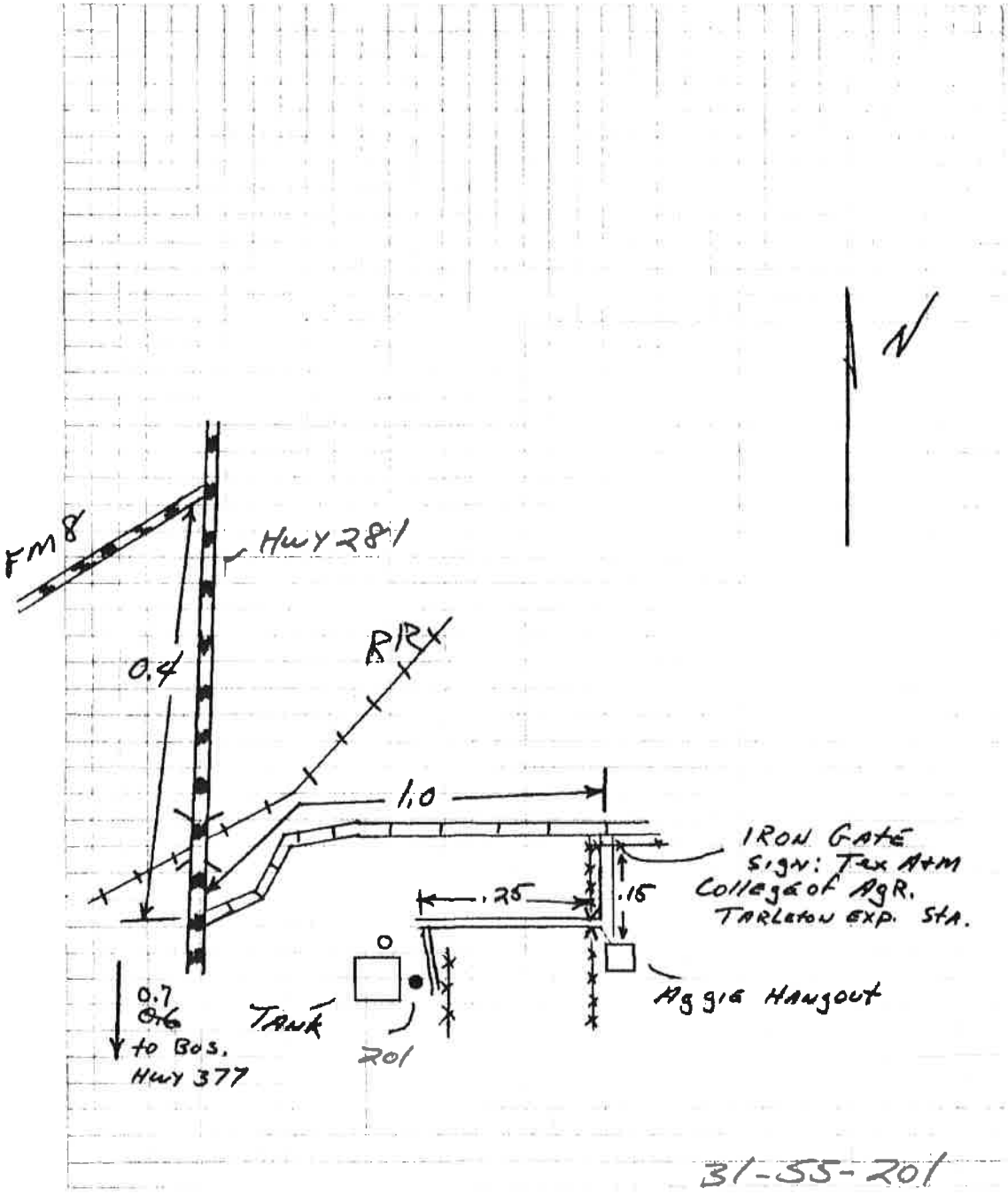
TWDBE-WD-2 (Sketch) 31-55-201

TEXAS WATER DEVELOPMENT BO

BY_____ DATE_____ DIVISION _____ SHEET NO._____ OF____

CHKD_____ DATE_____ JOB NAME _____

31-55-201 JOB NO._____ PROG. CODE _____



TWDBS-SI-3

County: ERATH

Recorder: TARLETON EXPERIMENT STATION

Well Number: 31-55-201

Date Installed: 6-11-74

Shelter Number: 580-6561

Shelter Type: 99B

Recorder Number: 580-6307 S.N. 49063-68

Recorder Type: A-35

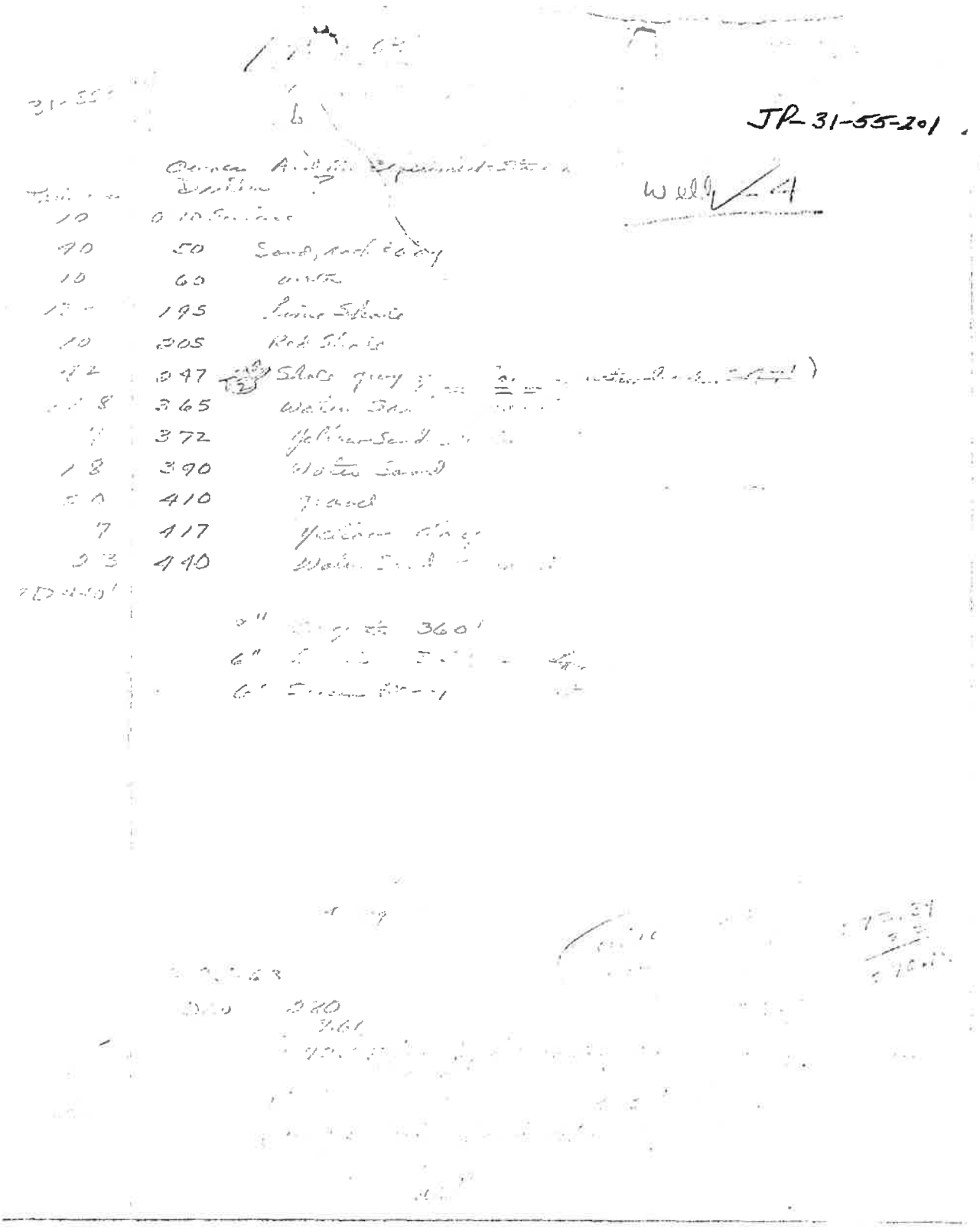
Clock Number: ~~684774~~ 6-72903

Type of Clock Drive: SPRING

Remarks:

Mr. Newman requested key to shelter and was supplied one by mail 7-14-78 AT

31-55-201


JR-31-55-201
Well
Sand, and Gravel
Shale
Water Sand
Yellow Sand
Hard Sand
Yellow Clay
Water Sand
3" Casing @ 360'
6" Casing
6" Screen

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

~~Texas State Department of Health Laboratories~~
~~1100 West 49th Street~~
~~Austin, Texas 78756~~
TEXAS A&M

TWDBE-GW ONLY
Program No. _____
Proj. No. _____

CHEMICAL WATER ANALYSIS REPORT

Send report to:
Ground Water Data and Protection Division
Texas Water Development Board
P.O. Box 13087
Austin, Texas 78711

ERATH Co.

County JP ERATH
State Well No. 31-55-201
Well No. _____
Data Collected 10-17-55
By _____

Location NE Edge of STEPHENVILLE
Source (type of well) (NONE) Owner TARLETON Experiment Station
Date Drilled ± 1955 Depth ± 430 ft. WBF TRAVIS Peak
Producing intervals 350-430 Water level 267.64 ft (11-13-73)
Sampled after pumping _____ hrs. Yield 120 GPM (7-12-67) Temperature _____ °F _____ °C
Point of collection End discharge pipe Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use IRR-OBS. Remarks abandoned in 1972

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. _____ Date Received _____ Date Reported _____

	MG/L	ME/L
Silica		
Calcium	93	4.65
Magnesium	18	1.48
Sodium	68	2.96
Total		9.09
☐ Potassium		
☐ Manganese		
☐ Boron		
3/ ☐ Total Iron		
☐ (other) _____	MG/L	

%Na 32.56
SAR .69
RSC 3.1

Specific Conductance (micromhos/cm³) _____
Diluted Conductance (micromhos/cm³) _____ X _____

	MG/L	ME/L
Carbonate		
1/ Bicarbonate (118)	239	3.91
Sulfate	100	2.08
Chloride	110	3.10
Fluoride		
Nitrate		
pH		9.09
Total		
1/ Dissolved Solids (sum in MG/L)	507	
Phenolphthalein Alkalinity as C aCO_3		
Total Alkalinity as C aCO_3		
Total Hardness as C aCO_3	17	
2/ Nitrogen Cycle		
Ammonia - N		
Nitrite - N		
Nitrate - N		
Organic Nitrogen		

" ☐ " Items will be analyzed if checked.

1/ The bicarbonate reported in this analysis is converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure is used in the computation of this sum.
2/ Nitrogen cycle requires separate sample.
3/ Total Iron requires separate sample.

TWDBE-WD-1 (Rev. 1-25-72)

Analyst _____ Checked By _____

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
30	2 of 3	SSW	0.40 / 2,115.30	Tarleton College Exp. Station TX	GWDB

Well Rep Track No:	
State Well No:	3155210
Owner Name:	Tarleton College Exp. Station
Drilling Start Dt:	
Drilling Month:	5
Drilling Day:	18
Drilling Year:	1973
Well Depth:	420
Well Usage:	Irrigation
Water Level Status:	
Latitude:	32.2413890
Longitude:	-98.1841670
Data Source:	Groundwater Database (GWDB) Reports; GIS shapefile of GWDB well locations
Well Info Report:	https://www3.twdb.texas.gov/apps/waterdatainteractive//GetReports.aspx?Num=3155210&Type=GWDB
Document Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive//GetScannedImage.aspx?Num=3155210&Cnty=Erath

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer HOSSTON Field No. _____ State Well No. 31-55-210

Owner's Well No. 3 County ERATH

1. Location: ___ 1/4, ___ 1/4 Sec. ___, Block ___ Survey ___

2. Owner: TARLETON College Exp. Station Address: Rt #2 Stephenville

Tenant: ___ Address: ___

Driller: WOLF DRILLING Co. Address: Box 16, Stephenville

3. Elevation of Lsd is 1320 ft. above msl, determined by Topo

4. Drilled: 5-18 19 73; Dug, Cable Tool, (Rotary)

5. Depth: Rept. 420 ft. Meas. ___ ft.

6. Completion: Open Hole, (Straight Wall) Underreamed, Gravel Packed ___

7. Pump: Mfgr. Western Type Turbine

No. Stages ___, Bowls Diam. ___ in., Setting 410 ft.

Column Diam. ___ in., Length Tailpipe ___ ft.

8. Motor: Fuel Electric Make & Model U.S. MOTORS HP. 40

9. Yield: Flow ___ gpm, Pump 250 gpm, Meas. (Rept), Est. MR. NEWMAN

10. Performance Test: Date 5-19-73 Length of Test 1 day Made by Wolf

Static Level ___ ft. Pumping Level ___ ft. Drawdown ___ ft.

Production 135 gpm Specific Capacity ___ gpm/ft.

11. Water Level: 265 ft. (Rept) Meas. 11-13 19 73 (above) below Ground Level which is ___ ft. above below surface.

___ ft. rept. meas. ___ 19 ___ above below which is ___ ft. above below surface.

___ ft. rept. meas. ___ 19 ___ above below which is ___ ft. above below surface.

___ ft. rept. meas. ___ 19 ___ above below which is ___ ft. above below surface.

12. Use: Dom., Stock, Public Supply, Ind., (Irr.) Waterflooding, Observation, Not Used, ___

13. Quality: (Remarks on taste, odor, color, etc.) ___

Temp. ___ °F, Date sampled for analysis ___ Laboratory ___

Temp. ___ °F, Date sampled for analysis ___ Laboratory ___

Temp. ___ °F, Date sampled for analysis ___ Laboratory ___

14. Other data available as circled: (Driller's Log) Radioactivity Log, Electric Log, Formation Samples, Pumping Test, over

15. Record by: R.L. NORDSTROM Date 11-13 19 73

Source of Data D-Log, Obs. MR SHELBY NEWMAN

16. Remarks: meter 50-741-721 open discharge butane pit pump

Pumps Continuously for 3 mos. in summer

CASING & BLANK PIPE

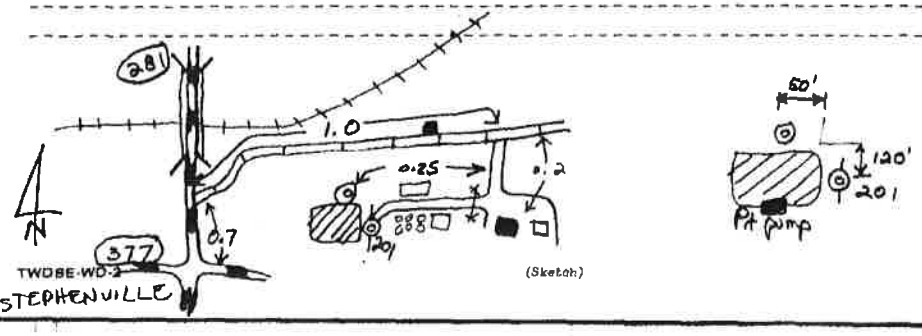
Cemented From 0 ft. to 30 ft.

Diam. (in.)	Type	Setting, ft. from	to
16	steel	0	30
10 3/4	"	+1	420

WELL SCREEN

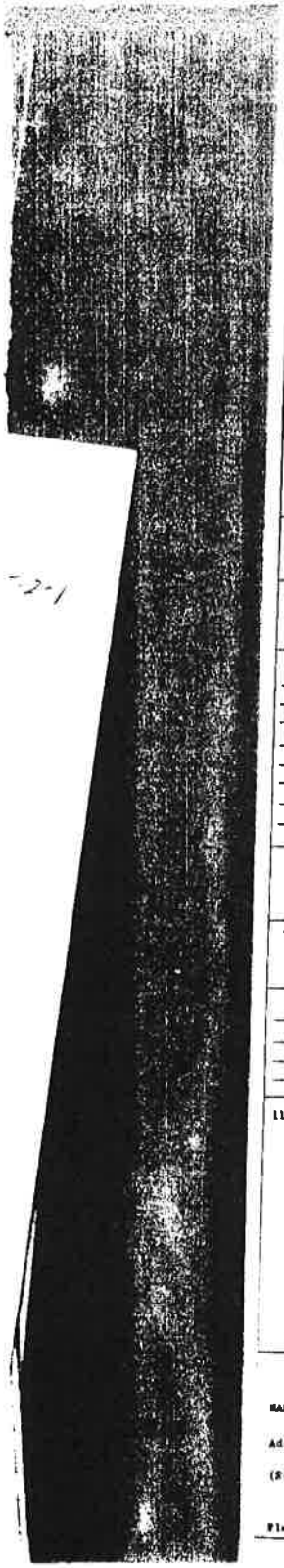
Screen Openings ___

Diam. (in.)	Type	Setting, ft. from	to
10 3/4	slotted	360	420



31-55-210

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB



GW 1

State of Texas

WATER WELL REPORT

For TWDB use only
Well No. 37-42 5E
Located on map
Received: 7-3-73
Form GW 8
Form GW 9

Send original copy of certified log to Texas Water Development Board, P. O. Box 1486, Austin, Texas 78711

1) OWNER:
Person having well drilled: Tarleton College Exp.Station (Name) Address: Rt # 2,Stephenville,Tex.76401 (Street or RFD) (City) (State)
Landowner: (Name) Address: (Street or RFD) (City) (State)

2) LOCATION OF WELL:
County: Erath Labor: League: Abstract No.:
(Circle or name as appropriate) ¼ ¼ ¼ of Section: Block No.: Survey:
3 miles in North (NE, SE, SW, NW) direction from Stephenville (Town).

NORTH

Right Off Highway 281 apprx 3 Miles

Sketch map of well location with distances from adjacent section or survey lines, and to landmarks, roads, and creeks.

3) TYPE OF WORK (Check): New Well ☒ Deepening ☐ Reconditioning ☐ Plugging ☐

4) PROPOSED USE (Check): Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☒ Test Well ☐ Other ☐

5) TYPE OF WELL (Check): Rotary ☒ Driven ☐ Dug ☐ Cable ☐ Jetted ☐ Bored ☐

6) WELL LOG:
Diameter of hole 12¼ in. Depth drilled 420 ft. Depth of completed well 421 ft. Date drilled 5/18/73
All measurements made from 0 ft. above ground level.

From (ft.)	To (ft.)	Description and color of formation material
0	4	Top Soil
4	6	Rock
6	17	White Sand
17	22	Clay
22	26	Yellow Sand
26	165	Shale and Rock
165	268	Rock,Shale,Blue Clay
268	310	Sand
310	321	Red Clay
321	412	Sand,Clay,Rock Layers
412	420	Red Clay

(Use reverse side if necessary)

7) COMPLETION (Check): Straight wall ☐ Gravel packed ☐ Other ☐ Top 30' cemented
Under reamed ☐ Open hole ☐

8) WATER LEVEL: Static level ____ ft. below land surface Date ____
Artesian pressure ____ lbs. per square inch Date ____

9) CASING: Type: old ☐ New ☒ Steel ☒ Plastic ☐ Other ☐
Cemented from ____ ft. to ____ ft.

10) SCREEN: Type ____
Perforated ☐ Slotted ☐

Diameter (inches)	Setting From (ft.)	Setting To (ft.)	Gage
16 @	0	30	¼"
10-3/4	0	420	.188

Diameter (inches)	Setting From (ft.)	Setting To (ft.)	Slot size

11) WELL TESTS:
Was a pump test made? ☐ Yes ☐ No If yes by whom?
Yield: ____ gpm with ____ ft. drawdown after ____ hrs
Bailer test ____ gpm with ____ ft. drawdown after ____ hrs
Artesian flow ____ gpm Date ____
Temperature of water ____
Was a chemical analysis made? ☐ Yes ☐ No
Did any strata contain undesirable water? ☐ Yes ☐ No
Type of water: ____ depth of strata ____

12) PUMP DATA:
Manufacturer's Name ____
Type ____ H.P. ____
Designed pumping rate ____ gpm ☐ gph ☐
Type power unit ____
Depth to bowls, cylinder, jet, etc., ____ ft. below land surface.

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

NAME C.W.Wolf (Type or Print) Water Well Drillers Registration No. 559

Address P.O.Box 16 (RFD) Stephenville (City) Texas (State)

(Signed) C.W.Wolf (Water Well Driller) WOLF DRILLING CO. (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available. JP 31-55-210

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
30	3 of 3	SSW	0.40 / 2,115.30	TILL STONE TX	TCEQ WELL LOGS

Grid No:	31-55-2
Date Drilled:	09/28/1979
Owners Name:	TILL STONE
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	220
Depth Drilled:	275
Latitude:	32.241644
Longtiude:	-98.1839174

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

Send original copy by certified mail to the Texas Department of Water Resources P. O. Box 13087 Austin, Texas 78711

State of Texas
WATER WELL REPORT

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

For TDWR use only
Well No. 31-55-23
Located on map yes
Received: CURT.

1) OWNER T. H. Stone (Name) Address 1460 Mel 552 (Street or RFD) Stephenville (City) Tx (State) 76401 (Zip)

2) LOCATION OF WELL: County Erath miles in S (N.E., S.W., etc.) direction from Stephenville (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form. 1/4 0

☐ Legal description:
Section No. _____ Block No. _____ Township _____
Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
☑ See attached map. map on 31-55-14

3) TYPE OF WORK (Check): ☑ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): ☐ Domestic ☐ Industrial ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Other _____

5) DRILLING METHOD (Check): ☐ Mud Rotary ☐ Air Hammer ☐ Driven ☐ Bored ☑ Air Rotary ☐ Cable Tool ☐ Jetted ☐ Other _____

6) WELL LOG:

Date drilled 9-28-79

Diameter of Hole: Dia. (in.)	From (ft.)	To (ft.)
6¾	Surface 0	275

From (ft.)	To (ft.)	Description and color of formation material
0	5	Top Soil
5	25	Caliche
25	125	Blue Clay
125	225	Shale
225	245	Sand
245	250	Red Clay
250	275	Gravel

(Use reverse side if necessary)

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☑ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 235 ft. to 275 ft.

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mgf., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
4½	N	PVC, perf			SCH40

CEMENTING DATA
Cemented from 0 ft. to 235 ft.
Method used poured
Cemented by Dowell Well Service Inc. (Company or Individual)

9) WATER LEVEL:
Static level 220 ft. below land surface Date 9-28-79
Artesian flow _____ gpm. Date _____

10) PACKERS: Type Depth

11) TYPE PUMP:
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

12) WELL TESTS:
☐ Type Test: ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with 20 ft. drawdown after 1 hrs.

13) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☐ No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

MAR 1 5 1982

NAME Mark A. Dowell (Type or Print) Water Well Drillers Registration No. 1891

ADDRESS PO Box 558 (Street or RFD) Stephenville (City) Tex (State) 76401 (Zip)

(Signed) Mark Dowell (Water Well Driller) Dowell Well Service Inc. (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TDWR-0392 (Rev. 1-12-79)

DEPARTMENT OF WATER RESOURCES COPY

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
31	1 of 1	NNE	0.40 / 2,117.54	James Young 2703 CR 455 Stephenville TX 76401	SDRW WELLS

Track NO:	425567
Date Submitted:	2016-07-06
Owner Name:	James Young
Owner Address:	2703 CR 455
Owner Address2:	
Owner City:	Stephenville
Owner State:	TX
Owner Zip:	76401
County:	Erath
Type of Work:	Replacement
Typ of Wrk Oth Descr:	
Proposed Use:	Domestic
Prop Use Oth Descr:	
Latitude:	32.267222
Longitude:	-98.171389
Drilling Date Started:	2016-07-05
Drilling Date Completed:	2016-07-06
Chemical Analysis:	No
Company Name:	Dowell Well Service
Company Address:	P.O. Box 402
CompanyAddress2:	
Company City:	Stephenville
Company State:	TX
Company Zip:	76401
Company Country:	
Data Source:	Full SDR Database; SDRDB Well Location (Map)
Report Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive/GetReports.aspx?Num=425567&Type=SDR-Well

Well Borehole Information

Top Depth:	
Bottom Depth:	455.0
Top Depth:	0
Bottom Depth:	455

Well Levels

Measurement:	350
Measurement Date:	2016-07-06

Well Strata

Water Type:

Second Trinity

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
32	1 of 2	ESE	0.42 / 2,211.76	Poston Farms TX	GWDB

Well Rep Track No:	
State Well No:	3155304
Owner Name:	Poston Farms
Drilling Start Dt:	
Drilling Month:	
Drilling Day:	
Drilling Year:	1958
Well Depth:	360
Well Usage:	Irrigation
Water Level Status:	
Latitude:	32.2491670
Longitude:	-98.1638890
Data Source:	Groundwater Database (GWDB) Reports; GIS shapefile of GWDB well locations
Well Info Report:	https://www3.twdb.texas.gov/apps/waterdatainteractive//GetReports.aspx?Num=3155304&Type=GWDB
Document Link:	https://www3.twdb.texas.gov/apps/waterdatainteractive//GetScannedImage.aspx?Num=3155304&Cnty=Erath

TEXAS WATER COMMISSION

WELL SCHEDULE

Aquifer Hensel | Field No. | State Well No. 31-55-304

Owner's Well No. | County Erath Co

1. Location: 1/4, 1/4 Sec. , Block , Survey

2. Owner: Poston Farms Address: Stephenville

Tenant: Jack Berry Mgr. Address: Rt. 2 Stephenville

Driller: A.N. Jackson & Sons Address: Stephenville

3. Elevation of SP in 1381 ft. above msl, determined by Stephenville Quad. 1961

4. Drilled: 1958; Dug, (Cable Tool) Rotary,

5. Depth: Rept. 360 ft. Meas. ft.

6. Completion: Open Hole, (Straight Wall) Underreamed, Gravel Packed

7. Pump: Mfgr. Peerless Type Turbine

No. Stages , Bowls Diam. in., Setting ft.

Column Diam. in., Length Tailpipe ft.

8. Motor: Fuel elect. Make & Model U.S. Motors HP. 25

9. Yield: Flow gpm, Pump 75-80 gpm, Meas. (Rept.) Est.

10. Performance Test: Date Length of Test Made by

Static Level ft. Pumping Level ft. Drawdown ft.

Production gpm Specific Capacity gpm/ft.

CASING & BLANK PIPE

Cemented From ft. to ft.

Diam. (in.)	Type	Setting, ft. from	to
6"	OD	Surf	TD

11. Water Level: ft. rept. meas. 10-14-1965 above (below) Unable to meas. which is ft. above (below) surface.

ft. rept. meas. 19 above (below) which is ft. above (below) surface.

ft. rept. meas. 19 above (below) which is ft. above (below) surface.

ft. rept. meas. 19 above (below) which is ft. above (below) surface.

12. Use: (Dom.) (Stock) Public Supply, Ind. Irr. Waterflooding, Observation, Not Used,

13. Quality: (Remarks on taste, odor, color, etc.)

See Files Temp. 72 °F, Date sampled for analysis 10-14-65 Laboratory TSHD

Temp. °F, Date sampled for analysis Laboratory

Temp. °F, Date sampled for analysis Laboratory

WELL SCREEN

Screen Openings

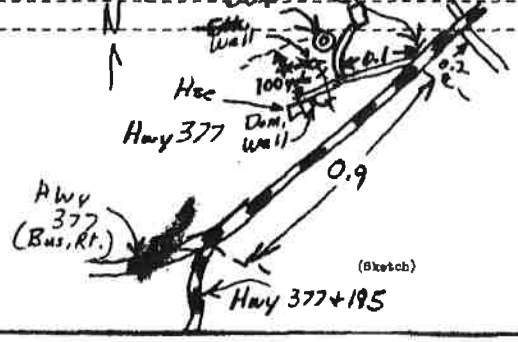
Diam. (in.)	Type	Setting, ft. from	to
6"	OD		

14. Other data available as circled: Driller's Log, Radioactivity Log, Electric Log, Formation Samples, Pumping Test,

15. Record by: D. Thompson Date 10-14-1965

Source of Data Jack Berry

16. Remarks: Well has U.S. Motor 25 HP, 3 Phase Open Discha. System Ice well, dom+stk wells, houses, Feed chicken houses, etc, are Hse Sign + Poston Farm all on same meter. 304



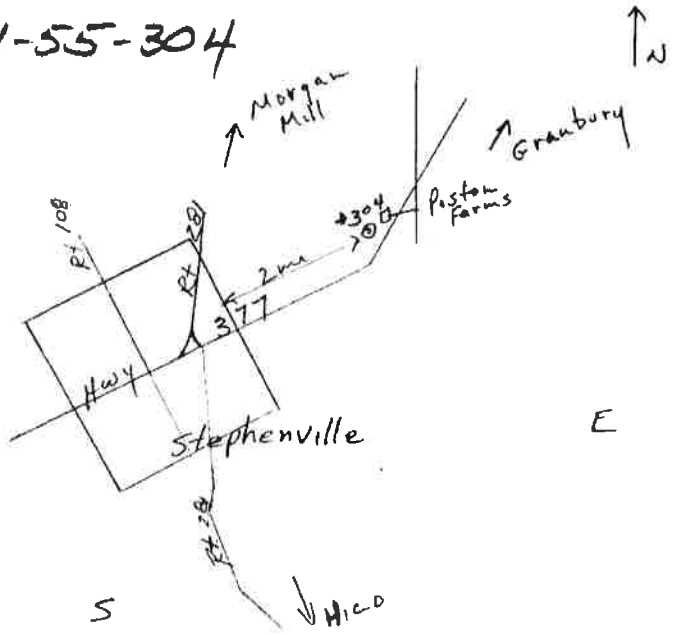
(Sketch)

Form B-4 (62-1)

31-55-304

CA

31-55-304



CHEMICAL WATER ANALYSIS REPORT

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas State Department of Health Laboratories
1100 West 49th Street
Austin 5, Texas

RECEIVED
TEXAS WATER DEVELOPMENT BOARD
ENGINEERING RECORDS

Send report to:

Ground Water Division
Texas Water Commission
P. O. Box 2311
Capitol Station
Austin 11, Texas

COUNTY Erath Co.
State Well No. 31-55-304
Well No.
Date Collected 10-14-65
By D. Thompson
Location 2 mi. e. of Stephenville
Source (type of well) drilled (turbine) Owner Poston Farms
Date Drilled 1958 Depth 360' (rept.) ft. WBF Trinity & Paluxy
Producing intervals Water level unable to meas. ft.
Sampled after pumping hrs. Yield GPM meas. est. Temperature 72 °F
Point of collection tapped at pipe to Storage tank Appearance clear
clear - turbid - colored
Use Irr. Remarks Please send analysis copy to Mr. Jack Berry Mgr. Rt 2, Stephenville, Texas

FOR LABORATORY USE ONLY

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. 70617 WL Date Received OCT 18 1965 Date Reported 10-22-65

	PPM	EPM		PPM	EPM
Silica	14		Carbonate	0	0
Calcium	78	3.90	Bicarbonate	368	6.04
Magnesium	32	2.63	Sulfate	28	0.58
Sodium	17	0.75	Chloride	20	0.55
	Total	7.27	Fluoride	9.4	—
☐ Potassium			Nitrate	<0.4	—
☐ Manganese				Total	7.17
☐ Boron		%Na	pH	7.4	
☐ Total Iron		SAR	Dissolved Solids (sum)	560	
☐ (other)		RSC	Phenolphthalein Alkalinity as $CaCO_3$	0	
Specific Conductance (micromhos/cm³)	640		Total Alkalinity as $CaCO_3$	6.04	302
Diluted Conductance (micromhos/cm³)	3 x 231 693		Total Hardness as $CaCO_3$	6.52	326

☐ items will be analyzed if checked.
Total Iron requires separate sample.

Analyst
Checked by

Form B-5 (62-1)

OL 22'65

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
32	2 of 2	ESE	0.42 / 2,211.76	TOBY STONE TX	TCEQ WELL LOGS

Grid No:	31-55-2U
Date Drilled:	05/23/1978
Owners Name:	TOBY STONE
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	300
Depth Drilled:	360
Latitude:	32.249167
Longtiude:	-98.163889

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

Dup

Send original copy by certified mail to the Texas Water Development Board P. O. Box 13087 Austin, Texas 78711

State of Texas

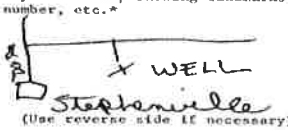
WATER WELL REPORT

For TWDB use only
Well No. 31-58-114
Located on map 120e
Received: 29 [illegible]

1) OWNER:
Person having well drilled Toby Stone (Name) Address P.O. Box 1155 (Street or RFD) Stephenville (City) Tx (State)
Landowner Same (Name) Address (Street or RFD) (City) (State)

2) LOCATION OF WELL:
County Erath . 3 miles in NE (N.E., S.W., etc.) direction from Stephenville (Town)

Locate by sketch map showing landmarks, roads, creeks, hiway number, etc.*



(Use reverse side if necessary)

or Give legal location with distances and directions from adjacent sections or survey lines.
Labor _____ League _____
Block _____ Survey _____
Abstract No. _____
(NW¼ NE¼ SW¼ SE¼) of Section _____

3) TYPE OF WORK (Check): New Well ✓ Deepening / Reconditioning / Plugging
4) PROPOSED USE (Check): Domestic / Industrial / Municipal / Irrigation / Test Well / Other
5) TYPE OF WELL (Check): Rotary ✓ Driven / Dug / Cable / Jetted / Bored

6) WELL LOG:
Diameter of hole 6¼ in. Depth drilled 360 ft. Depth of completed well 360 ft. Date drilled 5/23/78
All measurements made from 1 ft. above ground level.

From (ft.)	To (ft.)	Description and color of formation material
0	5	TS
5	40	Caliche
40	120	clay
120	260	shale
260	280	sand
280	320	clay
320	360	Gravel

(Use reverse side if necessary)

9) Casing:
Type: Old / New ✓ Steel / PVC Plastic / Other
Cemented from _____ ft. to _____ ft.

Diameter (inches)	Setting From (ft.)	To (ft.)	Gage
4 ID	0	360	Sch 40

10) SCREEN:
Type
Perforated ✓ / Slotted

Diameter (inches)	Setting From (ft.)	To (ft.)	Slot Size
11	320	360	5/16

7) COMPLETION (Check):
Straight wall / Gravel packed ✓ / Other
Under reamed / Open Hole

8) WATER LEVEL:
Static level 300 ft. below land surface Date 5/23/78
Artesian pressure _____ lbs. per square inch Date _____
Depth to pump bowls, cylinder, jet, etc.. No Pump ft. below land surface.

11) WELL TESTS:
Was a pump test made? Yes / No ✓ If yes, by whom?
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.
Bailer test 20 gpm with 80 ft. drawdown after 1 hrs.
Artesian flow _____ gpm
Temperature of water _____

12) WATER QUALITY:
Was a chemical analysis made? Yes / No ✓
Did any strata contain undesirable water? Yes / No ✓
Type of water? _____ depth of strata _____

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

NAME W. D. Dowell (Type or Print) Water Well Drillers Registration No. 1268
ADDRESS P.O. Box 558 (Street or RFD) Stephenville (City) Tex (State) 76401
(Signed) W D Dowell (Water Well Driller) Dowell Well Service Inc (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

*Additional instructions on reverse side.

TWDBE WO-8

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB
33	1 of 1	N	0.43 / 2,293.38	F. E. SUTTON TX	TCEQ WELL LOGS

Grid No:	31-47-8
Date Drilled:	05/21/1981
Owners Name:	F. E. SUTTON
County:	ERATH
Water Usage:	DOMESTIC
Static Level:	320
Depth Drilled:	400
Latitude:	32.2723779
Longtiude:	-98.1781393

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

Send original copy by certified mail to the Texas Department of Water Resources P. O. Box 13087 Austin, Texas 78711

State of Texas
WATER WELL REPORT

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

For TDWR use only
Well No. 31-47-8V
Located on map YES
Received: 8-25-82

1) OWNER F.E.Sutton (Name) Address Rt. 2 Box 364 (Street or RFD) Stephenville (City) Texas (State) 764 (Zip)

2) LOCATION OF WELL County Erath 4 miles in NE (N.E., S.W., etc.) direction from Stephenville (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form. 423

☐ Legal description:
Section No. _____ Block No. _____ Township _____
Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____

☒ See attached map. Mapson 31-47-3E

3) TYPE OF WORK (Check):
☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check):
☒ Domestic ☐ Industrial ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Other

5) DRILLING METHOD (Check):
☐ Mud Rotary ☐ Air Hammer ☐ Driven ☐ Bored ☒ Air Rotary ☐ Cable Tool ☐ Jetted ☐ Other

6) WELL LOG:

Date drilled 5-21-81

DIAMETER OF HOLE Dia. (in.)	From (ft.)	To (ft.)
6¼	Surface 0	400

From (ft.)	To (ft.)	Description and color of formation material
0	20	Caliche
20	40	Marl
40	50	Blue Clay
50	90	Red Clay
90	300	Brown Shale & Limestone
300	350	Shale
350	360	Limestone
360	400	Brown Shale & Limestone

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other
If Gravel Packed give interval . . . from 400 ft. to 340 ft.

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mgf., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
4 1d	N	Steel, slotted	400	340	156

CEMENTING DATA
Cemented from _____ ft. to _____ ft.
Method used Poured
Cemented by Dowell Well Service Inc. (Company or Individual)

9) WATER LEVEL:
Static level 320 ft. below land surface Date _____
Artesian flow _____ gpm Date _____

10) PACKERS: Type Depth

11) TYPE PUMP:
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder
☐ Other
Depth to pump bowls, cylinder, jet, etc., _____ ft.

12) WELL TESTS:
☐ Type Test: ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 20 gpm with NO ft. drawdown after ½ hrs.

RECEIVED
AUG 25 1982
DEPT. OF WATER RESOURCES

(Use reverse side if necessary)

13) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☒ No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☒ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

NAME W.D.Dowell (Type or Print) Water Well Drillers Registration No. 1268

ADDRESS P.O.Box 558 (Street or RFD) Stephenville (City) Texas (State) 76401 (Zip)

(Signed) W.D.Dowell (Water Well Driller) Dowell Well Service, Inc. (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TDWR-0392 (Rev. 1-12-79)

DEPARTMENT OF WATER RESOURCES COPY

Map Key	Number of Records	Direction	Distance (mi/ft)	Site	DB

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update.

Federal

Wells from NWIS: FED USGS

The U.S. Geological Survey's (USGS) National Water Information System (NWIS) is the nation's principal repository of water resources data. The NWIS includes comprehensive information of well-construction details, time-series data for gage height, streamflow, groundwater level, and precipitation and water use data. This select NWIS Wells dataset contains specific Site Types from the overall NWIS Sites data, limited to the following Group Site Types only: Groundwater Group Site Types: Well, Collector or Ranney type well, Hyporheic-zone well, Interconnected Wells, Multiple wells; Spring Group Site Type: Spring; and Other Group Site Types: Aggregate groundwater use, Cistern. Applicable NWIS database information is obtained through the Water Quality Data Portal (WQP). The WQP is a cooperative service sponsored by the USGS, the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC).

Government Publication Date: Mar 11, 2024

State

Well Log Reports from Plotted Water Wells: TCEQ WELL LOGS

Locations of TCEQ Water Wells as derived from well logs in the Texas Commission on Environmental Quality (TCEQ) Water Well Report Viewer, which includes unnumbered water wells and those plotted to 2.5 minute grid locations (2-3 miles). In this collection of Well Log Reports, locations have been manually verified.

Government Publication Date: Jul 26, 2022

Select Wells from SDR: SDRW WELLS

Locations of wells from the Submitted Drillers Report (SDR) Database with select proposed usage: Domestic, Fracking Supply, Industrial, Irrigation, Other, Public Supply, Rig Supply, Stock, Unknown. SDR is populated from the online Texas Well Report Submission and Retrieval System (TWRSRS), a cooperative Texas Department of Licensing and Regulation (TDLR) and Texas Water Development Board (TWDB) application requiring registered water-well drillers to submit reports. Excludes SDR records with the following proposed usage: Closed-Loop Geothermal, De-watering, Environmental Soil Boring, Extraction, Injection, Monitor, Test Well.

Government Publication Date: Mar 11, 2024

Groundwater Database: GWDB

The Texas Water Development Board (TWDB) Groundwater Database (GWDB) contains information on selected water wells, springs, oil/gas tests (that were originally intended to be or were converted to water wells), water levels and water quality.

Government Publication Date: Apr 12, 2024

Fort Bend Subsidence District Water Wells: WW FORT BEND

List of water wells in the Fort Bend Subsidence District, boundaries of which are defined as all the territory within Fort Bend County. The Fort Bend Subsidence District was created by the Texas Legislature in 1989 as a conservation and reclamation district to control land subsidence and manage groundwater resources through regulation, conservation, and coordination with suppliers of alternative water sources to assure an adequate quantity and quality of water for the future. The District's purpose is to provide for the regulation of the withdrawal of groundwater within the District to prevent subsidence that contributes to flooding, inundation or overflow of areas within the District, including rising waters resulting from storms or hurricanes.

Government Publication Date: Jan 22, 2024

High Plains Water Wells: WW HIGH PLAINS

Inventory of water wells in the High Plains Underground Water Conservation District No. 1 (HPUWCD), which was created in 1951. As a political subdivision of Texas, HPUWCD is charged with protecting, preserving and conserving aquifers within the District's 16-county service area.

Government Publication Date: Apr 14, 2024

Harris Galveston Subsidence District Water Wells: WW HARRIS GAL

List of water wells in the Harris-Galveston Subsidence District (HGSD). The HGSD was created by the 64th Texas Legislature as an underground water conservation district in 1975 to provide regulation of groundwater withdrawal to control subsidence.

Government Publication Date: Jan 22, 2024

Water Utility Database: WUD

The Water Utility Database is defined as a collection of data from Texas Water Districts, Public Drinking Water Systems and Water and Sewer Utilities who submit information to the TCEQ. This database is an integrated database designed and developed to replace over 160 stand alone legacy systems representing over 5 million records of the former Texas Water Commission and the Texas Department of Health.

Government Publication Date: Oct 1, 2020

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

T.F: GROUNDWATER TECHNICAL REPORT

T.F.1 Purpose

The purpose of this section is to provide information on the geologic features and groundwater resources at the Vanden Berge Farms facility located near Stephenville, Texas.

T.F.2 Geologic Atlas Map

Figure T.F.1, Geologic Atlas Map, shows the geologic formations located at the property.

T.F.3 Geomorphologic/Geologic Features

The Windthorst-Duffau and Maloterre-Purves-Dugout soils in this area of Erath County are immediately underlain by the Paluxy, Glen Rose, and Walnut Formations as shown in Figure T.F.1, Geologic Atlas Map. The Paluxy Formation consists of sandstone interbedded with claystone and siltstone, up to 100 feet thick, thinning southward. The Glen Rose Formation of Cretaceous age consists of alternating limestone and claystone with some sandstone, up to 250 feet thick in the southeastern area of the formation. (Geologic Atlas, 1976).

Forming the upper unit of the Trinity Group, the Paluxy Formation consists of up to 400 feet of predominantly fine to coarse-grained sand interbedded with clay and shale. Underlying the Paluxy, the Glen Rose Formation forms a gulfward-thickening wedge of marine carbonates consisting primarily of limestone. Paluxy bedrock outcrops along the northeast portion of this site. Limiting application rates of wastewater and manure will protect this feature form adverse impacts.

The Walnut Formation comprises the beds of clay and nonchalky limestones at the base of the Fredericksburg division. They consist of alternations of calcareous laminated clays, weathering yellow on oxidation, semicrystalline limestone flags, and shell agglomerate, all of which grade upward without break into the more chalky beds of the Edwards limestone. In places they weather into rich black soils and make extensive agricultural belts.

The basal unit of the Trinity Group consists of the Twin Mountains and Travis Peak formations, which are laterally separated by a facies change. To the north, the Twin Mountains Formation consists mainly of medium-to coarse-grained sands, silty clays, and conglomerates (Ashworth, 1995).

T.F.4 Aquifer Information

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

Formations comprising the Trinity Group are (from youngest to oldest) the Paluxy, Glen Rose, and Twin Mountains-Travis Peak. Updip, where the Glen Rose thins or is missing, the Paluxy and Twin Mountains coalesce to form the Antlers Formation. The Antlers consists

of up to 900 feet of sand and gravel, with clay beds in the middle section. Water from the Antlers is mainly used for irrigation in the outcrop area of North and Central Texas (Ashworth and Hopkins, 1995).

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

Recharge to the Trinity aquifer is generally as precipitation that falls on aquifer outcrop areas and as seepage from streams and ponds where the head gradient is downward. In the Hill County, water might flow laterally into the Trinity aquifer from the adjacent Edwards-Trinity aquifer. The aquifer discharges by evapotranspiration, spring discharge, diffuse lateral or upward leakage into shallow aquifers, and withdrawals from wells.

T.F.5 References

Ashworth and Hopkins, November 1995. Aquifers of Texas. Report 345, Texas Water Development Board.

Bureau of Economic Geology, The University of Texas at Austin, Geologic Atlas of Texas – Abilene Sheet. 1976.

Map Generated 8/13/2024

Legend:
Kpa – Cretaceous Paluxy Formation
Kgr – Cretaceous Glen Rose Formation
Kwa – Cretaceous Walnut Formation

N
W E
S

600' 0 1200' 600'

SCALE: 1" = 1200'

Source: United States Geological Survey.
Available at: http://txpub.usgs.gov.

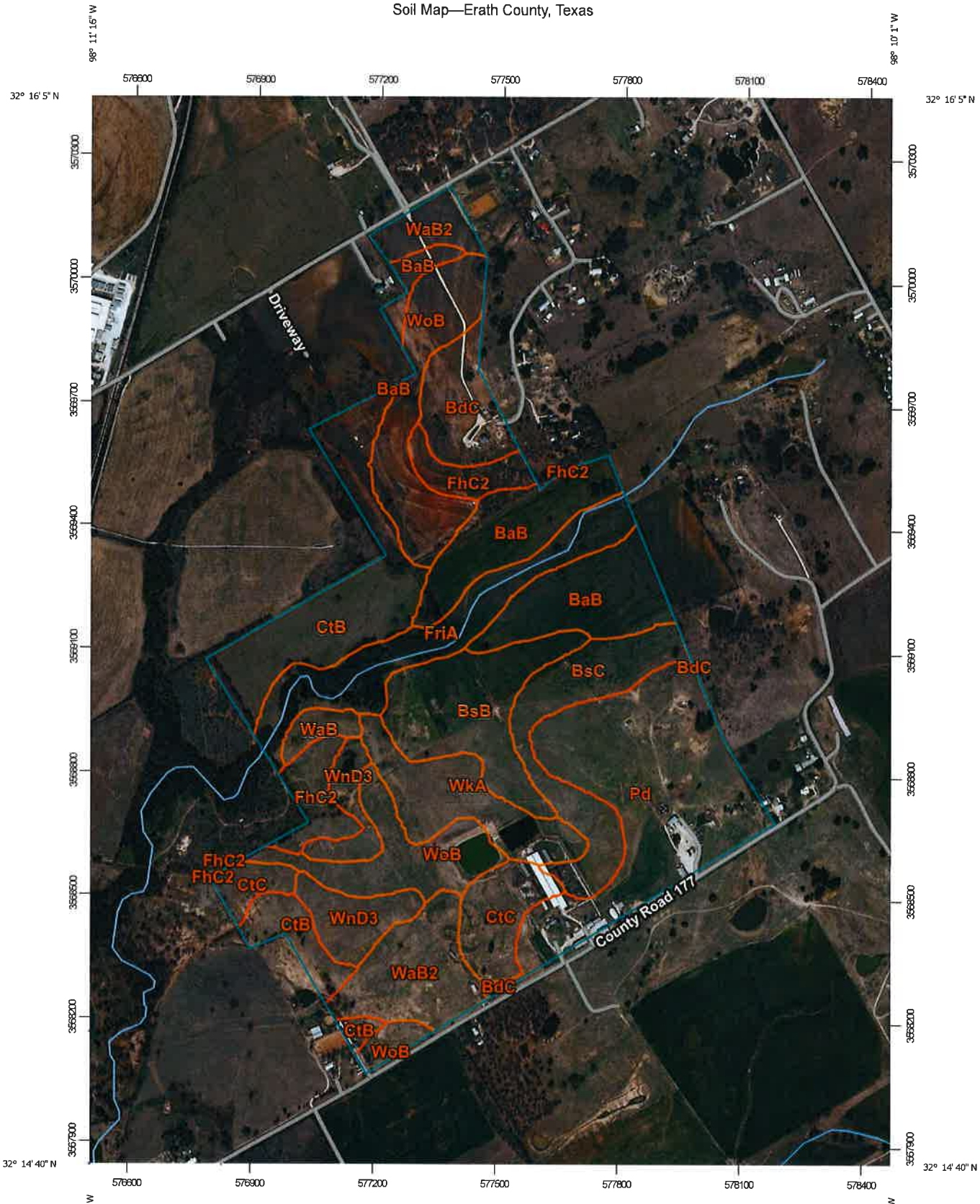
Vanden Berge Farms Stephenville, TX Erath County	Geologic Atlas Map Figure T.F.1 Page 14	ENVIRO-AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

T.G: SOILS INFORMATION

T.G.1 Soil Features

Soil mapping units included in this section for the production area and waste disposal areas were taken from the electronic NRCS soil survey for Erath County.

Soil Map—Erath County, Texas



Map Scale: 1:12,700 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

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

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 29, 2021

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres In AOI	Percent of AOI
BaB	Blanket clay loam, 1 to 3 percent slopes	40.3	11.3%
BdC	Bolar-Denton complex 3 to 5 percent slopes	13.7	3.9%
BsB	Bastsil fine sandy loam, 1 to 3 percent slopes	25.5	7.2%
BsC	Bastsil fine sandy loam, 3 to 5 percent slopes	23.1	6.5%
CtB	Clairette-Hassee very fine sandy loams, 1 to 3 percent slopes	39.1	11.0%
CtC	Clairette loam, 3 to 5 percent slopes	15.6	4.4%
FhC2	Fairy-Hico complex, 1 to 5 percent slopes, moderately eroded	14.0	3.9%
FriA	Frio silty clay, 0 to 1 percent slopes, occasionally flooded	25.9	7.3%
Pd	Purves-Dugout-Maloterre complex, 1 to 20 percent slopes	53.9	15.1%
WaB	Hassee fine sandy loam, 1 to 3 percent slopes	3.5	1.0%
WaB2	Hassee fine sandy loam, 1 to 3 percent slopes, eroded	24.8	7.0%
WkA	Hassee fine sandy loam, thick surface, 0 to 2 percent slopes	18.9	5.3%
WnD3	Windthorst and Duffau sandy clay loams, 1 to 8 percent slopes, severely eroded	15.1	4.2%
WoB	Windthorst very fine sandy loam, 1 to 5 percent slopes	43.0	12.1%
Totals for Area of Interest		**356.5**	**100.0%**

Physical Soil Properties

This table shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In this table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In this table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (Ksat), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at 1/3- or 1/10-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates in the table are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity (Ksat) is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In this table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The content of organic matter in a soil can be maintained by returning crop residue to the soil.

Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and Ksat. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind and/or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the "National Soil Survey Handbook."

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Reference:
United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. (http://soils.usda.gov)

Report—Physical Soil Properties

Physical Soil Properties–Erath County, Texas														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
BaB—Blanket clay loam, 1 to 3 percent slopes														
Blanket	0-14	20-25- 45	28-44- 53	27-31- 35	1.30-1.50	4.00-14.00	0.15-0.20	3.4-5.3	1.0-3.0	.32	.32	5	6	48
	14-40	5-24- 40	13-38- 60	35-38- 50	1.35-1.55	0.42-4.00	0.12-0.20	4.8-8.6	0.5-2.0	.32	.32			
	40-56	5-28- 40	10-39- 68	27-33- 50	1.35-1.55	1.40-14.00	0.12-0.20	2.6-7.9	0.3-1.0	.37	.37			
	56-80	5-35- 40	10-37- 66	27-28- 50	1.35-1.55	1.40-14.00	0.12-0.20	2.6-7.9	0.1-0.8	.43	.43			
BdC—Bolar-Denton complex 3 to 5 percent slopes														
Bolar	0-16	20-34- 45	17-36- 53	27-30- 40	1.21-1.38	4.00-14.00	0.17-0.21	2.4-6.8	1.0-4.0	.20	.20	2	4L	86
	16-32	15-34- 45	15-36- 50	20-30- 40	1.34-1.46	4.00-14.00	0.16-0.20	0.4-5.9	0.5-2.0	.28	.28			
	32-36	15-34- 45	15-36- 50	20-30- 40	1.38-1.56	4.00-14.00	0.12-0.16	0.3-5.5	0.3-1.0	.17	.32			
	36-80	—	—	—	—	0.42-14.00	—	—	—					
Denton	0-10	3- 6- 15	40-48- 57	40-46- 57	1.16-1.34	0.42-1.40	0.11-0.15	5.0-11.1	1.0-4.0	.17	.17	2	4	86
	10-28	5- 7- 25	28-48- 60	35-45- 55	1.28-1.41	0.42-1.40	0.09-0.14	3.7-10.3	1.0-4.0	.20	.20			
	28-32	5- 7- 25	28-48- 60	35-45- 55	1.31-1.41	0.42-1.40	0.09-0.13	2.7-9.4	0.5-2.0	.32	.32			
	32-38	5- 7- 30	40-63- 83	12-30- 40	1.36-1.45	4.00-14.00	0.08-0.12	0.0-5.2	0.1-1.0	.43	.43			
	38-80	—	—	—	—	0.42-14.00	—	—	—					

Physical Soil Properties–Erath County, Texas														
Map symbol and soil name	**Depth**	**Sand**	**Silt**	**Clay**	**Moist bulk density**	**Saturated hydraulic conductivity**	**Available water capacity**	**Linear extensibility**	**Organic matter**	**Erosion factors**			**Wind erodibility group**	**Wind erodibility index**
										Kw	**Kf**	**T**		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
BsB—Bastsil fine sandy loam, 1 to 3 percent slopes														
Bastsil, fine sandy loam	0-8	55-73-80	5-19-39	5-8-20	1.49-1.54	14.00-42.00	0.12-0.16	0.5-2.9	0.5-1.5	.28	.28	5	3	86
	8-15	55-73-80	5-19-39	5-8-20	1.55-1.71	14.00-42.00	0.12-0.16	0.4-2.4	0.4-1.3	.28	.28			
	15-34	40-50-55	10-22-37	20-28-35	1.48-1.58	4.00-14.00	0.12-0.16	2.1-4.6	0.3-0.8	.28	.28			
	34-50	40-51-55	10-24-39	20-25-35	1.51-1.68	4.00-14.00	0.12-0.16	2.3-4.5	0.1-0.3	.28	.28			
	50-80	40-55-65	5-23-43	15-22-30	1.60-1.66	4.00-42.00	0.11-0.16	1.6-3.8	0.0-0.3	.28	.28			
BsC—Bastsil fine sandy loam, 3 to 5 percent slopes														
Bastsil, fine sandy loam	0-9	55-73-80	5-19-39	5-8-20	1.49-1.54	14.00-42.00	0.12-0.16	0.5-2.9	0.5-1.5	.28	.28	5	3	86
	9-15	55-73-80	5-19-39	5-8-20	1.55-1.71	14.00-42.00	0.12-0.16	0.4-2.4	0.4-1.3	.28	.28			
	15-38	40-50-55	10-22-37	20-28-35	1.48-1.58	4.00-14.00	0.12-0.16	2.1-4.6	0.3-0.8	.28	.28			
	38-69	40-51-55	10-24-39	20-25-35	1.51-1.68	4.00-14.00	0.12-0.16	2.3-4.5	0.1-0.3	.28	.28			
	69-80	40-55-65	5-23-43	15-22-30	1.60-1.66	4.00-42.00	0.11-0.16	1.6-3.8	0.0-0.3	.28	.28			

Physical Soil Properties–Erath County, Texas														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
CtB—Clairette-Hassee very fine sandy loams, 1 to 3 percent slopes														
Clairette, very fine sandy loam	0-4	52-68-80	2-21-42	5-11-18	1.42-1.60	14.00-42.00	0.10-0.17	0.2-1.5	0.5-2.0	.49	.49	5	3	86
	4-10	35-49-75	5-32-50	10-19-24	1.44-1.57	4.00-14.00	0.15-0.19	0.7-2.3	0.5-1.5	.37	.37			
	10-26	20-31-60	0-31-48	32-38-55	1.42-1.66	1.40-4.00	0.10-0.18	3.7-8.7	0.3-1.0	.28	.28			
	26-56	25-40-60	0-27-53	18-33-45	1.46-1.54	4.00-14.00	0.16-0.20	1.1-6.3	0.1-0.8	.24	.24			
	56-74	25-47-70	0-27-53	15-26-45	1.54-1.64	4.00-14.00	0.12-0.13	0.8-6.2	0.1-0.6	.28	.28			
	74-80	10-56-75	0-27-73	10-17-45	1.50-1.70	14.00-42.00	0.12-0.17	0.4-6.3	0.1-0.5	.32	.32			
Hassee, very fine sandy loam	0-5	52-68-80	0-19-38	10-13-20	1.54-1.58	4.00-14.00	0.10-0.14	0.4-2.4	0.5-1.5	.55	.55	5	3	86
	5-14	35-68-75	5-17-45	10-15-20	1.41-1.52	4.00-14.00	0.07-0.12	0.4-2.4	0.2-1.2	.55	.55			
	14-35	25-30-50	7-27-40	35-43-50	1.40-1.53	0.01-0.42	0.06-0.10	5.8-10.4	0.5-1.2	.32	.32			
	35-45	25-32-55	0-24-45	30-44-50	1.45-1.52	0.01-0.42	0.06-0.10	3.8-10.2	0.2-1.0	.28	.28			
	45-79	25-35-55	4-26-45	30-39-45	1.40-1.53	0.01-0.42	0.05-0.10	3.7-8.5	0.1-0.5	.32	.32			

Physical Soil Properties–Erath County, Texas														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
CtC—Clairette loam, 3 to 5 percent slopes														
Clairette, loam	0-4	35-44-75	9-36-50	10-20-24	1.47-1.62	4.00-14.00	0.15-0.19	0.7-2.3	0.5-1.5	.37	.37	5	6	48
	4-10	35-49-75	5-32-50	10-19-24	1.44-1.57	4.00-14.00	0.15-0.19	0.7-2.3	0.5-1.5	.37	.37			
	10-26	20-31-60	0-31-48	32-38-55	1.42-1.66	1.40-4.00	0.10-0.18	3.7-8.7	0.3-1.0	.28	.28			
	26-56	25-40-60	0-27-53	18-33-45	1.46-1.54	4.00-14.00	0.16-0.20	1.1-6.3	0.1-0.8	.24	.24			
	56-74	25-47-70	0-27-53	15-26-45	1.54-1.64	4.00-14.00	0.12-0.13	0.8-6.2	0.1-0.6	.28	.28			
	74-80	10-56-75	0-27-73	10-17-45	1.50-1.70	14.00-42.00	0.12-0.17	0.4-6.3	0.1-0.5	.32	.32			
FhC2—Fairy-Hico complex, 1 to 5 percent slopes, moderately eroded														
Fairy, moderately eroded	0-13	52-68-80	6-26-43	5-6-18	1.47-1.51	14.00-42.00	0.10-0.17	0.3-1.8	0.5-2.0	.55	.55	5	3	86
	13-45	30-55-75	0-21-52	17-24-34	1.40-1.60	4.00-14.00	0.05-0.17	1.3-4.6	0.3-1.3	.24	.24			
	45-68	40-45-90	0-33-56	4-22-31	1.50-1.66	4.00-42.00	0.05-0.17	0.0-2.8	0.1-0.5	.32	.32			
	68-80	5-15-75	0-43-53	5-42-45	1.60-1.76	0.42-42.00	0.12-0.18	0.0-6.1	0.0-0.5	.32	.32			
Hico, moderately eroded	0-12	55-65-80	6-24-39	6-11-18	1.46-1.51	14.00-42.00	0.10-0.15	0.4-2.0	0.5-2.0	.28	.28	5	3	86
	12-51	30-55-75	0-17-48	17-28-34	1.44-1.64	4.00-14.00	0.05-0.17	1.7-4.4	0.3-1.3	.20	.20			
	51-80	40-60-90	0-24-50	4-16-31	1.53-1.64	4.00-42.00	0.05-0.17	0.1-3.5	0.1-0.5	.28	.28			

Physical Soil Properties–Erath County, Texas														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
FriA—Frio silty clay, 0 to 1 percent slopes, occasionally flooded														
Frio, occasionally flooded	0-22	2-10- 20	40-46- 58	40-44- 50	1.15-1.35	1.40-4.00	0.12-0.20	6.8-10.2	1.0-4.0	.20	.20	5	4	86
	22-40	2-15- 40	18-47- 68	30-38- 50	1.30-1.55	1.40-4.00	0.08-0.16	3.6-10.0	1.0-2.0	.32	.32			
	40-80	2- 9- 40	18-47- 68	30-44- 50	1.30-1.55	1.40-4.00	0.08-0.16	3.2-9.7	0.1-1.0	.32	.32			
Pd—Purves-Dugout-Maloterre complex, 1 to 20 percent slopes														
Purves, stony clay	0-8	8-25- 40	7-28- 40	40-48- 55	1.16-1.35	0.42-1.40	0.11-0.20	4.1-9.3	1.0-5.0	.05	.10	1	5	56
	8-12	8-26- 40	20-29- 54	35-45- 55	1.17-1.47	0.42-4.00	0.08-0.18	2.9-10.8	1.0-4.0	.15	.15			
	12-14	8-26- 40	20-29- 54	35-45- 55	1.21-1.47	0.42-4.00	0.04-0.07	1.0-7.3	1.0-3.0	.05	.17			
	14-24	—	—	—	—	0.42-14.00	—	—	—					
Dugout, gravelly clay loam	0-8	22-30- 42	28-42- 51	27-28- 35	1.31-1.47	1.40-4.00	0.06-0.15	1.9-5.4	1.0-2.0	.15	.28	1	5	56
	8-18	20-23- 40	28-48- 60	15-29- 35	1.40-1.53	1.40-4.00	0.07-0.16	0.0-4.9	0.1-1.2	.28	.28			
	18-28	—	—	—	—	0.42-14.00	—	—	—					
Maloterre, gravelly clay loam	0-8	30-35- 45	24-36- 43	27-29- 35	1.18-1.40	4.00-14.00	0.06-0.11	1.8-6.0	1.0-7.0	.15	.24	1	5	56
	8-18	—	—	—	—	0.01-0.42	—	—	—					

Physical Soil Properties–Erath County, Texas														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
WaB—Hassee fine sandy loam, 1 to 3 percent slopes														
Hassee	0-12	-69-	-16-	10-15- 20	1.50-1.65	4.00-14.00	0.11-0.17	0.0-2.9	0.5-2.0	.32	.32	5	3	86
	12-50	-18-	-29-	45-53- 60	1.30-1.55	0.01-0.42	0.12-0.18	6.0-8.9	0.5-1.0	.24	.24			
	50-60	-24-	-29-	35-48- 60	1.30-1.55	0.01-0.42	0.12-0.18	6.0-8.9	0.0-0.5	.28	.28			
WaB2—Hassee fine sandy loam, 1 to 3 percent slopes, eroded														
Hassee	0-6	-69-	-16-	10-15- 20	1.50-1.65	4.00-14.00	0.11-0.17	0.0-2.9	0.5-2.0	.32	.32	5	3	86
	6-50	-18-	-29-	45-53- 60	1.30-1.55	0.01-0.42	0.12-0.18	6.0-8.9	0.5-1.0	.24	.24			
	50-60	-23-	-29-	35-48- 60	1.30-1.55	0.01-0.42	0.12-0.18	6.0-8.9	0.0-0.5	.28	.28			
WkA—Hassee fine sandy loam, thick surface, 0 to 2 percent slopes														
Hassee	0-18	-69-	-16-	10-15- 20	1.50-1.65	4.00-14.00	0.11-0.17	0.0-2.9	0.5-2.0	.32	.32	5	3	86
	18-55	-18-	-29-	45-53- 60	1.30-1.55	0.01-0.42	0.12-0.18	6.0-8.9	0.5-1.0	.24	.24			
	55-65	-24-	-29-	35-48- 60	1.30-1.55	0.01-0.42	0.12-0.18	6.0-8.9	0.0-0.5	.28	.28			

Physical Soil Properties–Erath County, Texas														
Map symbol and soil name	**Depth**	**Sand**	**Silt**	**Clay**	**Moist bulk density**	**Saturated hydraulic conductivity**	**Available water capacity**	**Linear extensibility**	**Organic matter**	**Erosion factors**			**Wind erodibility group**	**Wind erodibility index**
										Kw	**Kf**	**T**		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
WnD3—Windthorst and Duffau sandy clay loams, 1 to 8 percent slopes, severely eroded														
Windthorst, severely eroded	0-6	46-62-66	14-15-27	20-23-34	1.47-1.56	1.40-14.00	0.11-0.14	0.7-5.3	0.5-1.0	.43	.43	4	5	56
	6-16	32-40-43	16-24-33	26-36-43	1.35-1.51	1.40-4.00	0.15-0.19	3.8-5.6	0.5-1.0	.37	.37			
	16-25	31-41-52	16-26-39	27-33-38	1.39-1.55	1.40-4.00	0.16-0.20	3.2-5.6	0.3-0.8	.37	.37			
	25-33	36-46-59	19-32-41	14-22-30	1.35-1.60	1.40-4.00	0.15-0.19	2.0-5.0	0.1-0.4	.55	.55			
	33-79	26-61-85	8-27-57	7-12-25	1.76-1.88	0.42-4.00	0.01-0.03	0.5-2.6	0.0-0.2	.64	.64			
Duffau, severely eroded	0-7	59-64-70	10-11-18	20-25-30	1.46-1.60	4.00-42.00	0.11-0.13	2.1-3.8	0.4-2.0	.24	.24	4	5	56
	7-44	43-57-61	11-18-23	18-25-39	1.48-1.60	4.00-14.00	0.11-0.13	1.9-5.1	0.2-0.6	.32	.32			
	44-60	33-66-81	12-15-42	4-19-32	1.55-1.61	4.00-42.00	0.13-0.15	0.1-3.7	0.1-0.3	.37	.37			
	60-79	26-61-85	8-27-57	7-12-25	1.76-1.88	0.42-4.00	0.01-0.03	0.5-2.7	0.0-0.2	.64	.64			

Physical Soil Properties–Erath County, Texas														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
WoB—Windthorst very fine sandy loam, 1 to 5 percent slopes														
Windthorst, very fine sandy loam	0-8	52-68-80	5-21-40	5-11-18	1.42-1.60	14.00-42.00	0.10-0.17	0.2-1.5	0.5-2.0	.43	.43	5	3	86
	8-33	30-46-60	5-16-35	35-38-50	1.43-1.60	1.40-4.00	0.10-0.20	4.4-7.6	0.2-1.0	.28	.28			
	33-46	30-46-70	5-18-35	25-36-50	1.38-1.60	1.40-14.00	0.10-0.20	2.4-7.6	0.2-1.0	.32	.32			
	46-80	30-65-75	0-25-53	5-10-45	1.45-1.70	1.40-42.00	0.11-0.18	0.1-6.5	0.0-0.5	.55	.55			

Data Source Information

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

Engineering Properties

This table gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Hydrologic soil group is a group of soils having similar runoff potential under similar storm and cover conditions. The criteria for determining Hydrologic soil group is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba). Listing HSGs by soil map unit component and not by soil series is a new concept for the engineers. Past engineering references contained lists of HSGs by soil series. Soil series are continually being defined and redefined, and the list of soil series names changes so frequently as to make the task of maintaining a single national list virtually impossible. Therefore, the criteria is now used to calculate the HSG using the component soil properties and no such national series lists will be maintained. All such references are obsolete and their use should be discontinued. Soil properties that influence runoff potential are those that influence the minimum rate of infiltration for a bare soil after prolonged wetting and when not frozen. These properties are depth to a seasonal high water table, saturated hydraulic conductivity after prolonged wetting, and depth to a layer with a very slow water transmission rate. Changes in soil properties caused by land management or climate changes also cause the hydrologic soil group to change. The influence of ground cover is treated independently. There are four hydrologic soil groups, A, B, C, and D, and three dual groups, A/D, B/D, and C/D. In the dual groups, the first letter is for drained areas and the second letter is for undrained areas.

The four hydrologic soil groups are described in the following paragraphs:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Percentage of rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

References:

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Report—Engineering Properties

Absence of an entry indicates that the data were not estimated. The asterisk '*' denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba). Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Engineering Properties–Erath County, Texas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
BaB—Blanket clay loam, 1 to 3 percent slopes														
Blanket	90	C	0-14	Clay loam	CH, CL	A-6, A-7-6	0- 0- 0	0- 0- 0	97-100-100	95-100-100	90-99-100	76-85-89	39-45-51	18-22-25
			14-40	Clay, silty clay, clay loam	CH, CL	A-7-6	0- 0- 0	0- 0- 0	97-100-100	94-100-100	91-99-100	78-85-97	45-50-64	24-27-36
			40-56	Clay, silty clay loam, clay loam	CH, CL	A-6, A-7-6	0- 0- 0	0- 0- 0	91-100-100	81-100-100	76-99-100	62-83-100	35-42-61	16-22-36
			56-80	Clay loam, clay, silty clay loam	CH, CL	A-6, A-7-6	0- 0- 0	0- 0- 0	91-100-100	82-100-100	80-99-100	63-78-100	35-37-61	16-18-36

Engineering Properties–Erath County, Texas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
BdC—Bolar-Denton complex 3 to 5 percent slopes														
Bolar	55	C	0-16	Clay loam	CL, CH	A-6, A-7-6	0- 0- 0	0- 1- 5	84-95-100	82-94-100	69-85-97	52-67-81	34-40-51	13-17-24
			16-32	Gravelly loam, gravelly clay loam, clay loam, silty clay loam, loam	CL, GC	A-6, A-7-6, A-4	0- 0- 0	0- 1- 4	65-92-98	61-91-98	50-82-95	36-65-79	26-35-46	8-14-21
			32-36	Silty clay loam, loam, gravelly loam, gravelly clay loam, clay loam	GC, CL, GC-GM	A-6, A-7-6, A-2-4	0- 0- 0	0- 1- 7	58-70-98	54-67-98	44-60-95	32-47-79	28-36-44	7-12-18
			36-80	Bedrock	—	—	—	—	—	—	—	—	—	—
Denton	35	D	0-10	Silty clay	CH, CL	A-7-6, A-7-5	0- 0- 0	0- 0- 0	91-95-100	90-94-100	87-93-100	82-90-100	45-54-66	21-27-34
			10-28	Clay, silty clay, silty clay loam	CL, CH, MH	A-7-6, A-7-5	0- 0- 0	0- 0- 0	84-95-100	82-94-100	77-94-100	70-90-100	41-55-66	18-26-33
			28-32	Clay, silty clay, silty clay loam	CH, ML	A-7-6	0- 0- 0	0- 0- 0	85-95-100	83-95-100	77-94-100	71-90-100	43-51-57	16-23-28
			32-38	Cobbly silt loam, cobbly silty clay loam, gravelly silt loam, gravelly silty clay loam, silt loam, silty clay loam	ML, GM	A-4, A-7-6	0- 0- 0	0- 6- 25	61-91-93	56-90-92	51-89-92	45-85-92	26-37-44	3-10-15
			38-80	Bedrock	—	—	—	—	—	—	—	—	—	—

Engineering Properties–Erath County, Texas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
BsB—Bastsil fine sandy loam, 1 to 3 percent slopes														
Bastsil, fine sandy loam	90	B	0-8	Fine sandy loam	SC-SM, CL, SM	A-4, A-6, A-2-4	0- 0- 0	0- 0- 0	95-100-100	90-98-100	74-89-100	28-37-58	17-21-34	2-5 -13
			8-15	Fine sandy loam	SC-SM, CL, SM	A-4, A-6, A-2-4	0- 0- 0	0- 0- 0	95-100-100	91-98-100	74-89-100	28-38-58	17-20-33	2-4 -13
			15-34	Loam, clay loam, sandy clay loam	CL, SC	A-6, A-7-6	0- 0- 0	0- 0- 0	100-100-100	97-98-100	88-95-100	49-58-67	31-39-46	13-19-25
			34-50	Loam, clay loam, sandy clay loam	CL, SC	A-6, A-7-6	0- 0- 0	0- 0- 0	100-100-100	97-98-100	88-95-100	49-57-67	30-35-45	13-17-25
			50-80	Fine sandy loam, loam, clay loam, sandy clay loam	CL, SC	A-6, A-4	0- 0- 0	0- 0- 0	100-100-100	97-98-100	87-95-100	43-53-65	25-32-40	10-15-21
BsC—Bastsil fine sandy loam, 3 to 5 percent slopes														
Bastsil, fine sandy loam	85	B	0-9	Fine sandy loam	SC-SM, CL, SM	A-4, A-6, A-2-4	0- 0- 0	0- 0- 0	95-100-100	90-98-100	74-89-100	28-37-58	17-21-34	2-5 -13
			9-15	Fine sandy loam	SC-SM, CL, SM	A-4, A-6, A-2-4	0- 0- 0	0- 0- 0	95-100-100	91-98-100	74-89-100	28-38-58	17-20-33	2-4 -13
			15-38	Loam, clay loam, sandy clay loam	CL, SC	A-6, A-7-6	0- 0- 0	0- 0- 0	100-100-100	97-98-100	88-95-100	49-58-67	31-39-46	13-19-25
			38-69	Loam, clay loam, sandy clay loam	CL, SC	A-6, A-7-6	0- 0- 0	0- 0- 0	100-100-100	97-98-100	88-95-100	49-57-67	30-35-45	13-17-25
			69-80	Fine sandy loam, loam, clay loam, sandy clay loam	CL, SC	A-6, A-4	0- 0- 0	0- 0- 0	100-100-100	97-98-100	87-95-100	43-53-65	25-32-40	10-15-21

Engineering Properties–Erath County, Texas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
CtB—Clairette-Hassee very fine sandy loams, 1 to 3 percent slopes														
Clairette, very fine sandy loam	50	C	0-4	Very fine sandy loam	CL-ML, CL, SM, ML	A-4	0- 0- 0	0- 0- 0	98-100-100	97-100-100	87-98-100	43-55-66	0-18 -30	NP-3 -10
			4-10	Very fine sandy loam, sandy clay loam, loam, fine sandy loam	SC-SM, CL	A-6, A-4	0- 0- 0	0- 0- 0	97-100-100	92-100-100	70-87-100	42-59-77	17-28 -33	4-11-14
			10-26	Clay, clay loam, sandy clay	CL, CH	A-7-6, A-7-5, A-6	0- 0- 0	0- 0- 0	97-100-100	92-100-100	78-93-100	56-74-86	39-43 -62	21-23-31
			26-56	Loam, sandy clay loam, clay, sandy clay, clay loam	SC, CL, CH	A-7-6, A-6, A-4	0- 0- 0	0- 0- 0	94-100-100	81-100-100	64-90-100	42-67-80	24-38 -54	9-18-29
			56-74	Sandy clay, clay, sandy clay loam, loam, clay loam	CL, CH, SC-SM	A-4, A-6, A-7-6	0- 0- 0	0- 0- 0	94-100-100	82-100-100	64-89-100	37-58-75	17-31 -53	6-16-31

Engineering Properties–Erath County, Texas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
			74-80	Loam, fine sandy loam, silty clay loam, clay, clay loam, sandy clay loam	CH, CL-ML, SC-SM	A-4, A-7-6, A-2-4	0- 0- 0	0- 0- 0	90-100-100	80-100-100	60-89-100	30-52-79	17-21-52	4-7 -33
Hassee, very fine sandy loam	40	D	0-5	Very fine sandy loam	CL, SC-SM	A-4, A-6	0- 0- 0	0- 0- 0	97-100-100	92-100-100	84-99-100	41-54-66	22-25-33	6-8 -13
			5-14	Loam, very fine sandy loam, sandy clay loam, fine sandy loam	CL, SC-SM	A-4, A-6, A-2-4	0- 0- 0	0- 0- 0	97-100-100	91-100-100	79-99-100	35-54-67	21-26-33	6-9 -13
			14-35	Clay, clay loam, sandy clay	CH, CL	A-7-6	0- 0- 0	0- 0- 0	97-100-100	91-100-100	83-98-100	61-78-84	46-55-63	25-31-37
			35-45	Clay, clay loam, sandy clay loam, sandy clay	CH, CL	A-7-6, A-6	0- 0- 0	0- 0- 0	97-100-100	91-100-100	81-97-100	56-76-85	40-55-62	21-32-37
			45-79	Clay, sandy clay, clay loam, sandy clay loam	CL, CH	A-7-6, A-6	0- 0- 0	0- 0- 0	97-100-100	91-100-100	80-96-100	55-72-81	39-49-56	20-28-33

Engineering Properties–Erath County, Texas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
CtC—Clairette loam, 3 to 5 percent slopes														
Clairette, loam	90	C	0-4	Loam, sandy clay loam, very fine sandy loam, fine sandy loam	SC-SM, CL	A-4, A-6	0- 0- 0	0- 0- 0	97-100-100	92-100-100	92-100-100	47-66-81	17-26-33	4-10-14
			4-10	Very fine sandy loam, sandy clay loam, loam, fine sandy loam	SC-SM, CL	A-6, A-4	0- 0- 0	0- 0- 0	97-100-100	92-100-100	70-87-100	42-59-77	17-28-33	4-11-14
			10-26	Clay, clay loam, sandy clay	CL, CH	A-7-6, A-7-5, A-6	0- 0- 0	0- 0- 0	97-100-100	92-100-100	78-93-100	56-74-86	39-43-62	21-23-31
			26-56	Loam, sandy clay loam, clay, sandy clay, clay loam	SC, CL, CH	A-7-6, A-6, A-4	0- 0- 0	0- 0- 0	94-100-100	81-100-100	64-90-100	42-67-80	24-38-54	9-18-29
			56-74	Sandy clay, clay, sandy clay loam, loam, clay loam	SC-SM, CL, CH	A-7-6, A-4, A-6	0- 0- 0	0- 0- 0	94-100-100	82-100-100	64-89-100	37-58-75	17-31-53	6-16-31
			74-80	Loam, fine sandy loam, silty clay loam, clay, clay loam, sandy clay loam	CH, CL-ML, SC-SM	A-4, A-7-6, A-2-4	0- 0- 0	0- 0- 0	90-100-100	80-100-100	60-89-100	30-52-79	17-21-52	4-7 -33

Engineering Properties–Erath County, Texas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
FhC2—Fairy-Hico complex, 1 to 5 percent slopes, moderately eroded														
Fairy, moderately eroded	45	B	0-13	Very fine sandy loam	CL-ML, SM, CL	A-4	0- 0- 0	0- 0- 0	98-99-100	97-98-100	87-96-100	44-54-67	0-17 -29	NP-5 -9
			13-45	Fine sandy loam, clay loam, sandy clay loam	CL, SC-SM	A-4, A-6, A-7-6	0- 0- 0	0- 0- 0	93-98-100	92-98-100	71-87-100	38-51-68	19-31 -41	7-16-24
			45-68	Sandy clay loam, loamy fine sand, silt loam, loam, fine sandy loam	CL, SM	A-4, A-6	0- 0- 0	0- 0- 0	93-100-100	92-100-100	69-88-100	41-62-78	0-30 -37	NP-11-17
			68-80	Sandy clay, bedrock, sandy clay loam, loam, clay loam, very fine sandy loam, silty clay	ML, CL	A-7-6, A-4	0- 0- 0	0- 0- 0	91-99-100	89-99-100	70-95-100	53-86-100	0-47 -49	NP-27-27
Hico, moderately eroded	35	B	0-12	Fine sandy loam	SM, SC-SM, CL	A-4, A-2-4	0- 0- 0	0- 0- 0	93-100-100	92-100-100	77-92-98	33-45-54	15-20 -27	1-5 -10
			12-51	Fine sandy loam, clay loam, sandy clay loam	SC, CL	A-6, A-7-6, A-4	0- 0- 0	0- 0- 0	93-100-100	92-100-100	71-87-100	38-51-66	26-37 -43	9-18-23
			51-80	Loamy fine sand, loam, sandy clay loam, fine sandy loam	CL, SM, SC	A-2-4, A-4, A-6	0- 0- 0	0- 0- 0	93-96-100	92-95-100	71-84-100	33-47-67	0-25 -40	NP-9 -20

Engineering Properties–Erath County, Texas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
FriA—Frio silty clay, 0 to 1 percent slopes, occasionally flooded														
Frio, occasionally flooded	85	C	0-22	Silty clay	CH	A-7-6	0- 0- 0	0- 0- 0	96-98-100	96-98-100	92-98-100	85-92-100	51-57-69	33-37-44
			22-40	Clay, silty clay, silty clay loam, clay loam	CH, CL	A-7-6	0- 0- 0	0- 0- 0	92-98-100	92-98-100	82-98-100	69-90-100	45-54-65	28-34-42
			40-80	Clay loam, clay, silty clay loam, silty clay	CL, CH	A-7-6	0- 0- 0	0- 0- 0	92-98-100	91-98-100	82-98-100	72-93-100	43-57-62	25-35-39

Engineering Properties–Erath County, Texas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
Pd—Purves-Dugout-Maloterre complex, 1 to 20 percent slopes														
Purves, stony clay	37	D	0-8	Stony clay	CH, GC	A-7-6	18-25-37	0-8-15	69-95-98	67-95-98	57-88-97	46-76-86	55-60-68	36-39-43
			8-12	Clay loam, gravelly silty clay loam, gravelly clay loam, gravelly silty clay, gravelly clay, clay, silty clay loam, silty clay	CH, GC	A-7-6, A-2-7	0-0-0	0-0-7	50-91-100	48-90-100	40-82-99	34-71-91	49-61-67	30-38-42
			12-14	Very cobbly silty clay, very gravelly clay loam, gravelly clay loam, extremely gravelly clay, gravelly clay, extremely gravelly silty clay loam	CH, GP-GC, GC	A-7-6, A-2-7	0-0-0	0-2-22	19-27-62	15-24-60	13-21-58	11-19-54	49-57-68	30-36-44
			14-24	Bedrock	—	—	—	—	—	—	—	—	—	—
Dugout, gravelly clay loam	25	D	0-8	Gravelly clay loam	SC, CL, GC	A-6, A-7-6, A-2-6	0-0-1	0-0-1	58-77-95	37-62-91	33-58-90	25-46-74	35-38-42	14-16-19
			8-18	Gravelly silt loam, gravelly loam, gravelly clay loam, silt loam, loam, clay loam	CL, GC-GM	A-6, A-7-6, A-1-b	0-0-1	0-0-1	58-80-91	37-78-91	32-73-91	25-62-80	25-36-43	4-12-17
			18-28	Bedrock	—	—	—	—	—	—	—	—	—	—

Engineering Properties–Erath County, Texas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
Maloterre, gravelly clay loam	22	D	0-8	Gravelly clay loam	CL, GC, SC	A-7-6, A-2-6, A-6	0- 0- 0	0- 1- 2	57-76-94	36-60-91	29-51-82	23-42-69	36-38-44	12-15-23
			8-18	Bedrock	—	—	—	—	—	—	—	—	—	—
WaB—Hassee fine sandy loam, 1 to 3 percent slopes														
Hassee	100	D	0-12	Fine sandy loam	CL	A-4, A-6	0- 0- 0	0- 0- 0	95-98-100	95-98-100	80-90-100	50-65-80	20-28-35	8-12-16
			12-50	Silty clay, clay	CH, CL	A-7-6	0- 0- 0	0- 0- 0	95-98-100	95-98-100	95-98-100	75-85-95	41-52-62	24-33-41
			50-60	Clay loam, clay	CH, CL	A-6, A-7-6	0- 0- 0	0- 0- 0	95-98-100	95-98-100	90-95-100	70-83-95	35-44-52	20-28-35
WaB2—Hassee fine sandy loam, 1 to 3 percent slopes, eroded														
Hassee	100	D	0-6	Fine sandy loam	CL	A-4, A-6	0- 0- 0	0- 0- 0	95-98-100	95-98-100	80-90-100	50-65-80	20-28-35	8-12-16
			6-50	Silty clay, clay	CH, CL	A-7-6	0- 0- 0	0- 0- 0	95-98-100	95-98-100	95-98-100	75-85-95	41-52-62	24-33-41
			50-60	Clay, clay loam	CH, CL	A-6, A-7-6	0- 0- 0	0- 0- 0	95-98-100	95-98-100	90-95-100	70-83-95	35-44-52	20-28-35

Engineering Properties–Erath County, Texas														
Map unit symbol and soil name	**Pct. of map unit**	**Hydrologic group**	**Depth**	**USDA texture**	**Classification**		**Pct Fragments**		**Percentage passing sieve number---**				**Liquid limit**	**Plasticity index**
					Unified	**AASHTO**	**>10 inches**	**3-10 inches**	**4**	**10**	**40**	**200**		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
WkA—Hassee fine sandy loam, thick surface, 0 to 2 percent slopes														
Hassee	80	D	0-18	Fine sandy loam	CL	A-4, A-6	0- 0- 0	0- 0- 0	95-98-100	95-98-100	80-90-100	50-65-80	20-28-35	8-12-16
			18-55	Silty clay, clay	CH, CL	A-7-6	0- 0- 0	0- 0- 0	95-98-100	95-98-100	95-98-100	75-85-95	41-52-62	24-33-41
			55-65	Clay loam, clay	CH, CL	A-6, A-7-6	0- 0- 0	0- 0- 0	95-98-100	95-98-100	90-95-100	70-83-95	35-44-52	20-28-35

Engineering Properties–Erath County, Texas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
WnD3—Windthorst and Duffau sandy clay loams, 1 to 8 percent slopes, severely eroded														
Windthorst, severely eroded	50	C	0-6	Sandy clay loam	CL	A-6	0- 0- 0	0- 0- 0	95-100-100	90-100-100	87-100-100	54-63-74	30-35-46	13-16-24
			6-16	Loam, clay loam, clay	CL	A-7-6, A-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	94-100-100	68-77-83	37-47-54	18-26-31
			16-25	Clay loam, sandy clay loam	CL	A-6, A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	94-100-100	69-77-87	37-43-49	19-23-27
			25-33	Sandy clay loam, very fine sandy loam, loam, clay loam	CL	A-4, A-7-6, A-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	93-100-100	65-75-83	25-33-41	8-14-21
			33-79	Silt loam, loamy very fine sand, loam, very fine sandy loam	CL, ML, CL-ML	A-4	0- 0- 0	0- 0- 0	100-100-100	100-100-100	87-100-100	49-69-88	18-23-35	3-7 -17
Duffau, severely eroded	40	B	0-7	Sandy clay loam	SC	A-6	0- 0- 0	0- 0- 0	97-100-100	95-100-100	89-99-100	40-47-52	31-37-44	13-17-21
			7-44	Sandy clay loam, sandy clay, clay loam, fine sandy loam	CL	A-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	93-100-100	52-59-67	29-36-49	12-18-28
			44-60	Loamy fine sand, loam, fine sandy loam, clay loam, sandy clay loam	SC-SM, SC, CL	A-6, A-4	0- 0- 0	0- 0- 0	100-100-100	100-100-100	89-99-100	40-49-64	0-29 -42	NP-15-22
			60-79	Loam, very fine sandy loam, loamy very fine sand, silt loam	CL-ML, ML, CL	A-4	0- 0- 0	0- 0- 0	100-100-100	100-100-100	87-100-100	49-69-88	18-23-35	3-7 -17

Engineering Properties–Erath County, Texas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
WoB—Windthorst very fine sandy loam, 1 to 5 percent slopes														
Windthorst, very fine sandy loam	85	C	0-8	Very fine sandy loam	CL, SM, ML, CL-ML	A-4	0- 0- 0	0- 0- 0	98-100-100	97-100-100	87-98-100	43-55-66	0-18 -30	NP-3 -10
			8-33	Clay, sandy clay, clay loam	CH, CL	A-6, A-7-6	0- 0- 0	0- 0- 0	98-100-100	97-100-100	90-100-100	57-69-80	36-40 -51	21-24-32
			33-46	Sandy clay loam, sandy clay, clay, clay loam	CL, CH	A-6, A-7-6	0- 0- 0	0- 0- 0	98-100-100	97-100-100	88-100-100	54-69-80	29-37 -51	14-21-32
			46-80	Bedrock, very fine sandy loam, loam, clay, sandy clay loam, sandy clay, clay loam	SM, ML, CL, CL-ML	A-4, A-7-6, A-2-4	0- 0- 0	0- 0- 0	91-99-100	89-99-100	74-96-100	33-56-80	0-15 -49	NP-3 -29

Data Source Information

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

T.H: ENGINEERING REPORT

T.H.1 Purpose

This report is prepared as part of the application for Vanden Berge Farms for a Texas Land Application Permit (TLAP) through the Texas Commission on Environmental Quality (TCEQ). Water balance models have been developed to illustrate the function of the impoundment system and the hydraulic and nutrient demands of the planned crops.

T.H.2 Background

Vanden Berge Farms is applying for a new Industrial Water Quality TLAP Permit No. WQ0000000000 to receive, store, and dispose of treated effluent from Schreiber Foods, Inc.

T.H.3 Impoundment Facility

The storage system at the facility consists of one earthen impoundment with a storage capacity of 8.4 gallons. The impoundment will contain the treated effluent from Schreiber Foods, Inc.

T.H.4 Water Balance Calculations

Figures T.H.1 & T.H.2, Water Balance Calculations, are designed to evaluate the maximum application rate (hydraulic loading rate) for the land application area, estimate the inflows and withdrawals from the direct rainfall, process-generated wastewater, evaporation, and irrigation withdrawal based on crop demand.

Figure T.H.1
Water Balance Calculations

Permittee: **Vanden Berge Farms**
Permit No.: **WQ0000000000**

TWDB Data Quadrangle: **509**

The water balance calculations are designed to evaluate the maximum application rate (hydraulic loading rate) for the land area where irrigation is to occur. The applicant's proposed application rate must not must not exceed the maximum calculated application rate or the maximum application rate based on agronomic analyis.

(1) Month	(2) Avg Rain	(3) Avg Runoff	(4) Avg Infilt Rainfall	(5) Evapo-trans.	(6) Required Leach	(7) Total Water Needs	(8) Effluent Needed in Root Zone	(9a) Raw Net Evap. from Reservoir	(9b) Reservoir Net Evap. (as inches on plot acres)	(10) Effluent Needed Based on Irrigation Efficiency	(11) Reservoir Consumtion (as inches on plot acres)
Units →	*inches*	*inches*	*inches*	*inches*	*inches*	*inches*	*inches*	*inches*	*inches*	*inches*	*inches*
January	1.55	0.11	1.44	2.10	0.12	2.22	0.78	0.93	0.02	0.92	0.94
February	1.91	0.23	1.68	2.46	0.14	2.60	0.92	0.79	0.02	1.08	1.10
March	2.61	0.55	2.07	4.06	0.36	4.42	2.36	1.52	0.03	2.77	2.80
April	2.68	0.58	2.09	4.98	0.52	5.50	3.41	2.48	0.05	4.01	4.06
May	4.21	1.54	2.67	5.73	0.56	6.29	3.61	1.04	0.02	4.25	4.27
June	3.43	1.02	2.41	6.82	0.80	7.62	5.21	3.56	0.07	6.13	6.20
July	1.91	0.23	1.68	7.66	1.09	8.75	7.07	6.06	0.12	8.32	8.44
August	2.25	0.37	1.88	7.56	1.03	8.59	6.72	5.47	0.11	7.90	8.01
September	2.99	0.75	2.23	5.78	0.64	6.42	4.19	2.87	0.06	4.93	4.99
October	3.35	0.97	2.38	4.29	0.35	4.64	2.26	1.58	0.03	2.65	2.69
November	1.91	0.23	1.68	2.81	0.21	3.02	1.33	1.41	0.03	1.57	1.60
December	1.40	0.07	1.33	2.24	0.17	2.41	1.08	1.04	0.02	1.27	1.29
Totals	30.21	6.67	23.54	56.49	5.99	62.48	38.94	28.73	0.58	45.81	46.39

Crop is	Coastal	
CN	71.00	*dimensionless*
Ce	1.00	*mmhos/cm*
Cl	6.50	*mmhos/cm*
Pond area	3.64	*acres*
Irrigation area	180.00	*acres*
Irrigation Efficiency, *K*	0.85	*dimensionless*
Design Flow	0.192	*MGD*

Maximum calculated application rate = 3.82 *ac-in/ac/month* **OR** *ac-ft/ac/year*
Applicant's proposed application rate = *ac-in/ac/month* **OR** *ac-ft/ac/year*
Maximum rate from agronomic analysis = N/A *ac-in/ac/month* **OR** *ac-ft/ac/year*

Recommended rate for permit = 3.82 *ac-in/ac/month* **OR** *ac-ft/ac/year*

Limiting factor = Click this cell to choose from list.

Gross rate check (from flow, acres) = 1.19 **OK**

(2) Average rainfall – Data source: Texas Water Development Board (see Quadrangle above)
(3) Average runoff = [[(*average rainfall* – (0.2*((1000/*CN*) – 10)))]]^2/((*average rainfall* + (0.8*((1000/*CN*) – 10))))
(4) Average infiltrated rainfall = (*average rainfall – average runoff*)
(5) Evapotranspiration – Data Source: Mean Crop Consumptive Mean Crop Consumptive Use and Free-Water Evaporation
(6) Required leaching =
If: *evapotranspiration – average infiltrated rainfall* ≤ 0, then 0;
If: *evapotranspiration – average infiltrated rainfall* > 0, *Ce* /(*Cl* – *Ce*)*(*evapotranspiration – avg infiltrated rainfall*)
(7) Total water needs = *evapotranspiration + required leaching*
(8) Effluent needed in root zone = *total water needs – average infiltrated rainfall*
(9a) Net evaporation – Data source: Texas Water Development Board (see Quadrangle above)
(9b) Raw net evaporation from reservoir surface = (*net evaporation from reservoir*)*((*pond area*)/(*irrigation area*))
(10) Effluent needed based on irrigation efficiency = (*effluent needed in root zone*)/(*irrigation efficiency*)
(11) Consumption from reservoir = *net evaporation from reservoir surface + effluent needed based on irrigation efficiency*

Figure T.H.2
Water Balance Calculations

Permittee: **Vanden Berge Farms**
Permit No.: **WQ0000000000**

TWDB Data Quadrangle: **509**

The water balance calculations are designed to evaluate the maximum application rate (hydraulic loading rate) for the land area where irrigation is to occur. The applicant's proposed application rate must not must not exceed the maximum calculated application rate or the maximum application rate based on agronomic analyis.

Month (1) *Units →*	Avg. Precip. (2) *inches*	Average Runoff (3) *inches*	Average Infiltrated Rainfall (4) *inches*	Evapotrans-piration (5) *inches*	Required Leaching (6) *inches*	Total Water Needs (5)+(6) (7) *inches*	Effluent Needed in Root Zone (7)-(4) (8) *inches*	Evaporation from Reservoir Surface (9) *inches*	Effluent to be Applied to Land (8)/K (10) *inches*	Consumption from Reservoir (9)+(10) (11) *inches*
January	1.55	0.62	0.93	0.00	0.00	0.00	0.00	0.08	0.00	0.08
February	1.91	0.89	1.02	0.00	0.00	0.00	0.00	0.07	0.00	0.07
March	2.61	1.48	1.13	0.00	0.00	0.00	0.00	0.13	0.00	0.13
April	2.68	1.53	1.14	0.00	0.00	0.00	0.00	0.21	0.00	0.21
May	4.21	2.93	1.29	2.98	0.31	3.29	2.00	0.09	2.36	2.44
June	3.43	2.20	1.22	6.10	0.89	6.99	5.76	0.30	6.78	7.08
July	1.91	0.89	1.02	8.38	1.34	9.72	8.70	0.51	10.24	10.75
August	2.25	1.17	1.08	8.59	1.37	9.96	8.88	0.46	10.44	10.91
September	2.99	1.81	1.18	6.03	0.88	6.91	5.73	0.24	6.74	6.99
October	3.35	2.13	1.22	1.65	0.08	1.73	0.51	0.13	0.60	0.73
November	1.91	0.90	1.02	0.00	0.00	0.00	0.00	0.12	0.00	0.12
December	1.40	0.51	0.89	0.00	0.00	0.00	0.00	0.09	0.00	0.09
Totals	30.21	17.07	13.14	33.73	4.86	38.59	31.58	2.43	37.16	39.59

Crop is	Soghum	
CN	88.00	*dimensionless*
Ce	1.00	*mmhos/cm*
Cl	6.50	*mmhos/cm*
Pond area	3.64	*acres*
Irrigation area	43.00	*acres*
Irrigation Efficiency, *K*	0.85	*dimensionless*
Design Flow	0.000	*MGD*

Maximum calculated application rate = 3.30 *ac-in/ac/month* **OR** *ac-ft/ac/year*
Applicant's proposed application rate = *ac-in/ac/month* **OR** *ac-ft/ac/year*
Maximum rate from agronomic analysis = N/A *ac-in/ac/month* **OR** *ac-ft/ac/year*

Recommended rate for permit = 3.30 *ac-in/ac/month* **OR** *ac-ft/ac/year*

Limiting factor = Click this cell to choose from list.
Gross rate check (from flow, acres) = 0.00 **OK**

(2) Average rainfall – Data source: Texas Water Development Board (see Quadrangle above)
(3) Average runoff = [[(*average rainfall* – (0.2*((1000/*CN*) – 10)))]]^2/((*average rainfall* + (0.8*((1000/*CN*) – 10))))
(4) Average infiltrated rainfall = (*average rainfall* – *average runoff*)
(5) Evapotranspiration – Data Source: Mean Crop Consumptive Mean Crop Consumptive Use and Free-Water Evaporation
(6) Required leaching =
If: *evapotranspiration* – *average infiltrated rainfall* ≤ 0, then 0;
If: *evapotranspiration* – *average infiltrated rainfall* > 0, *Ce* /(*Cl* – *Ce*)*(*evapotranspiration* – *avg infiltrated rainfall*)
(7) Total water needs = *evapotranspiration* + *required leaching*
(8) Effluent needed in root zone = *total water needs* – *average infiltrated rainfall*
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(10) Effluent needed based on irrigation efficiency = (*effluent needed in root zone*)/(*irrigation efficiency*)
(11) Consumption from reservoir = *net evaporation from reservoir surface* + *effluent needed based on irrigation efficiency*

T.I: POLLUTANT ANALYSIS DATA

ANALYTICAL REPORT

September 17, 2024

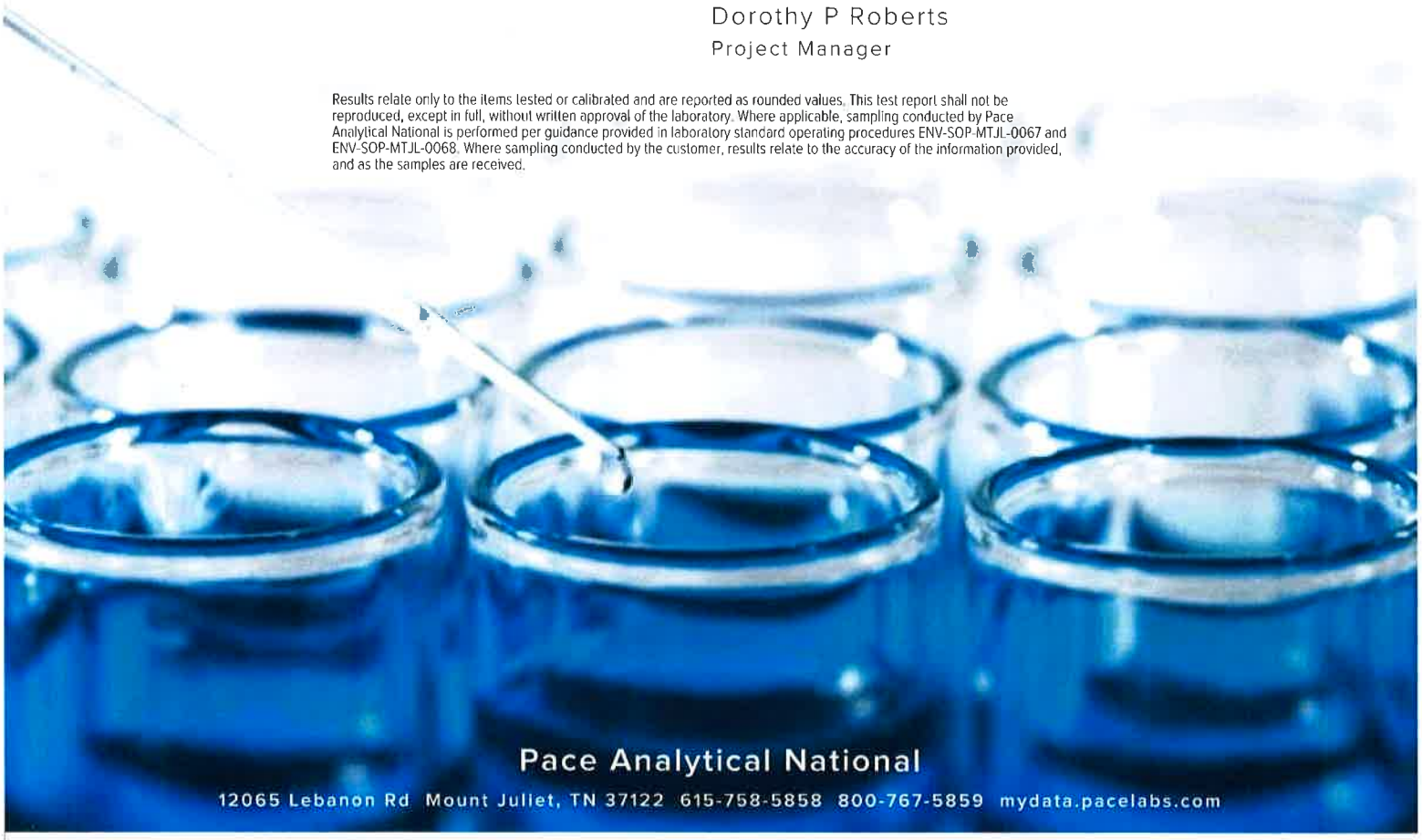
Enviro-Ag Engineering

Sample Delivery Group:	L1773907
Samples Received:	09/04/2024
Project Number:	
Description:	Pollutant Permit

Report To: Jourdan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Entire Report Reviewed By: Dorothy P Roberts

Dorothy P Roberts
Project Manager



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SAMPLE SUMMARY

SCHREIBER IRRIGATION WEEK 2 L1773907-01 WW

			Collected by	Collected date/time	Received date/time
				09/04/24 09:03	09/04/24 11:25

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2357637	1	09/10/24 11:07	09/10/24 11:07	EIG	Allen, TX
Calculated Results	WG2359571	1	09/16/24 16:42	09/16/24 16:42	ZSA	Mt. Juliet, TN
Gravimetric Analysis by Method 2540C	WG2358080	1	09/07/24 12:36	09/07/24 14:02	QQT	Allen, TX
Gravimetric Analysis by Method 2540D	WG2359185	1	09/10/24 05:21	09/10/24 06:48	QQT	Allen, TX
Wet Chemistry by Method 1664A	WG2359152	1	09/10/24 05:20	09/10/24 12:57	MAB	Mt. Juliet, TN
Wet Chemistry by Method 2320B	WG2358720	1	09/09/24 12:06	09/09/24 12:06	SEN	Allen, TX
Wet Chemistry by Method 300.0	WG2355826	1	09/04/24 16:57	09/04/24 16:57	EIG	Allen, TX
Wet Chemistry by Method 300.0	WG2359292	1	09/10/24 14:23	09/10/24 14:23	SMC	Allen, TX
Wet Chemistry by Method 300.0	WG2359292	1	09/10/24 16:46	09/10/24 16:46	SMC	Allen, TX
Wet Chemistry by Method 300.0	WG2360155	1	09/11/24 09:38	09/11/24 09:38	SMC	Allen, TX
Wet Chemistry by Method 3500Cr-B	WG2358763	1	09/09/24 16:23	09/09/24 16:23	KCM	Allen, TX
Wet Chemistry by Method 351.2	WG2358651	1	09/09/24 12:17	09/10/24 11:07	EIG	Allen, TX
Wet Chemistry by Method 360.1	WG2357350	1	09/06/24 09:02	09/06/24 09:02	SEN	Allen, TX
Wet Chemistry by Method 4500Cl G-2011	WG2358913	1	09/09/24 16:03	09/09/24 16:03	CAH	Mt. Juliet, TN
Wet Chemistry by Method 4500CN-E	WG2359751	1	09/10/24 10:00	09/10/24 15:08	TJG	Allen, TX
Wet Chemistry by Method 4500CN-G	WG2359751	1	09/10/24 15:08	09/10/24 15:08	TJG	Allen, TX
Wet Chemistry by Method 4500P-E	WG2357307	10	09/09/24 12:21	09/09/24 12:21	SMC	Allen, TX
Wet Chemistry by Method 5210 B-2016	WG2355706	1	09/04/24 16:18	09/09/24 11:14	JBS	Allen, TX
Wet Chemistry by Method 5210 B-2016	WG2355708	1	09/04/24 17:09	09/09/24 12:36	JBS	Allen, TX
Wet Chemistry by Method 5220D	WG2358816	1	09/09/24 14:40	09/09/24 15:52	JBS	Allen, TX
Wet Chemistry by Method 5310C	WG2356192	1	09/05/24 02:59	09/05/24 02:59	EIG	Allen, TX
Wet Chemistry by Method SM 4500-H+B	WG2359282	1	09/10/24 09:06	09/10/24 09:06	SEN	Allen, TX
Wet Chemistry by Method SM4500NH3H	WG2357637	1	09/06/24 17:53	09/06/24 17:53	EIG	Allen, TX
Mercury by Method 245.1	WG2356593	1	09/06/24 15:27	09/07/24 13:11	SDG	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG2359571	1	09/16/24 07:58	09/16/24 16:42	ZSA	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Dorothy P Roberts
Project Manager

Sample Delivery Group (SDG) Narrative

Analysis was filtered in the laboratory.

Lab Sample ID	Project Sample ID	Method
L1773907-01	SCHREIBER IRRIGATION WEEK 2	3500Cr-B

Calculated Results

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chromium,Trivalent	ND		0.00300	1	09/16/2024 16:42	WG2359571
Organic Nitrogen	ND		0.100	1	09/10/2024 11:07	WG2357637

Gravimetric Analysis by Method 2540C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Total Dissolved Solids	3350		250	1	09/07/2024 14:02	WG2358080

Gravimetric Analysis by Method 2540D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Suspended Solids	165		41.7	1	09/10/2024 06:48	WG2359185

Wet Chemistry by Method 1664A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Oil & Grease (Hexane Extr)	ND		5.10	1	09/10/2024 12:57	WG2359152

Wet Chemistry by Method 2320B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	522		20.0	1	09/09/2024 12:06	WG2358720

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	1340		0.800	1	09/10/2024 16:46	WG2359292
Fluoride	ND		0.500	1	09/11/2024 09:38	WG2360155
Nitrate	ND		0.500	1	09/04/2024 16:57	WG2355826
Sulfate	148		0.700	1	09/10/2024 14:23	WG2359292

Wet Chemistry by Method 3500Cr-B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chromium,Hexavalent	ND	J6	0.00300	1	09/09/2024 16:23	WG2358763

Wet Chemistry by Method 351.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Kjeldahl Nitrogen, TKN	2.80		0.250	1	09/10/2024 11:07	WG2358651

Wet Chemistry by Method 360.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Oxygen	8.90	T8	1	1	09/06/2024 09:02	WG2357350

Wet Chemistry by Method 4500Cl G-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chlorine,residual	0.294	T8	0.100	1	09/09/2024 16:03	WG2358913

Wet Chemistry by Method 4500CN-E

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Cyanide	ND		0.0100	1	09/10/2024 15:08	WG2359751

Wet Chemistry by Method 4500CN-G

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Cyanide,amenable	ND		0.0100	1	09/10/2024 15:08	WG2359751

Wet Chemistry by Method 4500P-E

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Phosphorus,Total	5.50		0.500	10	09/09/2024 12:21	WG2357307

Wet Chemistry by Method 5210 B-2016

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
BOD	49.7		10.0	1	09/09/2024 11:14	WG2355706
CBOD	21.0		10.0	1	09/09/2024 12:36	WG2355708

Wet Chemistry by Method 5220D

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
COD	211		35.0	1	09/09/2024 15:52	WG2358816

Wet Chemistry by Method 5310C

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	22.5		0.700	1	09/05/2024 02:59	WG2356192

Wet Chemistry by Method SM 4500-H+B

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	su			date / time	
pH	8.73	T8	1	09/10/2024 09:06	WG2359282

Sample Narrative:
L1773907-01 WG2359282: 8.73 at 19.7C

Wet Chemistry by Method SM4500NH3H

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Ammonia Nitrogen	2.79		0.100	1	09/06/2024 17:53	WG2357637

Mercury by Method 245.1

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	09/07/2024 13:11	WG2356593

SAMPLE RESULTS - 01
L1773907

Metals (ICP) by Method 200.7

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum	0.580		0.200	1	09/16/2024 16:42	WG2359571
Antimony	ND		0.0100	1	09/16/2024 16:42	WG2359571
Arsenic	ND		0.0100	1	09/16/2024 16:42	WG2359571
Barium	0.0232		0.00500	1	09/16/2024 16:42	WG2359571
Beryllium	ND		0.00200	1	09/16/2024 16:42	WG2359571
Cadmium	ND		0.00200	1	09/16/2024 16:42	WG2359571
Chromium	ND		0.0100	1	09/16/2024 16:42	WG2359571
Copper	ND		0.0100	1	09/16/2024 16:42	WG2359571
Lead	ND		0.00500	1	09/16/2024 16:42	WG2359571
Nickel	ND		0.0100	1	09/16/2024 16:42	WG2359571
Selenium	ND		0.0100	1	09/16/2024 16:42	WG2359571
Silver	ND		0.00500	1	09/16/2024 16:42	WG2359571
Titanium	ND		0.0500	1	09/16/2024 16:42	WG2359571
Zinc	ND		0.0500	1	09/16/2024 16:42	WG2359571

Method Blank (MB)

(MB) R4117108-1 09/07/24 14:02

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Total Dissolved Solids	U		25.0	25.0

L1773799-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1773799-01 09/07/24 14:02 • (DUP) R4117108-3 09/07/24 14:02

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Total Dissolved Solids	1690	1670	1	1.31		10

L1773801-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1773801-01 09/07/24 14:02 • (DUP) R4117108-4 09/07/24 14:02

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Total Dissolved Solids	476	473	1	0.632		10

Laboratory Control Sample (LCS)

(LCS) R4117108-2 09/07/24 14:02

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Total Dissolved Solids	2410	2530	105	85.0-115	

Method Blank (MB)

(MB) R4118212-1 09/10/24 06:48

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Suspended Solids	U		2.50	2.50

L1773907-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1773907-01 09/10/24 06:48 • (DUP) R4118212-3 09/10/24 06:48

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Suspended Solids	165	155	1	6.25		10

L1774383-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1774383-01 09/10/24 06:48 • (DUP) R4118212-4 09/10/24 06:48

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Suspended Solids	606	623	1	2.80		10

Laboratory Control Sample (LCS)

(LCS) R4118212-2 09/10/24 06:48

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Suspended Solids	879	849	96.6	85.0-115	

QUALITY CONTROL SUMMARY

L1773907-01

Method Blank (MB)

(MB) R4117754-1 09/10/24 12:57

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Oil & Grease (Hexane Extr)	U		1.16	5.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4117754-2 09/10/24 12:57 • (LCSD) R4117754-3 09/10/24 12:57

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Oil & Grease (Hexane Extr)	40.0	37.6	37.2	94.0	93.0	78.0-114			1.07	20

L1773880-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1773880-01 09/10/24 12:57 • (MS) R4117754-4 09/10/24 12:57 • (MSD) R4117754-5 09/10/24 12:57

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Oil & Grease (Hexane Extr)	40.0	6.38	32.6	38.2	65.4	79.5	1	78.0-114	J6		15.9	18

Method Blank (MB)

(MB) R4117294-1 09/09/24 12:06

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Alkalinity	U		20.0	20.0

L1773809-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1773809-02 09/09/24 12:06 • (DUP) R4117294-3 09/09/24 12:06

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Alkalinity	192	192	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4117294-2 09/09/24 12:06

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Alkalinity	250	242	96.8	90.0-110	

Method Blank (MB)

(MB) R4115728-1 09/04/24 15:22

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Nitrate	U		0.379	0.500

Laboratory Control Sample (LCS)

(LCS) R4115728-2 09/04/24 15:34

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Nitrate	5.00	5.05	101	90.0-110	

L1773730-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1773730-01 09/04/24 16:45 • (MS) R4115728-3 09/04/24 18:11 • (MSD) R4115728-4 09/04/24 18:23

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Nitrate	5.00	ND	5.23	5.26	105	105	1	90.0-110			0.597	20

Method Blank (MB)

(MB) R4118157-1 09/10/24 12:36

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chloride	U		0.325	0.800
Sulfate	U		0.211	0.700

Laboratory Control Sample (LCS)

(LCS) R4118157-2 09/10/24 12:48

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Chloride	5.00	5.11	102	90.0-110	
Sulfate	5.00	5.14	103	90.0-110	

L1774873-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1774873-01 09/10/24 15:11 • (MS) R4118157-3 09/10/24 16:58 • (MSD) R4118157-4 09/10/24 17:10

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Sulfate	5.00	ND	5.13	5.16	103	103	1	90.0-110			0.550	20

L1774873-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1774873-01 09/10/24 15:47 • (MS) R4118157-5 09/10/24 17:21 • (MSD) R4118157-6 09/10/24 17:33

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Chloride	250	273	502	501	91.3	91.2	1	90.0-110			0.0459	20

Method Blank (MB)

(MB) R4118306-1 09/11/24 09:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Fluoride	U		0.0947	0.500

Laboratory Control Sample (LCS)

(LCS) R4118306-2 09/11/24 09:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluoride	5.00	4.95	99.0	90.0-110	

L1775284-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775284-01 09/11/24 10:14 • (MS) R4118306-3 09/11/24 10:25 • (MSD) R4118306-4 09/11/24 10:37

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Fluoride	5.00	ND	5.09	5.10	95.7	96.0	1	90.0-110			0.298	20

QUALITY CONTROL SUMMARY

L1773907-01

Method Blank (MB)

(MB) R4117351-1 09/09/24 16:23

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Chromium,Hexavalent	U		0.00200	0.00300

Laboratory Control Sample (LCS)

(LCS) R4117351-2 09/09/24 16:23

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Chromium,Hexavalent	0.200	0.194	97.2	85.0-115	

L1773907-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1773907-01 09/09/24 16:23 • (MS) R4117351-3 09/09/24 16:23 • (MSD) R4117351-4 09/09/24 16:23

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Chromium,Hexavalent	0.200	ND	0.154	0.155	77.1	77.5	1	85.0-115	J6	J6	0.555	20

Method Blank (MB)

(MB) R4117690-2 09/10/24 11:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Kjeldahl Nitrogen, TKN	U		0.140	0.250

Laboratory Control Sample (LCS)

(LCS) R4117690-1 09/10/24 10:57

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Kjeldahl Nitrogen, TKN	4.00	4.14	104	90.0-110	

L1774505-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1774505-02 09/10/24 11:15 • (MS) R4117690-3 09/10/24 11:16 • (MSD) R4117690-4 09/10/24 11:18

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Kjeldahl Nitrogen, TKN	4.00	0.448	0.816	0.643	9.20	4.88	1	90.0-110	J6	J3 J6	23.7	20

L1773907-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1773907-01 09/06/24 09:02 • (DUP) R4116288-1 09/06/24 09:02

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Oxygen	8.90	8.75	1	1.70		10

Method Blank (MB)

(MB) R4117333-1 09/09/24 16:01

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chlorine,residual	U		0.0260	0.100

L1773764-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1773764-01 09/09/24 16:02 • (DUP) R4117333-4 09/09/24 16:02

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chlorine,residual	0.158	0.163	1	3.12		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4117333-2 09/09/24 16:01 • (LCSD) R4117333-3 09/09/24 16:01

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Chlorine,residual	1.00	1.04	1.04	104	104	85.0-115			0.0962	20

Method Blank (MB)

(MB) R4117864-1 09/10/24 15:08

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Cyanide	U		0.00430	0.0100

Laboratory Control Sample (LCS)

(LCS) R4117864-2 09/10/24 15:08

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Cyanide	0.100	0.0994	99.4	85.0-115	

L1774055-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1774055-01 09/10/24 15:08 • (MS) R4117864-3 09/10/24 15:08 • (MSD) R4117864-4 09/10/24 15:08

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0852	0.0629	85.2	62.9	1	85.0-115		J3 J6	30.1	20

L1774309-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1774309-01 09/10/24 15:08 • (MS) R4117864-5 09/10/24 15:08 • (MSD) R4117864-6 09/10/24 15:08

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.108	0.105	108	105	1	85.0-115			2.00	20

Method Blank (MB)

(MB) R4117172-1 09/09/24 12:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Phosphorus,Total	U		0.0152	0.0500

Laboratory Control Sample (LCS)

(LCS) R4117172-2 09/09/24 12:20

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Phosphorus,Total	0.500	0.507	101	80.0-120	

L1772524-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772524-02 09/09/24 12:20 • (MS) R4117172-3 09/09/24 12:22 • (MSD) R4117172-4 09/09/24 12:22

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Phosphorus,Total	0.500	4.40	4.90	4.97	99.1	113	10	80.0-120			1.40	20

L1772954-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772954-02 09/09/24 12:21 • (MS) R4117172-5 09/09/24 12:22 • (MSD) R4117172-6 09/09/24 12:22

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Phosphorus,Total	0.500	ND	0.534	0.529	103	102	1	80.0-120			0.868	20

Method Blank (MB)

(MB) R4117143-1 09/09/24 10:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
BOD	U		0.200	0.200

L1773584-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1773584-01 09/09/24 10:58 • (DUP) R4117143-3 09/09/24 11:20

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
BOD	7.20	7.16	1	0.557		20

Laboratory Control Sample (LCS)

(LCS) R4117143-2 09/09/24 10:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
BOD	198	205	103	85-115	

Cp
Tc
Ss
Cn
Sr
Qc
Gl
Al
Sc

Method Blank (MB)

(MB) R4117192-1 09/09/24 12:04

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
CBOD	U		0.200	0.200

L1773891-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1773891-02 09/09/24 12:35 • (DUP) R4117192-3 09/09/24 12:48

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
CBOD	1.50	1.27	1	16.6		20

L1773965-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1773965-01 09/09/24 12:39 • (DUP) R4117192-4 09/09/24 12:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
CBOD	1.32	1.35	1	2.25		20

Laboratory Control Sample (LCS)

(LCS) R4117192-2 09/09/24 12:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
CBOD	198	203	102	85-115	

Method Blank (MB)

(MB) R4117332-1 09/09/24 15:52

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		16.1	35.0

Laboratory Control Sample (LCS)

(LCS) R4117332-2 09/09/24 15:52

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
COD	500	512	102	80.0-120	

L1773638-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1773638-01 09/09/24 15:52 • (MS) R4117332-3 09/09/24 15:52 • (MSD) R4117332-4 09/09/24 15:52

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	500	82.9	552	571	93.8	97.5	1	80.0-120			3.36	20

L1774311-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1774311-01 09/09/24 15:52 • (MS) R4117332-5 09/09/24 15:52 • (MSD) R4117332-6 09/09/24 15:52

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	500	62.0	558	575	99.2	103	1	80.0-120			2.96	20

Method Blank (MB)

(MB) R4115842-1 09/04/24 18:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TOC (Total Organic Carbon)	U		0.270	0.700

Laboratory Control Sample (LCS)

(LCS) R4115842-6 09/05/24 10:35

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TOC (Total Organic Carbon)	10.0	10.6	106	90.0-110	

L1773350-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1773350-01 09/04/24 22:05 • (MS) R4115842-2 09/04/24 20:18 • (MSD) R4115842-3 09/04/24 20:47

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOC (Total Organic Carbon)	10.0	9.87	18.6	20.1	87.6	102	1	80.0-120			7.39	20

L1773350-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1773350-02 09/04/24 22:24 • (MS) R4115842-4 09/04/24 21:08 • (MSD) R4115842-5 09/04/24 21:37

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOC (Total Organic Carbon)	10.0	7.46	17.9	18.2	105	108	1	80.0-120			1.77	20

L1771621-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1771621-04 09/10/24 09:06 • (DUP) R4117626-2 09/10/24 09:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.33	8.31	1	0.240		20

Sample Narrative:
OS: 8.33 at 20.7C
DUP: 8.31 at 20.3C

Laboratory Control Sample (LCS)

(LCS) R4117626-1 09/10/24 09:06

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	6.00	5.97	99.5	99.0-101	

Sample Narrative:
LCS: 5.97 at 22.5C

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R4117329-1 09/06/24 17:17

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Ammonia Nitrogen	U		0.0280	0.100

Laboratory Control Sample (LCS)

(LCS) R4117329-2 09/06/24 17:19

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Ammonia Nitrogen	5.00	5.00	100	80.0-120	

L1773620-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1773620-02 09/06/24 17:31 • (MS) R4117329-3 09/06/24 17:21 • (MSD) R4117329-4 09/06/24 17:23

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Ammonia Nitrogen	5.00	1.45	6.36	6.36	98.2	98.2	1	80.0-120			0.000	20

L1773651-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1773651-01 09/06/24 17:38 • (MS) R4117329-5 09/06/24 17:24 • (MSD) R4117329-6 09/06/24 17:26

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Ammonia Nitrogen	5.00	0.185	5.07	5.08	97.7	97.9	1	80.0-120			0.197	20

Method Blank (MB)

(MB) R4116836-1 09/07/24 12:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R4116836-2 09/07/24 12:15

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Mercury	0.00300	0.00341	114	85.0-115	

L1773767-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1773767-01 09/07/24 12:17 • (MS) R4116836-4 09/07/24 12:22 • (MSD) R4116836-5 09/07/24 12:25

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.00300	ND	0.00313	0.00343	104	114	1	70.0-130			9.21	20

L1773903-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1773903-01 09/07/24 12:27 • (MS) R4116836-6 09/07/24 12:30 • (MSD) R4116836-7 09/07/24 12:32

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.00300	ND	0.00332	0.00344	111	115	1	70.0-130			3.50	20

QUALITY CONTROL SUMMARY

L1773907-01

Method Blank (MB)

(MB) R4120401-1 09/16/24 16:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum	U		0.0592	0.200
Antimony	U		0.00398	0.0100
Arsenic	U		0.00645	0.0100
Barium	U		0.000795	0.00500
Beryllium	U		0.000401	0.00200
Cadmium	U		0.000552	0.00200
Chromium	U		0.00163	0.0100
Copper	U		0.00226	0.0100
Lead	U		0.00227	0.00500
Nickel	U		0.00182	0.0100
Selenium	U		0.00616	0.0100
Silver	U		0.00131	0.00500
Titanium	U		0.00437	0.0500
Zinc	U		0.00578	0.0500

Laboratory Control Sample (LCS)

(LCS) R4120401-2 09/16/24 16:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum	10.0	9.87	98.7	85.0-115	
Antimony	1.00	0.942	94.2	85.0-115	
Arsenic	1.00	0.962	96.2	85.0-115	
Barium	1.00	0.982	98.2	85.0-115	
Beryllium	1.00	0.976	97.6	85.0-115	
Cadmium	1.00	0.979	97.9	85.0-115	
Chromium	1.00	0.958	95.8	85.0-115	
Copper	1.00	0.989	98.9	85.0-115	
Lead	1.00	0.951	95.1	85.0-115	
Nickel	1.00	0.934	93.4	85.0-115	
Selenium	1.00	0.950	95.0	85.0-115	
Silver	0.200	0.198	99.0	85.0-115	
Titanium	1.00	0.944	94.4	85.0-115	
Zinc	1.00	0.945	94.5	85.0-115	

Cp
Tc
Ss
Cn
Sr
Qc
Gl
Al
Sc

L1773802-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1773802-02 09/16/24 16:14 • (MS) R4120401-4 09/16/24 16:17 • (MSD) R4120401-5 09/16/24 16:19

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	10.0	ND	9.93	10.1	99.3	101	1	70.0-130			1.86	20
Antimony	1.00	ND	0.950	0.962	95.0	96.2	1	70.0-130			1.28	20
Arsenic	1.00	ND	0.980	0.998	98.0	99.8	1	70.0-130			1.84	20
Barium	1.00	ND	0.986	1.01	98.6	101	1	70.0-130			1.94	20
Beryllium	1.00	ND	0.979	0.999	97.9	99.9	1	70.0-130			1.93	20
Cadmium	1.00	ND	0.986	0.998	98.6	99.8	1	70.0-130			1.27	20
Chromium	1.00	ND	0.975	0.999	97.5	99.9	1	70.0-130			2.37	20
Copper	1.00	ND	0.993	1.01	99.3	101	1	70.0-130			1.60	20
Lead	1.00	ND	0.959	0.970	95.9	97.0	1	70.0-130			1.16	20
Nickel	1.00	ND	0.936	0.946	93.6	94.6	1	70.0-130			1.03	20
Selenium	1.00	ND	0.957	0.967	95.7	96.7	1	70.0-130			1.07	20
Silver	0.200	ND	0.199	0.202	99.4	101	1	70.0-130			1.46	20
Titanium	1.00	ND	0.948	0.963	94.8	96.3	1	70.0-130			1.66	20
Zinc	1.00	ND	0.958	0.979	95.8	97.9	1	70.0-130			2.23	20

L1773803-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1773803-01 09/16/24 16:20 • (MS) R4120401-6 09/16/24 16:22 • (MSD) R4120401-7 09/16/24 16:24

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	10.0	ND	9.69	9.69	96.9	96.9	1	70.0-130			0.0303	20
Antimony	1.00	ND	0.960	0.963	96.0	96.3	1	70.0-130			0.301	20
Arsenic	1.00	0.0122	1.03	1.03	102	102	1	70.0-130			0.0639	20
Barium	1.00	0.255	1.20	1.20	94.7	94.7	1	70.0-130			0.0648	20
Beryllium	1.00	ND	0.972	0.973	97.2	97.3	1	70.0-130			0.0836	20
Cadmium	1.00	ND	0.990	0.992	99.0	99.2	1	70.0-130			0.171	20
Chromium	1.00	ND	0.935	0.940	93.3	93.8	1	70.0-130			0.515	20
Copper	1.00	ND	0.968	0.969	96.2	96.2	1	70.0-130			0.0662	20
Lead	1.00	ND	0.952	0.958	95.0	95.5	1	70.0-130			0.569	20
Nickel	1.00	ND	0.968	0.962	96.5	95.9	1	70.0-130			0.564	20
Selenium	1.00	ND	1.00	1.00	100	100	1	70.0-130			0.109	20
Silver	0.200	ND	0.203	0.205	102	102	1	70.0-130			0.584	20
Titanium	1.00	ND	0.956	0.950	95.6	95.0	1	70.0-130			0.576	20
Zinc	1.00	ND	0.958	0.956	93.8	93.7	1	70.0-130			0.176	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

Arkansas	88-0647	Kansas	E10388
Florida	E871118	Texas	T104704232-23-39
Iowa	408	Oklahoma	8727
Louisiana	30686		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:	Billing Information:	Pres Chk
Enviro-Ag Engineering **3404 Airway Blvd.** **Amarillo, TX 79118**	**Bryan Mullin** **3404 Airway Blvd.** **Amarillo, TX 79118**	
Report to: **Jourdan Mullin**	Email To: **cmullin@enviroag.com;rgeorge@enviroag.com;mshoemaker@enviroag.com;jmullin@enviroag.com**	
Project Description: **Pollutant Permit**	City/State Collected:	Please Circle: PT MT CT ET
Phone: **254-965-3500**	Client Project #	Lab Project #
Collected by (print):	Site/Facility ID #	P.O. #
Collected by (signature): Immediately Packed on Ice N ____ Y ____	***Rush?*** (Lab MUST Be Notified) ____ Same Day ____ Five Day ____ Next Day ____ 5 Day (Rad Only) ____ Two Day ____ 10 Day (Rad Only) ____ Three Day	**Quote #** Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALLALK 125mlHDPE-NoPres	ALLBOD 1L-HDPE NoPres	ALLCBOD 1L-HDPE NoPres	ALLCN/ CNAM 250mlHDPE-NaOH	ALLOGHEX 1L-Amb-Add HCl	ALLPHOS 500mlHDPE-Add H2SO4	ALLTDS 1L-HDPE NoPres	ALLTOC 250mlAmb-H2SO4	ALLTSS 1L-HDPE-NoPres	CHLORR 250mlHDPE-NoPres	Remarks	Sample # (lab only)
Schreiber Irrigation Week 2	Grab	WW		9/3/24 4 4P	9:03AM	15	X	X	X	X	X	X	X	X	X	X	-01	

Chain of Custody Page 3 of 7

Pace Analytical®

190 Allen, TX 75013

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SDG #

Table # L177 3907

Acctnum: **DSENVIGDTX**

Template: **T258910**

Prelogin: **P1097478**

PM: **3566 - Dorothy P Roberts**

PB:

Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: Field TEMP ____
Metals, Al,Sb,As,Ba,Be,Cd,Cr,CR6,CR3,Cu,Pb,Ni,Se,Ag,Tl,Zn, Hg

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __UPS __FedEx __Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP __Y __N
COC Signed/Accurate:	__Y __N
Bottles arrive intact:	__Y __N
Correct bottles used:	__Y __N
Sufficient volume sent:	__Y __N
If Applicable	
VOA Zero Headspace:	__Y __N
Preservation Correct/Checked:	__Y __N
RAD Screen <0.5 mR/hr:	__Y __N

Relinquished by : (Signature)	Date: 9/3/24 4 4	Time: 9:05AM	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Relinquished by : (Signature)	Date: 9/4/24	Time: 11:25AM	Received by: (Signature) Ayden Ramos PACE	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK

9/4/24 1125

Company Name/Address:
Enviro-Ag Engineering

3404 Airway Blvd.
Amarillo, TX 79118

Billing Information:
Bryan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Pres Chk

Report to:
Jourdan Mullin

Email To: **cmullin@enviroag.com;rgeorge@enviroag.com;mshoemaker@enviroag.com;jmullin@enviroag.com**

Project Description:
Pollutant Permit

City/State Collected:

Please Circle: PT MT CT ET

Phone: **254-965-3500**

Client Project #

Lab Project #

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N____ Y____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Metals ICP site spec 250mlHDPE HNO3	WetChem COD,NH3 TKN 500mlHDPE-Add H2SO4	WetChem CR6, CR3, DO 500mlHDPE-NoPres	WetChem anioins,pH 125mlHDPE-NoPres	Remarks	Sample # (lab only)
Schreiber Irrigation Week 2	Grab	WW		9/3/24 LP	9:03AM	15	X	X	X	X		-01

Chain of Custody Page 4 of 7

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190 Allen, TX 75013

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SDG #

Table # 477907

Acctnum: **DSENVIGDTX**

Template: **T258910**

Prelogin: **P1097478**

PM: **3665 - Dorothy P Roberts**

PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: **Field TEMP ____**
Metals, Al,Sb,As,Ba,Be,Cd,Cr,CR6,CR3,Cu,Pb,Ni,Se,Ag,Tl,Zn, Hg

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP	__Y	__N
COC Signed/Accurate:		__Y	__N
Bottles arrive intact:		__Y	__N
Correct bottles used:		__Y	__N
Sufficient volume sent:		__Y	__N
If Applicable			
VOA Zero Headspace:		__Y	__N
Preservation Correct/Checked:		__Y	__N
RAD Screen <0.5 mR/hr:		__Y	__N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	9/3/24	9:05AM		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
	9/4/24	11:25AM	Anderson Ramos/PACE	9/4/24 11:25
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
Pace ANALYTICAL SERVICES	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: Enviro Ag Engineering Project Work order (place label):

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☑ LSO ☐ PACE ☐ Other: _____

Tracking #: _____ L1773907

Custody Seal on Cooler/Box: Yes ☐ No ☑

Received on ice: Wet ☑ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: IR18 **Cooler Temp °C:** 4.3 (Recorded) +0.3 (Correction Factor) 4.6 (Actual)

Receiving Lab 2 Thermometer Used: _____ **Cooler Temp °C:** _____ (Recorded) _____ (Correction Factor) _____ (Actual)

Chain of Custody relinquished	Yes ☑ No ☐
Sampler name & signature on COC	Yes ☐ No ☑
Short HT analyses (<72 hrs)	Yes ☑ No ☐

Temperature should be above freezing to 6°C unless collected same day as receipt in which evidence of cooling is acceptable.

Triage Person: AG Date: 9/4/24

Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips: 6402007 Residual Chlorine Present Cl Strips: 14860 Sulfide Present Lead Acetate Strips: 14862	Yes ☑ No ☐ NA ☐ Yes ☐ No ☑ NA ☐ Yes ☐ No ☑ NA ☐
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☐ NA ☑
Project sampled in USDA Regulated Area outside of Texas State Sampled: _____	Yes ☐ No ☐ NA ☑
Non-Conformance(s):	Yes ☐ No ☐

Login Person: AR Date: 9/4

Labeling Person (if different than log-in): _____ Date: _____

Company Name/Address:
Enviro-Ag Engineering

3404 Airway Blvd.
Amarillo, TX 79118

Billing Information:
Bryan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Pres Chk

Report to:
Jourdan Mullin

Email To: **cmullin@enviroag.com;rgeorge@enviroag.com;mshoemaker@enviroag.com;jmullin@enviroag.com**

Project Description:
Pollutant Permit

City/State Collected:

Please Circle: PT MT CT ET

Phone: **254-965-3500**

Client Project #

Lab Project #

Collected by (print):

Site/Facility ID #

P.O #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALLALK 125mlHDPE-NoPres	ALLBOD 1L-HDPE NoPres	ALLCBOD 1L-HDPE NoPres	ALLCN/ CNAM 250mlHDPE-NaOH	ALLOGHEX 1L-Amb-Add HCl	ALLPHOS 500mlHDPE-Add H2SO4	ALLTDS 1L-HDPE NoPres	ALLTOC 250mlAmb-H2SO4	ALLTSS 1L-HDPE-NoPres	CHLORR 250mlHDPE-NoPres	Remarks	Sample # (lab only)
Schreiber Irrigation Week 2	Grab	WW		9/3/24 4 9/4	9:05AM	15	X	X	X	X	X	X	X	X	X	X	-01	

Chain of Custody Page ___ of ___

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SDG #

Table # L177 3907

Acctnum: **DSENVIGDTX**

Template: **T258910**

Prelogin: **P1097478**

PM: 3666 - Dorothy P Roberts

PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: Field TEMP ____
Metals, Al,Sb,As,Ba,Be,Cd,Cr,CR6,CR3,Cu,Pb,Ni,Se,Ag,Tl,Zn, Hg

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP	__Y __N
COC Signed/Accurate:		__Y __N
Bottles arrive intact:		__Y __N
Correct bottles used:		__Y __N
Sufficient volume sent:		__Y __N
If Applicable		
VOA Zero Headspace:		__Y __N
Preservation Correct/Checked:		__Y __N
RAD Screen <0.5 mR/hr:		__Y __N

	Date:	Time:			
Relinquished by: (Signature)	9/3/24	9:05AM	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Relinquished by: (Signature)	9/4/24	11:25AM	Received by: (Signature) Ruben Ramos PACE	Temp: °C Bottles Received: 9/4/24 1125	If preservation required by Login: Date/Time
Relinquished by: (Signature) Alejandra Valles PACE	9/4/24	1700	Received for lab by: (Signature) FedEx	Date: 9/4/24 Time: 1700	Hold: Condition: NCF / OK

REC: FedEx

REC: CR3000 090524 0900

Company Name/Address:
Enviro-Ag Engineering

3404 Airway Blvd.
Amarillo, TX 79118

Billing Information:
Bryan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Pres Chk

Report to:
Jourdan Mullin

Email To: **cmullin@enviroag.com;rgeorge@enviroag.com;mshoemaker@enviroag.com;jmullin@enviroag.com**

Project Description:
Pollutant Permit

City/State Collected:

Please Circle: PT MT CT ET

Phone: **254-965-3500**

Client Project #

Lab Project #

Collected by (print):

Site/Facility ID #

P O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Metals ICP site spec 250mlHDPE HNO3	WetChem COD,NH3 TKN 500mlHDPE-Add H2 SO4	WetChem CR6, CR3, DO 500mlHDPE-NoPres	WetChem anioins,pH 125mlHDPE-NoPres	Remarks	Sample # (lab only)
Schreiber Irrigation Week 2	Grab	WW		9/4/24 LP	9:03AM	15	X	X	X	X	-01	

Chain of Custody Page __ of __

Pace Analytical

190 Allen, TX 75013

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SDG #

Table # **1772907**

Acctnum: **DSENVIGDTX**

Template: **T258910**

Prelogin: **P1097478**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: **Field TEMP ____**
Metals, Al,Sb,As,Ba,Be,Cd,Cr,CR6,CR3,Cu,Pb,Ni,Se,Ag,Tl,Zn, Hg

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

	Date:	Time:			
Relinquished by (Signature)	9/5/24	9:05AM	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Relinquished by (Signature)	9/4/24	11:25AM	Received by: (Signature) Jason Ramos/PACE	Temp: °C Bottles Received: 9/4/24 11:25	If preservation required by Login: Date/Time
Relinquished by (Signature) PACE	9/4/24	1700	Received for lab by: (Signature) FedEx	Date: 9/4/24 Time: 1700	Hold: Condition: NCF / OK

REC: FedEx

REC: CRobeld 0905 24 0900

Pace	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: Enviro Ag Engineering Project Work order (place label): L1773907

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☑ LSO ☐ PACE ☐ Other: _____

Tracking #: _____

Custody Seal on Cooler/Box: Yes ☐ No ☑

Received on ice: Wet ☑ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: IR18 Cooler Temp °C: 4.3 (Recorded) +0.3 (Correction Factor) 4.6 (Actual)

Receiving Lab 2 Thermometer Used: _____ Cooler Temp °C: _____(Recorded) _____(Correction Factor) _____(Actual)

Chain of Custody relinquished	Yes ☑ No ☐
Sampler name & signature on COC	Yes ☐ No ☑
Short HT analyses (<72 hrs)	Yes ☑ No ☐

Temperature should be above freezing to 6°C unless collected same day as receipt in which evidence of cooling is acceptable.

Triage Person: AG Date: 9/4/24

Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips: 6407007	Yes ☑ No ☐ NA ☐
Residual Chlorine Present Cl Strips: 148610	Yes ☐ No ☑ NA ☐
Sulfide Present Lead Acetate Strips: 148612	Yes ☐ No ☑ NA ☐
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☐ NA ☑
Project sampled in USDA Regulated Area outside of Texas State Sampled: _____	Yes ☐ No ☐ NA ☑
Non-Conformance(s):	Yes ☐ No ☐

Login Person: AR Date: 9/4

Labeling Person (if different than log-in): _____ Date: _____

Fed Ex tracking #	Gun ID	Temperature
4104 4612 7552	TLA9	4.5+0.3=4.8
4104 4612 7596	|	2.3+0.3=2.6
4104 4612 7585	|	1.8+0.3=2.1
4104 4612 7602	|	2.4+0.3=2.7
4104 4612 7563	|	0.4+0.3=0.7
4104 4612 7574	|	0.2+0.3=0.5
4104 4612 7600	|	1.0+0.3=1.3
4104 4612 7611	|	0.1+0.3=0.4

Name

Date

ANALYTICAL REPORT

September 06, 2024

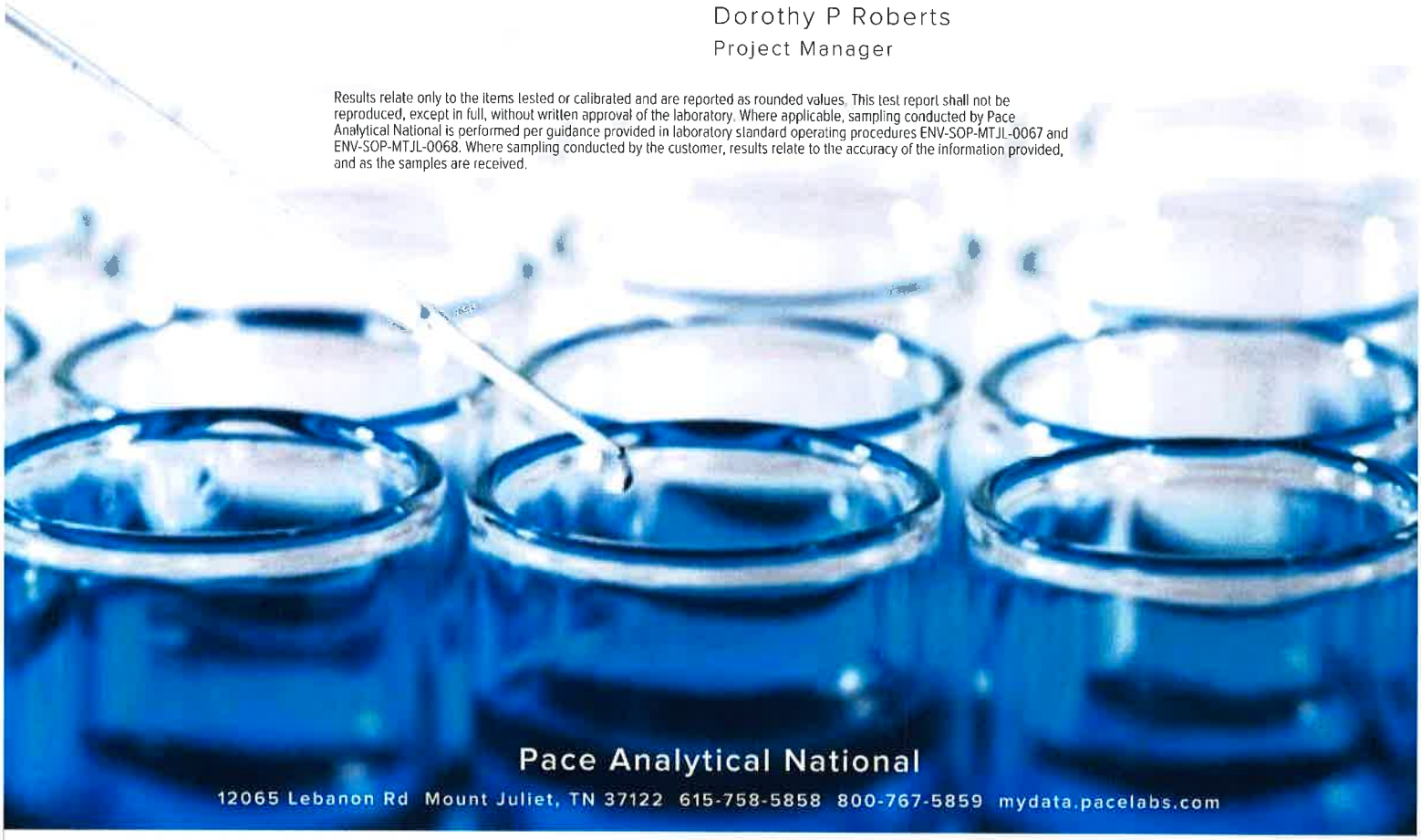
Enviro-Ag Engineering

Sample Delivery Group:	L1772137
Samples Received:	08/28/2024
Project Number:	
Description:	Pollutant Permit

Report To: Jourdan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Entire Report Reviewed By: Dorothy P Roberts

Dorothy P Roberts
Project Manager



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SAMPLE SUMMARY

SCHREIBER IRRIGATION WEEK 1 L1772137-01 WW

			Collected by	Collected date/time	Received date/time
				08/28/24 09:18	08/28/24 11:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2352982	1	09/04/24 14:45	09/04/24 14:45	EIG	Allen, TX
Calculated Results	WG2353543	1	09/03/24 13:16	09/03/24 13:16	TDM	Allen, TX
Gravimetric Analysis by Method 2540C	WG2352885	1	08/29/24 11:52	08/29/24 13:13	QQT	Allen, TX
Gravimetric Analysis by Method 2540D	WG2355186	1	09/03/24 10:54	09/03/24 14:00	QQT	Allen, TX
Wet Chemistry by Method 1664A	WG2355577	1	09/04/24 14:21	09/04/24 18:01	DAL	Mt. Juliet, TN
Wet Chemistry by Method 2320B	WG2355069	1	09/03/24 09:10	09/03/24 09:10	SEN	Allen, TX
Wet Chemistry by Method 300.0	WG2352080	1	08/28/24 17:37	08/28/24 17:37	SMC	Allen, TX
Wet Chemistry by Method 300.0	WG2352080	1	08/28/24 19:23	08/28/24 19:23	SMC	Allen, TX
Wet Chemistry by Method 300.0	WG2352080	1	08/28/24 19:35	08/28/24 19:35	SMC	Allen, TX
Wet Chemistry by Method 300.0	WG2355469	1	09/04/24 13:59	09/04/24 13:59	EIG	Allen, TX
Wet Chemistry by Method 3500Cr-B	WG2353494	1	08/30/24 15:53	08/30/24 15:53	KCM	Allen, TX
Wet Chemistry by Method 351.2	WG2355106	1	09/03/24 12:14	09/04/24 14:45	EIG	Allen, TX
Wet Chemistry by Method 360.1	WG2353479	1	08/30/24 08:46	08/30/24 08:46	JBS	Allen, TX
Wet Chemistry by Method 4500Cl G-2011	WG2350713	1	08/31/24 09:29	08/31/24 09:29	ARV	Mt. Juliet, TN
Wet Chemistry by Method 4500CN-E	WG2352739	1	08/29/24 10:00	08/29/24 16:00	KCM	Allen, TX
Wet Chemistry by Method 4500CN-G	WG2352739	1	08/29/24 16:00	08/29/24 16:00	KCM	Allen, TX
Wet Chemistry by Method 4500P-E	WG2352948	10	08/30/24 17:00	08/30/24 17:00	SMC	Allen, TX
Wet Chemistry by Method 5210 B-2016	WG2351991	1	08/28/24 14:42	09/02/24 10:43	JBS	Allen, TX
Wet Chemistry by Method 5210 B-2016	WG2351993	1	08/28/24 16:03	09/02/24 12:10	JBS	Allen, TX
Wet Chemistry by Method 5220D	WG2355070	1	09/03/24 10:32	09/03/24 16:11	JBS	Allen, TX
Wet Chemistry by Method 5310C	WG2353510	1	08/30/24 16:26	08/30/24 16:26	EIG	Allen, TX
Wet Chemistry by Method SM 4500-H+B	WG2353456	1	08/30/24 08:37	08/30/24 08:37	SEN	Allen, TX
Wet Chemistry by Method SM4500NH3H	WG2352982	1	08/29/24 16:51	08/29/24 16:51	EIG	Allen, TX
Mercury by Method 245.1	WG2353457	1	08/30/24 10:40	08/30/24 16:52	SKW	Allen, TX
Metals (ICP) by Method 200.7	WG2353543	1	08/30/24 10:09	09/03/24 13:16	TDM	Allen, TX

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Dorothy P Roberts
Project Manager

Sample Delivery Group (SDG) Narrative

Analysis was filtered in the laboratory.

Lab Sample ID	Project Sample ID	Method
L1772137-01	SCHREIBER IRRIGATION WEEK 1	3500Cr-B

SAMPLE RESULTS - 01
L1772137

Calculated Results

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chromium,Trivalent	ND		0.00300	1	09/03/2024 13:16	WG2353543
Organic Nitrogen	5.09		0.100	1	09/04/2024 14:45	WG2352982

Gravimetric Analysis by Method 2540C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Total Dissolved Solids	3720		500	1	08/29/2024 13:13	WG2352885

Gravimetric Analysis by Method 2540D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Suspended Solids	132		25.0	1	09/03/2024 14:00	WG2355186

Wet Chemistry by Method 1664A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Oil & Grease (Hexane Extr)	ND		5.00	1	09/04/2024 18:01	WG2355577

Wet Chemistry by Method 2320B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	990		20.0	1	09/03/2024 09:10	WG2355069

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	1520		0.800	1	08/28/2024 19:35	WG2352080
Fluoride	ND		0.500	1	09/04/2024 13:59	WG2355469
Nitrate	1.89	J6	0.500	1	08/28/2024 17:37	WG2352080
Sulfate	156		0.700	1	08/28/2024 19:23	WG2352080

Wet Chemistry by Method 3500Cr-B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chromium,Hexavalent	ND		0.00300	1	08/30/2024 15:53	WG2353494

Wet Chemistry by Method 351.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Kjeldahl Nitrogen, TKN	7.43		0.250	1	09/04/2024 14:45	WG2355106

Wet Chemistry by Method 360.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Oxygen	8.56	T8	1	1	08/30/2024 08:46	WG2353479

Wet Chemistry by Method 4500Cl G-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chlorine,residual	ND	T8	0.100	1	08/31/2024 09:29	WG2350713

SAMPLE RESULTS - 01
L1772137

Wet Chemistry by Method 4500CN-E

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.0100	1	08/29/2024 16:00	WG2352739

Wet Chemistry by Method 4500CN-G

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide,amenable	ND		0.0100	1	08/29/2024 16:00	WG2352739

Wet Chemistry by Method 4500P-E

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Phosphorus,Total	7.46		0.500	10	08/30/2024 17:00	WG2352948

Wet Chemistry by Method 5210 B-2016

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
BOD	ND	J-	60.0	1	09/02/2024 10:43	WG2351991
CBOD	ND		60.0	1	09/02/2024 12:10	WG2351993

Wet Chemistry by Method 5220D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	240		35.0	1	09/03/2024 16:11	WG2355070

Wet Chemistry by Method 5310C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	26.4		0.700	1	08/30/2024 16:26	WG2353510

Wet Chemistry by Method SM 4500-H+B

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	8.77	T8	1	08/30/2024 08:37	WG2353456

Sample Narrative:
L1772137-01 WG2353456: 8.77 at 20.4C

Wet Chemistry by Method SM4500NH3H

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Ammonia Nitrogen	2.34		0.100	1	08/29/2024 16:51	WG2352982

Mercury by Method 245.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	08/30/2024 16:52	WG2353457

SAMPLE RESULTS - 01
L1772137

Metals (ICP) by Method 200.7

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum	0.628		0.500	1	09/03/2024 13:16	WG2353543
Antimony	ND		0.0250	1	09/03/2024 13:16	WG2353543
Arsenic	ND		0.0100	1	09/03/2024 13:16	WG2353543
Barium	0.0194		0.0100	1	09/03/2024 13:16	WG2353543
Beryllium	ND		0.00100	1	09/03/2024 13:16	WG2353543
Cadmium	ND		0.00500	1	09/03/2024 13:16	WG2353543
Chromium	ND		0.00700	1	09/03/2024 13:16	WG2353543
Copper	ND		0.0200	1	09/03/2024 13:16	WG2353543
Lead	ND		0.0100	1	09/03/2024 13:16	WG2353543
Nickel	ND		0.0100	1	09/03/2024 13:16	WG2353543
Selenium	ND		0.0200	1	09/03/2024 13:16	WG2353543
Silver	ND		0.00500	1	09/03/2024 13:16	WG2353543
Thallium	ND		0.0200	1	09/03/2024 13:16	WG2353543
Zinc	ND		0.0250	1	09/03/2024 13:16	WG2353543

Method Blank (MB)

(MB) R4113931-1 08/29/24 13:13

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Total Dissolved Solids	U		25.0	25.0

L1771461-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1771461-02 08/29/24 13:13 • (DUP) R4113931-3 08/29/24 13:13

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Total Dissolved Solids	3860	4050	1	4.80		10

L1771612-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1771612-01 08/29/24 13:13 • (DUP) R4113931-4 08/29/24 13:13

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Total Dissolved Solids	1780	1730	1	3.02		10

Laboratory Control Sample (LCS)

(LCS) R4113931-2 08/29/24 13:13

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Total Dissolved Solids	2410	2470	103	85.0-115	

Method Blank (MB)

(MB) R4115852-1 09/03/24 14:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Suspended Solids	U		2.50	2.50

L1772133-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1772133-02 09/03/24 14:00 • (DUP) R4115852-3 09/03/24 14:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Suspended Solids	44.3	41.3	1	7.00		10

L1772444-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1772444-01 09/03/24 14:00 • (DUP) R4115852-4 09/03/24 14:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Suspended Solids	152	132	1	14.1	P1	10

Laboratory Control Sample (LCS)

(LCS) R4115852-2 09/03/24 14:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Suspended Solids	879	858	97.6	85.0-115	

Method Blank (MB)

(MB) R4115586-1 09/04/24 18:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Oil & Grease (Hexane Extr)	U		1.16	5.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4115586-2 09/04/24 18:01 • (LCSD) R4115586-3 09/04/24 18:01

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Oil & Grease (Hexane Extr)	40.0	39.1	39.3	97.8	98.3	78.0-114			0.510	20

L1772540-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1772540-02 09/04/24 18:01 • (MS) R4115586-4 09/04/24 18:01

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Oil & Grease (Hexane Extr)	40.0	60.0	89.6	74.0	1	78.0-114	J6

Cp
Tc
Ss
Cn
Sr
Qc
Gl
Al
Sc

Method Blank (MB)

(MB) R4114938-1 09/03/24 09:10

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Alkalinity	U		20.0	20.0

L1772957-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1772957-02 09/03/24 09:10 • (DUP) R4114938-3 09/03/24 09:10

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Alkalinity	207	207	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4114938-2 09/03/24 09:10

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Alkalinity	250	240	96.0	90.0-110	

Method Blank (MB)

(MB) R4113217-1 08/28/24 16:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.325	0.800
Nitrate	U		0.379	0.500
Sulfate	U		0.211	0.700

Laboratory Control Sample (LCS)

(LCS) R4113217-2 08/28/24 16:14

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	5.00	5.18	104	90.0-110	
Nitrate	5.00	4.99	99.7	90.0-110	
Sulfate	5.00	5.27	105	90.0-110	

L1772137-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772137-01 08/28/24 17:37 • (MS) R4113217-3 08/28/24 19:47 • (MSD) R4113217-4 08/28/24 19:59

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate	5.00	1.89	3.46	3.48	31.5	31.8	1	90.0-110	J6	J6	0.334	20

L1772137-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772137-01 08/28/24 19:23 • (MS) R4113217-5 08/28/24 20:11 • (MSD) R4113217-6 08/28/24 20:46

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	500	156	664	669	102	103	1	90.0-110			0.771	20

L1772137-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772137-01 08/28/24 19:35 • (MS) R4113217-7 08/28/24 20:57 • (MSD) R4113217-8 08/28/24 21:09

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	2500	1520	4150	4120	105	104	1	90.0-110			0.685	20

Method Blank (MB)

(MB) R4115408-1 09/04/24 13:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Fluoride	U		0.0947	0.500

Laboratory Control Sample (LCS)

(LCS) R4115408-2 09/04/24 13:23

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Fluoride	5.00	5.22	104	90.0-110	

L1772221-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772221-01 09/04/24 14:23 • (MS) R4115408-3 09/04/24 13:35 • (MSD) R4115408-4 09/04/24 13:47

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Fluoride	5.00	0.669	5.59	5.71	98.4	101	1	90.0-110			2.06	20

Method Blank (MB)

(MB) R4114083-1 08/30/24 15:53

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chromium,Hexavalent	U		0.00200	0.00300

Laboratory Control Sample (LCS)

(LCS) R4114083-2 08/30/24 15:53

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Chromium,Hexavalent	0.200	0.203	102	85.0-115	

L1772221-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772221-01 08/30/24 15:53 • (MS) R4114083-3 08/30/24 15:53 • (MSD) R4114083-4 08/30/24 15:53

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Chromium,Hexavalent	0.200	ND	0.185	0.182	92.3	91.1	1	85.0-115			1.39	20

QUALITY CONTROL SUMMARY

L1772137-01

Method Blank (MB)

(MB) R4115402-1 09/04/24 14:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Kjeldahl Nitrogen, TKN	U		0.140	0.250

Laboratory Control Sample (LCS)

(LCS) R4115402-2 09/04/24 14:23

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Kjeldahl Nitrogen, TKN	4.00	3.96	99.0	90.0-110	

L1769869-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1769869-03 09/04/24 14:26 • (MS) R4115402-3 09/04/24 15:04 • (MSD) R4115402-4 09/04/24 15:05

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Kjeldahl Nitrogen, TKN	4.00	5.92	14.0	13.0	202	177	1	90.0-110	E J5	E J5	7.41	20

L1770293-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1770293-01 09/04/24 14:27 • (MS) R4115402-5 09/04/24 15:06 • (MSD) R4115402-6 09/04/24 15:08

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Kjeldahl Nitrogen, TKN	20.0	39.9	68.5	70.4	143	153	10	90.0-110	J5	J5	2.74	20

L1772137-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1772137-01 08/30/24 08:46 • (DUP) R4113782-1 08/30/24 08:46

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Oxygen	8.56	8.76	1	2.31		10

Method Blank (MB)

(MB) R4114289-1 08/31/24 09:24

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chlorine,residual	U		0.0260	0.100

L1772513-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1772513-03 08/31/24 09:35 • (DUP) R4114289-4 08/31/24 09:36

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chlorine,residual	ND	ND	1	0.000		20

L1772513-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1772513-04 08/31/24 09:36 • (DUP) R4114289-5 08/31/24 09:36

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chlorine,residual	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4114289-2 08/31/24 09:25 • (LCSD) R4114289-3 08/31/24 09:25

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chlorine,residual	1.00	0.911	0.923	91.1	92.3	85.0-115			1.31	20

Method Blank (MB)

(MB) R4113520-1 08/29/24 16:00

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Cyanide	U		0.00430	0.0100

Laboratory Control Sample (LCS)

(LCS) R4113520-2 08/29/24 16:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Cyanide	0.100	0.0963	96.3	85.0-115	

L1771495-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1771495-02 08/29/24 16:00 • (MS) R4113520-3 08/29/24 16:00 • (MSD) R4113520-4 08/29/24 16:00

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0956	0.101	95.6	101	1	85.0-115			5.31	20

L1772137-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772137-01 08/29/24 16:00 • (MS) R4113520-5 08/29/24 16:00 • (MSD) R4113520-6 08/29/24 16:00

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0852	0.0949	85.2	94.9	1	85.0-115			10.8	20

Method Blank (MB)

(MB) R4114138-1 08/30/24 17:00

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Phosphorus,Total	U		0.0152	0.0500

Laboratory Control Sample (LCS)

(LCS) R4114138-2 08/30/24 17:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Phosphorus,Total	0.500	0.518	104	80.0-120	

L1772221-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772221-01 08/30/24 17:01 • (MS) R4114138-3 08/30/24 17:01 • (MSD) R4114138-4 08/30/24 17:01

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Phosphorus,Total	0.500	ND	0.523	0.525	105	105	1	80.0-120			0.443	20

Method Blank (MB)

(MB) R4114564-1 09/02/24 09:43

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
BOD	U		0.200	0.200

L1772082-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1772082-01 09/02/24 10:11 • (DUP) R4114564-3 09/02/24 10:46

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
BOD	5.14	4.88	1	5.19		20

L1772137-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1772137-01 09/02/24 10:43 • (DUP) R4114564-4 09/02/24 10:47

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
BOD	ND	ND	1	0		20

Laboratory Control Sample (LCS)

(LCS) R4114564-2 09/02/24 09:48

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
BOD	198	164	82.9	85-115	J-

Method Blank (MB)

(MB) R4114571-1 09/02/24 11:05

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
CBOD	U		0.200	0.200

L1772098-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1772098-02 09/02/24 11:40 • (DUP) R4114571-3 09/02/24 12:13

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
CBOD	1.01	ND	1	200	P1	20

L1772102-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1772102-02 09/02/24 11:51 • (DUP) R4114571-4 09/02/24 12:14

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
CBOD	1.71	1.54	1	10.5		20

Laboratory Control Sample (LCS)

(LCS) R4114571-2 09/02/24 11:10

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
CBOD	198	176	89	85-115	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R4114968-1 09/03/24 13:54

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		16.1	35.0

Laboratory Control Sample (LCS)

(LCS) R4114968-2 09/03/24 13:54

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
COD	500	529	106	80.0-120	

L1769663-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1769663-01 09/03/24 13:54 • (MS) R4114968-3 09/03/24 13:54 • (MSD) R4114968-4 09/03/24 13:54

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	500	45.2	531	535	97.1	98.0	1	80.0-120			0.785	20

L1771809-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1771809-01 09/03/24 13:54 • (MS) R4114968-5 09/03/24 13:54 • (MSD) R4114968-6 09/03/24 13:54

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	500	108	598	608	98.0	100	1	80.0-120			1.74	20

Method Blank (MB)

(MB) R4115336-1 08/30/24 13:12

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TOC (Total Organic Carbon)	U		0.270	0.700

Laboratory Control Sample (LCS)

(LCS) R4115336-2 08/30/24 13:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TOC (Total Organic Carbon)	10.0	9.82	98.2	90.0-110	

L1771703-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1771703-02 08/30/24 15:28 • (MS) R4115336-3 08/30/24 14:34 • (MSD) R4115336-4 08/30/24 15:02

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOC (Total Organic Carbon)	10.0	4.08	13.5	13.6	94.3	95.1	1	80.0-120			0.590	20

L1770709-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1770709-01 08/30/24 08:37 • (DUP) R4113798-2 08/30/24 08:37

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.36	7.37	1	0.136		20

Sample Narrative:
OS: 7.36 at 18.8C
DUP: 7.37 at 18.9C

Laboratory Control Sample (LCS)

(LCS) R4113798-1 08/30/24 08:37

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	6.00	6.00	100	99.0-101	

Sample Narrative:
LCS: 6 at 22.4C

Cp
1 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R4113602-1 08/29/24 16:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Ammonia Nitrogen	U		0.0280	0.100

Laboratory Control Sample (LCS)

(LCS) R4113602-2 08/29/24 16:16

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Ammonia Nitrogen	5.00	5.16	103	80.0-120	

L1771585-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1771585-01 08/29/24 16:27 • (MS) R4113602-3 08/29/24 16:18 • (MSD) R4113602-4 08/29/24 16:19

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Ammonia Nitrogen	5.00	0.252	5.24	5.23	99.8	99.6	1	80.0-120			0.191	20

L1771778-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1771778-01 08/29/24 16:37 • (MS) R4113602-5 08/29/24 16:21 • (MSD) R4113602-6 08/29/24 16:23

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Ammonia Nitrogen	5.00	0.337	5.37	5.40	101	101	1	80.0-120			0.557	20

QUALITY CONTROL SUMMARY

L1772137-01

Method Blank (MB)

(MB) R4114163-2 08/30/24 16:37

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Mercury	U		0.0000450	0.000200

Laboratory Control Sample (LCS)

(LCS) R4114163-1 08/30/24 16:35

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Mercury	0.00250	0.00264	106	85.0-115	

L1772505-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772505-08 08/30/24 16:39 • (MS) R4114163-3 08/30/24 16:41 • (MSD) R4114163-4 08/30/24 16:44

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.00250	ND	0.00245	0.00249	98.0	99.6	1	70.0-130			1.62	20

Method Blank (MB)

(MB) R4114074-1 08/30/24 15:06

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum	U		0.0353	0.500
Antimony	U		0.00242	0.0250
Arsenic	U		0.00418	0.0100
Barium	U		0.000490	0.0100
Beryllium	U		0.000180	0.00100
Cadmium	U		0.000350	0.00500
Chromium	U		0.000710	0.00700
Copper	U		0.00364	0.0200
Lead	U		0.00312	0.0100
Nickel	U		0.00358	0.0100
Selenium	U		0.00500	0.0200
Thallium	U		0.00775	0.0200
Zinc	U		0.0106	0.0250

Method Blank (MB)

(MB) R4114798-1 09/03/24 10:52

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Silver	U		0.000990	0.00500

Laboratory Control Sample (LCS)

(LCS) R4114074-2 08/30/24 15:10

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum	10.0	10.7	107	85.0-115	
Antimony	1.00	0.935	93.5	85.0-115	
Arsenic	1.00	0.987	98.7	85.0-115	
Barium	1.00	1.04	104	85.0-115	
Beryllium	1.00	1.06	106	85.0-115	
Cadmium	1.00	0.978	97.8	85.0-115	
Chromium	1.00	1.10	110	85.0-115	
Copper	1.00	0.986	98.6	85.0-115	
Lead	1.00	1.03	103	85.0-115	
Nickel	1.00	1.05	105	85.0-115	
Selenium	1.00	0.968	96.8	85.0-115	
Thallium	1.00	1.03	103	85.0-115	
Zinc	1.00	1.03	103	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R4114798-5 09/03/24 11:59

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Silver	0.500	0.486	97.1	85.0-115	

L1772221-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772221-01 08/30/24 15:14 • (MS) R4114074-3 08/30/24 15:18 • (MSD) R4114074-4 08/30/24 15:22

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	10.0	ND	10.7	10.7	107	107	1	70.0-130			0.000	20
Antimony	1.00	ND	0.965	0.945	96.5	94.5	1	70.0-130			2.10	20
Arsenic	1.00	ND	1.02	1.00	102	100	1	70.0-130			1.98	20
Barium	1.00	0.108	1.16	1.15	105	104	1	70.0-130			1.13	20
Beryllium	1.00	ND	1.05	1.04	105	104	1	70.0-130			1.15	20
Cadmium	1.00	0.0151	1.01	0.991	99.6	97.6	1	70.0-130			1.98	20
Chromium	1.00	ND	1.07	1.04	107	104	1	70.0-130			2.37	20
Copper	1.00	ND	1.01	0.991	99.1	97.6	1	70.0-130			1.51	20
Lead	1.00	ND	1.02	0.997	101	99.3	1	70.0-130			2.11	20
Nickel	1.00	ND	1.03	1.01	103	101	1	70.0-130			2.06	20
Selenium	1.00	ND	1.00	0.985	100	98.5	1	70.0-130			1.69	20
Thallium	1.00	ND	1.02	1.00	102	100	1	70.0-130			1.49	20
Zinc	1.00	0.265	1.27	1.25	100	98.0	1	70.0-130			1.91	20

L1772221-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772221-01 09/03/24 11:00 • (MS) R4114798-3 09/03/24 11:04 • (MSD) R4114798-4 09/03/24 11:07

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Silver	0.500	ND	0.400	0.375	80.0	75.1	1	70.0-130			6.35	20

L1772211-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772211-01 09/03/24 14:03 • (MS) R4114798-6 09/03/24 14:07 • (MSD) R4114798-7 09/03/24 14:11

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	10.0	ND	10.4	10.4	103	102	1	70.0-130			0.288	20
Antimony	1.00	ND	1.01	1.02	101	102	1	70.0-130			0.692	20
Arsenic	1.00	ND	1.04	1.04	104	104	1	70.0-130			0.0960	20
Barium	1.00	0.106	1.11	1.11	101	100	1	70.0-130			0.270	20
Beryllium	1.00	ND	1.02	1.02	102	102	1	70.0-130			0.196	20
Cadmium	1.00	0.0120	1.03	1.03	102	102	1	70.0-130			0.0970	20

L1772211-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772211-01 09/03/24 14:03 • (MS) R4114798-6 09/03/24 14:07 • (MSD) R4114798-7 09/03/24 14:11

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium	1.00	ND	1.05	1.03	105	103	1	70.0-130			1.63	20
Copper	1.00	ND	1.03	1.02	101	100	1	70.0-130			0.391	20
Lead	1.00	ND	1.04	1.03	103	103	1	70.0-130			0.193	20
Nickel	1.00	ND	1.03	1.03	103	103	1	70.0-130			0.389	20
Selenium	1.00	ND	1.02	1.03	102	103	1	70.0-130			0.973	20
Silver	0.500	ND	0.389	0.393	77.8	78.7	1	70.0-130			1.10	20
Thallium	1.00	ND	1.03	1.03	103	103	1	70.0-130			0.000	20
Zinc	1.00	0.311	1.37	1.35	106	104	1	70.0-130			1.32	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
J-	The associated batch QC was outside the lower control limits; associated data has a potential negative bias.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

Arkansas	88-0647	Kansas	E10388
Florida	E871118	Texas	T104704232-23-39
Iowa	408	Oklahoma	8727
Louisiana	30686		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Enviro-Ag Engineering

3404 Airway Blvd.
Amarillo, TX 79118

Billing Information:
Bryan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Pres Chk

Report to:
Jourdan Mullin

Email To: **cmullin@enviroag.com;rgeorge@enviroag.com;mshoemaker@enviroag.com;jmullin@enviroag.com**

Project Description:
Pollutant Permit

City/State Collected:

Please Circle: PT MT CT ET

Phone: **254-965-3500**

Client Project #

Lab Project #

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately
Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALLALK 125mlHDPE-NoPres	ALLBOD 1L-HDPE NoPres	ALLCBOD 1L-HDPE NoPres	ALLCN/ CNAM 250mlHDPE-NaOH	ALLOGHEX 1L-Amb-Add HCl	ALLPHOS 500mlHDPE-Add H2SO4	ALLTDS 1L-HDPE NoPres	ALLTOC 250mlAmb-H2SO4	ALLTSS 1L-HDPE-NoPres	CHLORR 250mlHDPE-NoPres	Remarks	Sample # (lab only)
Schreiber Irrigation Week 1	Grab	WW		8/28/24	9:13AM	15	X	X	X	X	X	X	X	X	X	X	-01	

Chain of Custody Page 15 of 16

Pace Analytical®

190 Allen, TX 75013

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SDG #

Table # L1772187

Acctnum: **DSENVIGDTX**

Template: **T258910**

Prelogin: **P1096615**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other WW

Remarks: Field TEMP ____
Metals, Al,Sb,As,Ba,Be,Cd,Cr,CR6,CR3,Cu,Pb,Ni,Se,Ag,Tl,Zn, Hg

pH ____ Temp ____

Flow ____ Other ____

Samples returned via:
__ UPS __ FedEx __ Courier ____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	9/23/24	9:25AM			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
	8/28/24	1140	Claire C - Pace ATX		
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK

Company Name/Address:
Enviro-Ag Engineering

3404 Airway Blvd.
Amarillo, TX 79118

Billing Information:
Bryan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Pres Chk

Report to:
Jourdan Mullin

Email To: **cmullin@enviroag.com;rgeorge@enviroag.com;mshoemaker@enviroag.com;jmullin@enviroag.com**

Project Description:
Pollutant Permit

City/State Collected:

Please Circle: PT MT CT ET

Phone: **254-965-3500**

Client Project #

Lab Project #

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately
Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Metals ICP site spec 250mlHDPE HNO3	WetChem COD,NH3 TKN 500mlHDPE-Add H2 SO4	WetChem CR6, CR3, DO 500mlHDPE-NoPres	WetChem anioins,pH 125mlHDPE-NoPres	Remarks	Sample # (lab only)
Schreiber Irrigation Week 1	Grab	WW		8/28/24	9:19AM	15	X	X	X	X	-01	

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other WW

Remarks: **Field TEMP ____**
Metals, Al,Sb,As,Ba,Be,Cd,Cr,CR6,CR3,Cu,Pb,Ni,Se,Ag,Tl,Zn, Hg

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/28/24	9:20AM	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/28/24	1140	Olivia C. Pace ATX
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCl / MeoH
TBR

Temp: °C Bottles Received:

Date: Time:

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Chain of Custody Page 16 of 16

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190 Allen, TX 75013

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SDG #

Table # 1177237

Acctnum: **DSENVIGDTX**
Template: **T258910**
Prelogin: **P1096615**
PM: **3565 - Dorothy P Roberts**
PB:

Shipped Via: **FedEX Ground**

Pace	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: Enviro-My Engineering Project Work order (place label):

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☑ LSO ☐ PACE ☐ Other: _____

Tracking #: _____ L1772137

Custody Seal on Cooler/Box: Yes ☐ No ☑

Received on ice: Wet ☑ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: 1218 **Cooler Temp °C:** 2.3 (Recorded) 0.3 (Correction Factor) 2.6 (Actual)

Receiving Lab 2 Thermometer Used: _____ **Cooler Temp °C:** _____ (Recorded) _____ (Correction Factor) _____ (Actual)

Chain of Custody relinquished	Yes ☑ No ☐
Sampler name & signature on COC	Yes ☐ No ☑
Short HT analyses (<72 hrs)	Yes ☑ No ☐

Temperature should be above freezing to 6°C unless collected same day as receipt in which evidence of cooling is acceptable.

Triage Person: AR Date: 8/28

Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips: 6402007	Yes ☐ No ☑ NA ☐
Residual Chlorine Present Cl Strips: 14840	Yes ☐ No ☑ NA ☐
Sulfide Present Lead Acetate Strips: 14802	Yes ☐ No ☑ NA ☐
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☐ NA ☑
Project sampled in USDA Regulated Area outside of Texas State Sampled: _____	Yes ☐ No ☐ NA ☑
Non-Conformance(s):	Yes ☑ No ☐

Login Person: AR Date: 8/28

Labeling Person (if different than log-in): _____ Date: _____

Qualtrax ID: 48806

Company Name/Address:
Enviro-Ag Engineering

3404 Airway Blvd.
Amarillo, TX 79118

Billing Information:
Bryan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Pres Chk

Report to:
Jourdan Mullin

Email To: **omullin@enviroag.com;rgeorge@enviroag.com;mshoemaker@enviroag.com;jmullin@enviroag.com**

Project Description:
Pollutant Permit

City/State Collected:

Please Circle: PT MT CT ET

Phone: **254-965-3500**

Client Project #

Lab Project #

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALLALK 125mlHDPE-NoPres	ALLBOD 1L-HDPE NoPres	ALLCBOD 1L-HDPE NoPres	ALLCN/ CNAM 250mlHDPE-NaOH	ALLOGHEX 1L-Amb-Add HCl	ALLPHOS 500mlHDPE-Add H2SO4	ALLTDS 1L-HDPE NoPres	ALLTOC 250mlAmb-H2SO4	ALLTSS 1L-HDPE-NoPres	CHLORR 250mlHDPE-NoPres	Remarks	Sample # (lab only)
Schreiber Irrigation Week 1	Grab	WW		8/28/24	9:15AM	15	X	X	X	X	X	X	X	X	X	X	-01	

REL: Alejandra Hallos PACE 8/28/24 1700
REC: ~~Otis~~ FedEX 8/28/24 1700
REL: FedEX
REC:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other WW

Remarks: Field TEMP ____
Metals, Al,Sb,As,Ba,Be,Cd,Cr,CR6,CR3,Cu,Pb,Ni,Se,Ag,Tl,Zn, Hg

pH ____ Temp ____

Flow ____ Other ____

Samples returned via:
__ UPS __ FedEx __ Courier ____

Tracking #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	9/23/24	9:25AM	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	8/28/24	1140	Olivia C. - Pace ATX
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)
			Christopher Tollett

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 4.4+3=7 °C Bottles Received:

Date: 8/29/24 Time: 0900

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Chain of Custody Page __ of __

Pace Analytical

190 Allen, TX 75013

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SDG #

Table # L1772187

Acctnum: **DSENVIGDTX**

Template: **T258910**

Prelogin: **P1096615**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via: **FedEX Ground**

Company Name/Address
Enviro-Ag Engineering

3404 Airway Blvd.
Amarillo, TX 79118

Billing Information:
Bryan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Pres Chk

Report to:
Jourdan Mullin

Email To: cmullin@enviroag.com;rgeorge@enviroag.com;mshoemaker@enviroag.com;jmullin@enviroag.com

Project Description:
Pollutant Permit

City/State Collected:

Please Circle: PT MT CT ET

Phone: **254-965-3500**

Client Project #

Lab Project #

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Metals ICP site spec 260mlHDPE HNO3	WetChem COD,NH3 TKN 500mlHDPE-Add H2SO4	WetChem CR6, CR3, DO 500mlHDPE-NoPres	WetChem anioins,pH 125mlHDPE-NoPres	Remarks	Sample # (lab only)
Schreiber Irrigation Well 1	Grab	WW		8/28/24	9:19AM	15	X	X	X	X	-01	

REL: Alejandra Valles Alejandra Valles 8/28/24 1700
REC: FedEx 8/28/24 1700
REL: FedEx
REC:

Chain of Custody Page 1 of 1

Pace Analytical
190 Allen, TX 75013

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SDG #

Table # L1772137

Acctnum: **DSENVIGDTX**

Template: **T258910**

Prelogin: **P1096615**

PM: 3885 - Dorothy P Roberts

PB:

Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: **Field TEMP ____**
Metals, Al,Sb,As,Ba,Be,Cd,Cr,CR6,CR3,Cu,Pb,Ni,Se,Ag,Tl,Zn, Hg

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__UPS __FedEx __Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	8/28/24	9:26AM			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.3=.7 °C Bottles Received:	
	8/28/24	1140	Alain C. Pace AT		
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date:	Time:	Hold:	Condition: NCF / OK
			Christopher D. Ballin	8/29/24	0900		

Pace	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: Enviro-my Engineering Project Work order (place label):

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☑ LSO ☐ PACE ☐ Other: _____

Tracking #: _____ L177 2137

Custody Seal on Cooler/Box: Yes ☐ No ☑

Received on ice: Wet ☑ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: 1218 Cooler Temp °C: 2.3 (Recorded) 0.3 (Correction Factor) 2.6 (Actual)

Receiving Lab 2 Thermometer Used: _____ Cooler Temp °C: _____ (Recorded) _____ (Correction Factor) _____ (Actual)

Chain of Custody relinquished	Yes ☑ No ☐
Sampler name & signature on COC	Yes ☐ No ☑
Short HT analyses (<72 hrs)	Yes ☑ No ☐

Temperature should be above freezing to 6 °C unless collected same day as receipt in which evidence of cooling is acceptable.

Triage Person: AM Date: 8/28

Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips: 6402007	Yes ☐ No ☑ NA ☐
Residual Chlorine Present Cl Strips: 148410	Yes ☐ No ☑ NA ☐
Sulfide Present Lead Acetate Strips: 148612	Yes ☐ No ☑ NA ☐
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☐ NA ☑
Project sampled in USDA Regulated Area outside of Texas State Sampled: _____	Yes ☐ No ☐ NA ☑
Non-Conformance(s):	Yes ☑ No ☐

Login Person: AM Date: 8/28

Labeling Person (if different than log-in) _____ Date: _____

Qualtrax ID: 48806

DAL 8/28 - L1772137 DSENVIGDTX NCF - AR

R5

Time estimate: oh **Time spent:** oh **Grouping date:** 29 August 2024

Members

AR Aysen Ramos (responsible)

- [ ] 1 . If Chain-of-custody (COC) is not received: contact client and if necessary, fill out a COC and indicate that it was filled out by lab personnel. Note issues on this NCF.
- [ ] 2. If COC is incomplete, check applicable issues below and add details where appropiate:
- [ ] *Collection date/time missing or incorrect
- [ ] *Analyses or analytes: missing or Clarification needed
- [ ] *Samples listed on COC do not match samples recieved (missing, additional,etc.)
- [ ] *Sample IDs on COC do not match sample Labels
- [ ] *Required trip blanks were not received
- [x] *Required signatures are missing
- [ ] 3. Sample integrity issues: check applicable issues below and add details where appropriate:
- [ ] *Samples: Past holding time
- [ ] *Samples: Not Field Filtered
- [ ] *samples: Insufficent volume received
- [ ] *Samples: Cooler damaged or compromised
- [ ] *Samples: contain Chlorine or Sulfide
- [ ] *Samples: condition needs to be brought to lab personnel's attention (details below)
- [ ] *Containers: Broken or compromised
- [ ] *Containers: Incorrect
- [ ] *Custody Seals: missing or compromised on samples, trip blanks or coolers
- [ ] *Packing Material: Insufficient/Improper
- [ ] *Preservation: improper
- [ ] *Temperature:not witin acceptance criteria (typically 0-6C)
- [ ] *Temperature: Samples arrived frozen
- [ ] *Vials received with improper headspace
- [ ] *Other:
- [x] 4. If Samples not preserved properly and Sample Receiving adjusts pH, add details below:
- [x] Sample ID:_Scheiber Irrigation Week 1_____
- [x] Preserved by:_____AR_____
- [x] Date/Time:_____08/28 1219_____
- [x] Initial and Final pH:_____6 / 0_____
- [x] Amount/type pres added:_____2.5ML_____
- [x] Lot # of Pres added:____24G31212____HNO3_____
- [ ] 5. Client contact: If Client is Contacted for any issue listed above, fill in details below:
- [ ] Client:
- [ ] PM Initials:
- [ ] Contacted per:
- [ ] Date/Time:

Comments

Aysen Ramos *29 August 2024 12:08 PM*

No collection signatures.

ANALYTICAL REPORT

September 26, 2024

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Enviro-Ag Engineering

Sample Delivery Group:	L1776394
Samples Received:	09/11/2024
Project Number:	
Description:	Pollutant Permit

Report To:

Jourdan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Entire Report Reviewed By: Dorothy P Roberts

Dorothy P Roberts
Project Manager

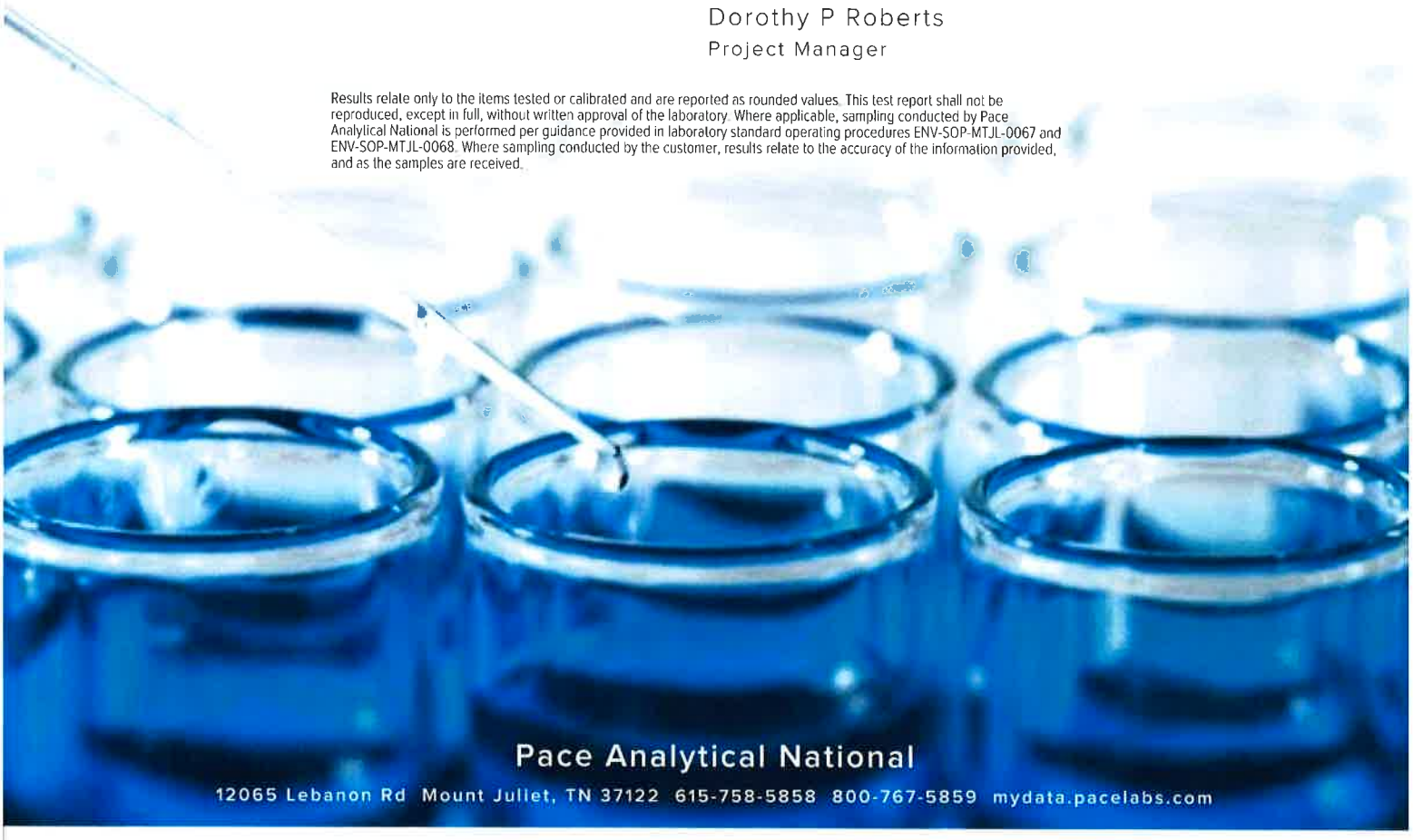

TABLE OF CONTENTS

SAMPLE SUMMARY

SCHREIBER IRRIGATION WEEK 3 L1776394-01 WW

			Collected by	Collected date/time	Received date/time	
			LISA POSTMUS	09/11/24 09:30	09/11/24 12:30	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2363272	1	09/25/24 09:10	09/25/24 09:10	JTM	Mt. Juliet, TN
Calculated Results	WG2363437	1	09/18/24 21:36	09/18/24 21:36	EIG	Allen, TX
Gravimetric Analysis by Method 2540C	WG2363287	1	09/16/24 10:31	09/16/24 12:37	QQT	Allen, TX
Gravimetric Analysis by Method 2540D	WG2364712	1	09/18/24 09:22	09/18/24 09:49	QQT	Allen, TX
Wet Chemistry by Method 1664A	WG2364004	1	09/18/24 16:25	09/18/24 20:09	DAL	Mt. Juliet, TN
Wet Chemistry by Method 2320B	WG2363254	1	09/16/24 10:42	09/16/24 10:42	SEN	Allen, TX
Wet Chemistry by Method 300.0	WG2360365	1	09/11/24 19:09	09/11/24 19:09	SMC	Allen, TX
Wet Chemistry by Method 300.0	WG2361894	1	09/13/24 17:59	09/13/24 17:59	SMC	Allen, TX
Wet Chemistry by Method 3500Cr-B	WG2364883	1	09/18/24 15:15	09/18/24 15:15	KCM	Allen, TX
Wet Chemistry by Method 351.2	WG2364715	2	09/18/24 10:15	09/18/24 21:36	EIG	Allen, TX
Wet Chemistry by Method 360.1	WG2361928	1	09/13/24 10:43	09/13/24 10:43	JBS	Allen, TX
Wet Chemistry by Method 4500Cl G-2011	WG2361916	1	09/13/24 11:18	09/13/24 11:18	JAR	Mt. Juliet, TN
Wet Chemistry by Method 4500CN-E	WG2362074	1	09/13/24 12:00	09/13/24 17:01	KCM	Allen, TX
Wet Chemistry by Method 4500CN-G	WG2363840	1	09/17/24 17:28	09/17/24 17:28	KCM	Allen, TX
Wet Chemistry by Method 4500P-E	WG2363182	10	09/16/24 15:22	09/16/24 15:22	SMC	Allen, TX
Wet Chemistry by Method 5210 B-2016	WG2360385	1	09/11/24 17:18	09/16/24 12:37	SEN	Allen, TX
Wet Chemistry by Method 5210 B-2016	WG2361112	1	09/12/24 14:05	09/17/24 12:59	SEN	Allen, TX
Wet Chemistry by Method 5220D	WG2361922	1	09/13/24 10:46	09/13/24 13:02	JBS	Allen, TX
Wet Chemistry by Method 5310C	WG2363934	1	09/17/24 21:28	09/17/24 21:28	EIG	Allen, TX
Wet Chemistry by Method SM 4500-H+B	WG2363828	1	09/17/24 09:15	09/17/24 09:15	SEN	Allen, TX
Wet Chemistry by Method SM4500NH3H	WG2363437	1	09/16/24 16:56	09/16/24 16:56	EIG	Allen, TX
Mercury by Method 245.1	WG2360415	1	09/12/24 14:25	09/13/24 12:55	AKB	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG2363272	1	09/24/24 17:12	09/25/24 09:10	JTM	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Dorothy P Roberts
Project Manager

Sample Delivery Group (SDG) Narrative

Analysis was filtered in the laboratory.

Lab Sample ID	Project Sample ID	Method
L1776394-01	SCHREIBER IRRIGATION WEEK 3	3500Cr-B

Calculated Results

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chromium,Trivalent	ND		0.00300	1	09/25/2024 09:10	WG2363272
Organic Nitrogen	17.0		0.100	1	09/18/2024 21:36	WG2363437

Gravimetric Analysis by Method 2540C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Total Dissolved Solids	3260		250	1	09/16/2024 12:37	WG2363287

Gravimetric Analysis by Method 2540D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Suspended Solids	258		50.0	1	09/18/2024 09:49	WG2364712

Wet Chemistry by Method 1664A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Oil & Grease (Hexane Extr)	ND		5.10	1	09/18/2024 20:09	WG2364004

Wet Chemistry by Method 2320B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	865		20.0	1	09/16/2024 10:42	WG2363254

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	1430		0.800	1	09/13/2024 17:59	WG2361894
Fluoride	ND		0.500	1	09/11/2024 19:09	WG2360365
Nitrate	ND		0.500	1	09/11/2024 19:09	WG2360365
Sulfate	157		0.700	1	09/13/2024 17:59	WG2361894

Wet Chemistry by Method 3500Cr-B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chromium,Hexavalent	ND		0.00300	1	09/18/2024 15:15	WG2364883

Wet Chemistry by Method 351.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Kjeldahl Nitrogen, TKN	17.3		0.500	2	09/18/2024 21:36	WG2364715

Wet Chemistry by Method 360.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Oxygen	8.11	T8	1	1	09/13/2024 10:43	WG2361928

Wet Chemistry by Method 4500Cl G-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chlorine,residual	0.135	T8	0.100	1	09/13/2024 11:18	WG2361916

Wet Chemistry by Method 4500CN-E

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.0100	1	09/13/2024 17:01	WG2362074

Wet Chemistry by Method 4500CN-G

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide,amenable	ND		0.0100	1	09/17/2024 17:28	WG2363840

Wet Chemistry by Method 4500P-E

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Phosphorus,Total	8.42		0.500	10	09/16/2024 15:22	WG2363182

Wet Chemistry by Method 5210 B-2016

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
BOD	61.1		60.0	1	09/16/2024 12:37	WG2360385
CBOD	ND	B1	60.0	1	09/17/2024 12:59	WG2361112

Wet Chemistry by Method 5220D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	265		35.0	1	09/13/2024 13:02	WG2361922

Wet Chemistry by Method 5310C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	22.5		0.700	1	09/17/2024 21:28	WG2363934

Wet Chemistry by Method SM 4500-H+B

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	8.69	T8	1	09/17/2024 09:15	WG2363828

Sample Narrative:
L1776394-01 WG2363828: 8.69 at 19.4C

Wet Chemistry by Method SM4500NH3H

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Ammonia Nitrogen	0.363	B	0.100	1	09/16/2024 16:56	WG2363437

Mercury by Method 245.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	09/13/2024 12:55	WG2360415

SCHREIBER IRRIGATION WEEK 3

Collected date/time: 09/11/24 09:30

SAMPLE RESULTS - 01

L1776394

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Aluminum	1.37		0.200	1	09/25/2024 09:10	WG2363272
Antimony	ND		0.0100	1	09/25/2024 09:10	WG2363272
Arsenic	ND		0.0100	1	09/25/2024 09:10	WG2363272
Barium	0.0348		0.00500	1	09/25/2024 09:10	WG2363272
Beryllium	ND		0.00200	1	09/25/2024 09:10	WG2363272
Cadmium	ND		0.00200	1	09/25/2024 09:10	WG2363272
Chromium	ND		0.0100	1	09/25/2024 09:10	WG2363272
Copper	ND		0.0100	1	09/25/2024 09:10	WG2363272
Lead	ND		0.00500	1	09/25/2024 09:10	WG2363272
Nickel	ND		0.0100	1	09/25/2024 09:10	WG2363272
Selenium	ND		0.0100	1	09/25/2024 09:10	WG2363272
Silver	ND		0.00500	1	09/25/2024 09:10	WG2363272
Thallium	ND		0.0100	1	09/25/2024 09:10	WG2363272
Zinc	ND		0.0500	1	09/25/2024 09:10	WG2363272

Method Blank (MB)

(MB) R4120667-1 09/16/24 12:37

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Total Dissolved Solids	U		25.0	25.0

L1776383-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1776383-01 09/16/24 12:37 • (DUP) R4120667-3 09/16/24 12:37

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Total Dissolved Solids	930	772	1	18.6	J3	10

L1776383-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1776383-02 09/16/24 12:37 • (DUP) R4120667-4 09/16/24 12:37

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Total Dissolved Solids	1010	1150	1	12.8	J3	10

Laboratory Control Sample (LCS)

(LCS) R4120667-2 09/16/24 12:37

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Total Dissolved Solids	2410	2490	103	85.0-115	

Method Blank (MB)

(MB) R4121212-1 09/18/24 09:49

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Suspended Solids	U		2.50	2.50

L1776394-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1776394-01 09/18/24 09:49 • (DUP) R4121212-3 09/18/24 09:49

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Suspended Solids	258	260	1	0.772		10

Laboratory Control Sample (LCS)

(LCS) R4121212-2 09/18/24 09:49

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Suspended Solids	879	887	101	85.0-115	

QUALITY CONTROL SUMMARY

L1776394-01

Method Blank (MB)

(MB) R4121468-1 09/18/24 20:09

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Oil & Grease (Hexane Extr)	U		1.16	5.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4121468-2 09/18/24 20:09 • (LCSD) R4121468-3 09/18/24 20:09

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Oil & Grease (Hexane Extr)	40.0	34.8	36.1	87.0	90.3	78.0-114			3.67	20

L1776604-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1776604-02 09/18/24 20:09 • (MS) R4121468-4 09/18/24 20:09

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Oil & Grease (Hexane Extr)	40.0	ND	22.5	56.2	1	78.0-114	J6

Cp
Tc
Ss
Cn
Sr
Qc
Gl
Al
Sc

QUALITY CONTROL SUMMARY

L1776394-01

Method Blank (MB)

(MB) R4120379-1 09/16/24 10:42

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Alkalinity	U		20.0	20.0

L1775916-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1775916-03 09/16/24 10:42 • (DUP) R4120379-3 09/16/24 10:42

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Alkalinity	100	98.0	1	2.02		20

L1776383-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1776383-04 09/16/24 10:42 • (DUP) R4120379-4 09/16/24 10:42

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Alkalinity	294	294	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4120379-2 09/16/24 10:42

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Alkalinity	250	240	96.0	90.0-110	

Method Blank (MB)

(MB) R4118974-1 09/11/24 18:09

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Fluoride	U		0.0947	0.500
Nitrate	U		0.379	0.500

Laboratory Control Sample (LCS)

(LCS) R4118974-2 09/11/24 18:21

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Fluoride	5.00	4.97	99.5	90.0-110	
Nitrate	5.00	4.84	96.8	90.0-110	

L1776419-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1776419-05 09/11/24 19:21 • (MS) R4118974-3 09/12/24 09:16 • (MSD) R4118974-4 09/12/24 09:28

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Fluoride	5.00	0.847	5.89	5.89	101	101	1	90.0-110			0.0543	20
Nitrate	5.00	ND	5.01	5.04	100	101	1	90.0-110			0.557	20

QUALITY CONTROL SUMMARY

L1776394-01

Method Blank (MB)

(MB) R4120096-1 09/13/24 15:37

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chloride	U		0.325	0.800
Sulfate	U		0.211	0.700

Laboratory Control Sample (LCS)

(LCS) R4120096-2 09/13/24 15:49

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Chloride	5.00	5.27	105	90.0-110	
Sulfate	5.00	5.34	107	90.0-110	

L1775714-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775714-01 09/13/24 16:36 • (MS) R4120096-3 09/13/24 19:34 • (MSD) R4120096-4 09/13/24 19:46

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Sulfate	500	422	916	914	98.9	98.5	1	90.0-110			0.204	20

L1776262-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1776262-05 09/13/24 17:47 • (MS) R4120096-5 09/13/24 19:58 • (MSD) R4120096-6 09/13/24 20:10

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Chloride	250	264	498	498	93.2	93.3	1	90.0-110			0.0271	20
Sulfate	250	455	678	677	89.4	89.1	1	90.0-110	J6	J6	0.115	20

QUALITY CONTROL SUMMARY

L1776394-01

Method Blank (MB)

(MB) R4121281-1 09/18/24 15:15

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chromium,Hexavalent	U		0.00200	0.00300

Laboratory Control Sample (LCS)

(LCS) R4121281-2 09/18/24 15:15

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Chromium,Hexavalent	0.200	0.197	98.5	85.0-115	

L1776375-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1776375-02 09/18/24 15:15 • (MS) R4121281-3 09/18/24 15:15 • (MSD) R4121281-4 09/18/24 15:15

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Chromium,Hexavalent	0.200	ND	0.105	0.107	52.4	53.7	1	85.0-115	J6	J6	2.39	20

QUALITY CONTROL SUMMARY

L1776394-01

Method Blank (MB)

(MB) R4121460-4 09/18/24 21:34

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Kjeldahl Nitrogen, TKN	U		0.140	0.250

Laboratory Control Sample (LCS)

(LCS) R4121460-1 09/18/24 21:16

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Kjeldahl Nitrogen, TKN	4.00	4.23	106	90.0-110	

L1776021-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1776021-02 09/18/24 21:18 • (MS) R4121460-2 09/18/24 21:23 • (MSD) R4121460-3 09/18/24 21:25

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Kjeldahl Nitrogen, TKN	4.00	1.71	6.78	6.54	127	121	2	90.0-110	J5	J5	3.60	20

L1776394-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1776394-01 09/13/24 10:43 • (DUP) R4119439-1 09/13/24 10:43

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Oxygen	8.11	7.91	1	2.50		10

Method Blank (MB)

(MB) R4119466-1 09/13/24 11:16

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chlorine,residual	U		0.0260	0.100

L1775714-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1775714-01 09/13/24 11:17 • (DUP) R4119466-4 09/13/24 11:17

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chlorine,residual	0.117	0.116	1	0.858		20

L1776977-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1776977-08 09/13/24 11:22 • (DUP) R4119466-5 09/13/24 11:22

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chlorine,residual	1.68	1.67	1	0.179		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4119466-2 09/13/24 11:16 • (LCSD) R4119466-3 09/13/24 11:16

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Chlorine,residual	1.00	1.07	1.07	107	107	85.0-115			0.374	20

Method Blank (MB)

(MB) R4119678-1 09/13/24 17:01

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Cyanide	U		0.00430	0.0100

Laboratory Control Sample (LCS)

(LCS) R4119678-2 09/13/24 17:01

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Cyanide	0.100	0.0931	93.1	85.0-115	

L1776954-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1776954-02 09/13/24 17:01 • (MS) R4119678-3 09/13/24 17:01 • (MSD) R4119678-4 09/13/24 17:01

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	0.0232	0.104	0.0988	80.4	75.6	1	85.0-115	J6	J6	4.71	20

L1776954-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1776954-03 09/13/24 17:01 • (MS) R4119678-5 09/13/24 17:01 • (MSD) R4119678-6 09/13/24 17:01

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	0.0213	0.102	0.106	80.7	84.2	1	85.0-115	J6	J6	3.37	20

Method Blank (MB)

(MB) R4120319-1 09/16/24 15:21

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Phosphorus,Total	U		0.0152	0.0500

Laboratory Control Sample (LCS)

(LCS) R4120319-2 09/16/24 15:21

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Phosphorus,Total	0.500	0.525	105	80.0-120	

L1776219-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1776219-02 09/16/24 15:21 • (MS) R4120319-3 09/16/24 15:22 • (MSD) R4120319-4 09/16/24 15:22

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Phosphorus,Total	0.500	ND	0.551	0.547	104	104	1	80.0-120			0.634	20

QUALITY CONTROL SUMMARY

L1776394-01

Method Blank (MB)

(MB) R4120236-1 09/16/24 12:11

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
BOD	U		0.200	0.200

L1776196-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1776196-01 09/16/24 12:29 • (DUP) R4120236-3 09/16/24 12:44

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
BOD	1.31	1.53	1	15.5		20

Laboratory Control Sample (LCS)

(LCS) R4120236-2 09/16/24 12:15

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
BOD	198	207	105	85-115	

Method Blank (MB)

(MB) R4120730-1 09/17/24 12:48

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
CBOD	0.205	B1	0.200	0.200

L1776371-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1776371-01 09/17/24 12:57 • (DUP) R4120730-3 09/17/24 13:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
CBOD	ND	1.25	1	200	P1	20

L1776836-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1776836-02 09/17/24 13:30 • (DUP) R4120730-4 09/17/24 13:52

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
CBOD	1.00	ND	1	200	P1	20

Laboratory Control Sample (LCS)

(LCS) R4120730-2 09/17/24 12:53

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
CBOD	198	192	96.9	85-115	

Method Blank (MB)

(MB) R4119522-1 09/13/24 13:02

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
COD	U		16.1	35.0

Laboratory Control Sample (LCS)

(LCS) R4119522-2 09/13/24 13:02

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
COD	500	522	104	80.0-120	

L1775631-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775631-01 09/13/24 13:02 • (MS) R4119522-3 09/13/24 13:02 • (MSD) R4119522-4 09/13/24 13:02

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	500	89.2	564	562	95.0	94.6	1	80.0-120			0.372	20

L1776266-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1776266-01 09/13/24 13:02 • (MS) R4119522-5 09/13/24 13:02 • (MSD) R4119522-6 09/13/24 13:02

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	500	53.6	529	531	95.0	95.4	1	80.0-120			0.395	20

Method Blank (MB)

(MB) R4121356-1 09/17/24 14:12

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
TOC (Total Organic Carbon)	U		0.270	0.700

Laboratory Control Sample (LCS)

(LCS) R4121356-2 09/17/24 14:51

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
TOC (Total Organic Carbon)	10.0	10.3	103	90.0-110	

L1775916-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775916-04 09/17/24 17:19 • (MS) R4121356-3 09/17/24 15:58 • (MSD) R4121356-4 09/17/24 16:17

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
TOC (Total Organic Carbon)	10.0	ND	10.3	10.4	99.3	100	1	80.0-120			0.676	20

L1776262-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1776262-05 09/17/24 19:33 • (MS) R4121356-5 09/17/24 16:38 • (MSD) R4121356-6 09/17/24 16:59

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
TOC (Total Organic Carbon)	10.0	9.00	18.9	18.9	99.0	98.5	1	80.0-120			0.265	20

L1776808-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1776808-01 09/17/24 09:15 • (DUP) R4120592-2 09/17/24 09:15

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	8.03	8.02	1	0.125		20

Sample Narrative:
OS: 8.03 at 19.8C
DUP: 8.02 at 19.6C

Laboratory Control Sample (LCS)

(LCS) R4120592-1 09/17/24 09:15

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	6.00	5.99	99.8	99.0-101	

Sample Narrative:
LCS: 5.99 at 20.6C

Method Blank (MB)

(MB) R4120932-1 09/16/24 15:56

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Ammonia Nitrogen	0.0598	J	0.0280	0.100

Laboratory Control Sample (LCS)

(LCS) R4120932-2 09/16/24 15:57

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Ammonia Nitrogen	5.00	5.10	102	80.0-120	

L1776212-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1776212-01 09/16/24 16:28 • (MS) R4120932-3 09/16/24 15:59 • (MSD) R4120932-4 09/16/24 16:01

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Ammonia Nitrogen	5.00	0.205	5.07	5.06	97.3	97.1	1	80.0-120			0.197	20

L1776262-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1776262-05 09/16/24 16:30 • (MS) R4120932-5 09/16/24 16:03 • (MSD) R4120932-6 09/16/24 16:04

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Ammonia Nitrogen	5.00	0.122	5.05	5.11	98.6	99.8	1	80.0-120			1.18	20

Method Blank (MB)

(MB) R4119533-1 09/13/24 11:47

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R4119533-2 09/13/24 11:49

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Mercury	0.00300	0.00303	101	85.0-115	

L1776025-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1776025-07 09/13/24 11:52 • (MS) R4119533-4 09/13/24 11:57 • (MSD) R4119533-5 09/13/24 11:59

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.00300	ND	0.00312	0.00303	104	101	1	70.0-130			2.91	20

L1776121-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1776121-04 09/13/24 12:02 • (MS) R4119533-6 09/13/24 12:09 • (MSD) R4119533-7 09/13/24 12:11

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.00300	ND	0.00303	0.00310	101	103	1	70.0-130			2.20	20

QUALITY CONTROL SUMMARY

L1776394-01

Method Blank (MB)

(MB) R4124170-1 09/25/24 08:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum	U		0.0592	0.200
Antimony	U		0.00398	0.0100
Arsenic	U		0.00645	0.0100
Barium	U		0.000795	0.00500
Beryllium	U		0.000401	0.00200
Cadmium	U		0.000552	0.00200
Chromium	U		0.00163	0.0100
Copper	U		0.00226	0.0100
Lead	U		0.00227	0.00500
Nickel	U		0.00182	0.0100
Selenium	U		0.00616	0.0100
Silver	0.00577		0.00131	0.00500
Thallium	U		0.00460	0.0100
Zinc	U		0.00578	0.0500

Laboratory Control Sample (LCS)

(LCS) R4124170-2 09/25/24 08:25

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum	10.0	10.5	105	85.0-115	
Antimony	1.00	0.979	97.9	85.0-115	
Arsenic	1.00	0.998	99.8	85.0-115	
Barium	1.00	1.04	104	85.0-115	
Beryllium	1.00	1.02	102	85.0-115	
Cadmium	1.00	0.983	98.3	85.0-115	
Chromium	1.00	1.01	101	85.0-115	
Copper	1.00	1.00	100	85.0-115	
Lead	1.00	0.998	99.8	85.0-115	
Nickel	1.00	0.970	97.0	85.0-115	
Selenium	1.00	0.982	98.2	85.0-115	
Silver	0.200	0.202	101	85.0-115	
Thallium	1.00	1.05	105	85.0-115	
Zinc	1.00	1.02	102	85.0-115	

L1776475-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1776475-01 09/25/24 08:29 • (MS) R4124170-4 09/25/24 08:35 • (MSD) R4124170-5 09/25/24 08:39

Analyte	Spike Amount mg/l	Original Result	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	10.0		10.1	10.5	101	105	1	70.0-130			3.64	20
Antimony	1.00		0.952	1.01	95.2	101	1	70.0-130			5.48	20
Arsenic	1.00	ND	0.974	1.03	97.4	103	1	70.0-130			5.75	20
Barium	1.00		0.996	1.05	98.9	104	1	70.0-130			5.28	20
Beryllium	1.00	ND	0.960	1.01	96.0	101	1	70.0-130			5.01	20
Cadmium	1.00	ND	0.949	0.997	94.9	99.7	1	70.0-130			4.90	20
Chromium	1.00		0.968	1.01	96.8	101	1	70.0-130			4.38	20
Copper	1.00	ND	0.961	1.01	96.1	101	1	70.0-130			4.73	20
Lead	1.00	ND	0.956	1.01	95.6	101	1	70.0-130			5.04	20
Nickel	1.00	ND	0.925	0.977	92.5	97.7	1	70.0-130			5.51	20
Selenium	1.00	ND	0.970	1.02	97.0	102	1	70.0-130			4.66	20
Silver	0.200	ND	0.192	0.201	94.8	98.9	1	70.0-130			4.16	20
Thallium	1.00		1.00	1.05	100	105	1	70.0-130			5.11	20
Zinc	1.00	ND	0.962	1.01	96.2	101	1	70.0-130			5.34	20

L1776589-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1776589-03 09/25/24 08:42 • (MS) R4124170-6 09/25/24 08:45 • (MSD) R4124170-7 09/25/24 08:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	10.0	ND	10.4	10.4	104	104	1	70.0-130			0.382	20
Antimony	1.00	ND	0.989	0.976	98.9	97.6	1	70.0-130			1.32	20
Arsenic	1.00	ND	1.01	1.01	101	101	1	70.0-130			0.508	20
Barium	1.00	ND	1.03	1.03	103	103	1	70.0-130			0.149	20
Beryllium	1.00	ND	1.00	1.00	100	100	1	70.0-130			0.110	20
Cadmium	1.00	ND	0.991	0.985	99.1	98.5	1	70.0-130			0.585	20
Chromium	1.00	ND	1.01	1.02	101	102	1	70.0-130			0.561	20
Copper	1.00	ND	0.993	0.999	99.3	99.9	1	70.0-130			0.649	20
Lead	1.00	ND	0.993	0.991	99.3	99.1	1	70.0-130			0.250	20
Nickel	1.00	ND	0.968	0.966	96.8	96.6	1	70.0-130			0.253	20
Selenium	1.00	ND	1.00	0.991	100	99.1	1	70.0-130			0.943	20
Silver	0.200	ND	0.198	0.199	99.1	99.3	1	70.0-130			0.205	20
Thallium	1.00	ND	1.05	1.05	105	105	1	70.0-130			0.202	20
Zinc	1.00	ND	1.01	1.01	101	101	1	70.0-130			0.262	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
B1	The blank depletion was greater than the recommended maximum depletion of 0.2mg/L.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

Arkansas	88-0647	Kansas	E10388
Florida	E871118	Texas	T104704232-23-39
Iowa	408	Oklahoma	8727
Louisiana	30686		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Company Name/Address:
Enviro-Ag Engineering

3404 Airway Blvd.
Amarillo, TX 79118

Billing Information:
Bryan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Pres Chk

Report to:
Jourdan Mullin

Email To: **cmullin@enviroag.com;rgeorge@enviroag.com;mshoemaker@enviroag.com;jmullin@enviroag.com**

Project Description:
Pollutant Permit

City/State Collected:

Please Circle: PT MT CT ET

Phone: **254-965-3500**

Client Project #

Lab Project #

Collected by (print):
Lisa Postmus

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALLALK 125mlHDPE-NoPres	ALLBOD 1L-HDPE NoPres	ALLCBOD 1L-HDPE NoPres	ALLCN/ CNAM 250mlHDPE-NaOH	ALLOGHEX 1L-Amb-Add HCl	ALLPHOS 500mlHDPE-Add H2SO4	ALLTDS 1L-HDPE NoPres	ALLTOC 250mlAmb-H2SO4	ALLTSS 1L-HDPE-NoPres	CHLORR 250mlHDPE-NoPres	Remarks	Sample # (lab only)
Schreiber Irrigation Week 3		WW				15	X	X	X	X	X	X	X	X	X	X		01

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical
190 Allen, TX 75013

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # U776394

Table #

Acctnum: **DSENVIGDTX**

Template: **T258910**

Prelogin: **P1096612**

PM: **3566 - Dorothy P Roberts**

PB:

Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil **AIR** - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: **Field TEMP ____**
Metals, Al,Sb,As,Ba,Be,Cd,Cr,CR6,CR3,Cu,Pb,Ni,Se,Ag,Tl,Zn, Hg

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP	__Y __N
COC Signed/Accurate:		__Y __N
Bottles arrive intact:		__Y __N
Correct bottles used:		__Y __N
Sufficient volume sent:		__Y __N
If Applicable		
VOA Zero Headspace:		__Y __N
Preservation Correct/Checked:		__Y __N
RAD Screen <0.5 mR/hr:		__Y __N

Relinquished by : (Signature)	Date: 9/11/24	Time: 1230	Received by: (Signature) Pace ATX	Trip Blank Received: Yes / No HCL / MeoH TBR	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Company Name/Address:
Enviro-Ag Engineering

3404 Airway Blvd.
Amarillo, TX 79118

Billing Information:
Bryan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Pres Chk

Report to:
Jourdan Mullin

Email To: **cmullin@enviroag.com;rgeorge@enviroag.com;mshoemaker@enviroag.com;jmullin@enviroag.com**

Project Description:
Pollutant Permit

City/State Collected:

Please Circle: PT MT CT ET

Phone: **254-965-3500**

Client Project #

Lab Project #

Collected by (print): Lisa Postmus

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Metals ICP site spec 250mlHDPE HNO3	WetChem COD,NH3 TKN 500mlHDPE-Add H2SO4	WetChem CR6, CR3, DO 500mlHDPE-NoPres	WetChem anioins,pH 125mlHDPE-NoPres
Schreiber Irrigation Week 3		WW				15	X	X	X	X

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace Analytical

190 Allen, TX 75013

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of our Pace Terms and Conditions found at http://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG #

Table #

Acctnum: **DSENVIGDTX**

Template: **T258910**

Prelogin: **P1096612**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via: **FedEX Ground**

Remarks | Sample # (lab only)

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: Field TEMP ____
Metals, Al,Sb,As,Ba,Be,Cd,Cr,CR6,CR3,Cu,Pb,Ni,Se,Ag,Tl,Zn, Hg

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TSP	
	9/11/24	1230	- Pace ATX	9/11/24 1235	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK

Pace	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: Enviro-Ag Project Work order (place label):

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☑ LSO ☐ PACE ☐ Other: _____

Tracking #: _____

Custody Seal on Cooler/Box: Yes ☐ No ☑

Received on ice: Wet ☑ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: IR18 **Cooler Temp °C:** 0.6 (Recorded) 0.0 (Correction Factor) 0.6 (Actual)

Receiving Lab 2 Thermometer Used: _____ **Cooler Temp °C:** _____ (Recorded) _____ (Correction Factor) _____ (Actual)

Chain of Custody relinquished	Yes ☑ No ☐
Sampler name & signature on COC	Yes ☑ No ☐
Short HT analyses (<72 hrs)	Yes ☑ No ☐

Temperature should be above freezing to 6°C unless collected same day as receipt in which evidence of cooling is acceptable.

Triage Person: QC Date: 9/11

Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips: 0402007	Yes ☑ No ☐ NA ☐
Residual Chlorine Present Cl Strips: 148660	Yes ☐ No ☑ NA ☐
Sulfide Present Lead Acetate Strips: 148662	Yes ☐ No ☑ NA ☐
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☐ NA ☐
Project sampled in USDA Regulated Area outside of Texas State Sampled: _____	Yes ☐ No ☐ NA ☑
Non-Conformance(s):	Yes ☑ No ☐

Login Person: _____ Date: _____

Labeling Person (if different than log-in): _____ Date: _____

Qualtrax ID: 48806

Company Name/Address:
Enviro-Ag Engineering

3404 Airway Blvd.
Amarillo, TX 79118

Billing Information:
Bryan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page __ of __

Pace Analytical
190 Allen, TX 75013

Report to:
Jourdan Mullin

Email To: cmullin@enviroag.com;rgeorge@enviroag.com;mshoemaker@enviroag.com;jmullin@enviroag.com

Project Description:
Pollutant Permit

City/State Collected:

Please Circle: PT MT CT ET

Phone: **254-965-3500**

Client Project #:

Lab Project #:

SDG # U776394

Table #

Acctnum: **DSENVIGDTX**

Template: **T258910**

Prelogin: **P1096612**

PM: 3866 - Dorothy P Roberts

PB:

Collected by (print): Lisa Postmus

Site/Facility ID #:

P.O. #:

Shipped Via: **FedEx Ground**

Collected by (signature):

Immediately Packed on Ice: N ____ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALLALK 125mlHDPE-NoPres	ALLBOD 1L-HDPE NoPres	ALLCBOD 1L-HDPE NoPres	ALLCN/ CNAM 250mlHDPE-NaOH	ALLOGHEX 1L-Amb-Add HCl	ALLPHOS 500mlHDPE-Add H2SO4	ALLTDS 1L-HDPE NoPres	ALLTOC 250mlAmb-H2SO4	ALLTSS 1L-HDPE-NoPres	CHLORR 250mlHDPE-NoPres	Remarks	Sample # (lab only)
Schreiber Irrigation Week 3		WW				15	X	X	X	X	X	X	X	X	X	X		01

* Matrix
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other ____

Remarks: Field TEMP ____
Metals, Al,Sb,As,Ba,Be,Cd,Cr,CR6,CR3,Cu,Pb,Ni,Se,Ag,Tl,Zn, Hg

pH ____ Temp ____

Flow ____ Other ____

Samples returned via:
__ UPS __ FedEx __ Courier ____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ___NP ___Y ___N
COC Signed/Accurate: ___Y ___N
Bottles arrive intact: ___Y ___N
Correct bottles used: ___Y ___N
Sufficient volume sent: ___Y ___N
If Applicable
VOA Zero Headspace: ___Y ___N
Preservation Correct/Checked: ___Y ___N
RAD Screen <0.5 mR/hr: ___Y ___N
0.2 0.3 0.5 TLA9

Relinquished by (Signature)	Date	Time	Received by (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	9/11/24	1230	Pace ATX	
Relinquished by (Signature)	Date	Time	Received by (Signature)	Temp: °C Bottles Received:
Alyson Ramos/PACE	9/11/24	1700	FedEx	9/11/24 1700
Relinquished by (Signature)	Date	Time	Received for lab by: (Signature)	Date: Time:
FedEx	9/11/24	1700	DeMarty	9.12.24 0918

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Company Name/Address
Enviro-Ag Engineering

3404 Airway Blvd.
Amarillo, TX 79118

Billing Information
Bryan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

Pace Analytical
190 Allen, TX 75013

Report to
Jourdan Mullin

Email To: cmullin@enviroag.com;rgeorge@enviroag.com;mshoemaker@enviroag.com;jmullin@enviroag.com

Project Description
Pollutant Permit

City/State Collected

Please Circle: PT MT CT ET

Phone: **254-965-3500**

Client Project #

Lab Project #

SDG #

Table #

Acctnum: **DSENVIGDTX**
Template: **T258910**
Prelogin: **P1096612**
PM: 3585 - Dorothy P Roberts
PB:

Shipped Via: **FedEx Ground**

Collected by (print): Lisa Postmus

Site/Facility ID #

P O #

Collected by (signature)

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	Metals ICP site spec 250mlHDPE HNO3	WetChem COD NH3 TKN 500mlHDPE-Add H2 SO4	WetChem CR6, CR3, DO 500mlHDPE-NoPres	WetChem anioins,pH 125mlHDPE-NoPres
Schreiber Irrigation Week 3		WW				15	X	X	X	X

* Matrix
SS Soil AIR Air F Filter
GW Groundwater B Bioassay
WW WasteWater
DW Drinking Water
OT Other

Remarks: Field TEMP ___
Metals, Al,Sb,As,Ba,Be,Cd,Cr,CR6,CR3,Cu,Pb,Ni,Se,Ag,Tl,Zn, Hg

pH ___ Temp ___
Flow ___ Other ___

Samples returned via:
__ UPS __ FedEx __ Courier ___

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screened <0.5 mR/hr: Y N
1.7+0.3=2.0 TLAS

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	Temp °C	Bottles Received:	If preservation required by Login: Date/Time
	9/11/24	1230	Pace FTX	9/11/24 1230			
Carlie/Aysen Ramos/PACE	9/11/24	1700	FedEx	9/11/24		1700	
FedEx			Dengang	9.12.24		0900	

Hold: | Condition: NCF / OK

Pace	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: Enviro-Ag Project Work order (place label):

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ✓ LSO ☐ PACE ☐ Other:

Tracking #:

Custody Seal on Cooler/Box: Yes ☐ No ✓

Received on ice: Wet ✓ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: IR18 Cooler Temp °C: 0.6 (Recorded) 0.0 (Correction Factor) 0.6 (Actual)

Receiving Lab 2 Thermometer Used: ____ Cooler Temp °C: ____ (Recorded) ____ (Correction Factor) ____ (Actual)

Chain of Custody relinquished	Yes ✓ No ☐
Sampler name & signature on COC	Yes ✓ No ☐
Short HT analyses (<72 hrs)	Yes ✓ No ☐

Temperature should be above freezing to 6 °C unless collected same day as receipt in which evidence of cooling is acceptable

Triage Person: QC Date 9/11

Sufficient Volume received	Yes ✓ No ☐
Correct Container used	Yes ✓ No ☐
Container Intact	Yes ✓ No ☐
Sample pH Acceptable pH Strips: 04022007 Residual Chlorine Present Cl Strips: 148660 Sulfide Present Lead Acetate Strips: 148662	Yes ✓ No ☐ NA ☐ Yes ☐ No ✓ NA ☐ Yes ☐ No ✓ NA ☐
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ✓
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ✓
Headspace in VOA (>6mm)	Yes ☐ No ☐ NA ☐
Project sampled in USDA Regulated Area outside of Texas State Sampled:	Yes ☐ No ☐ NA ✓
Non-Conformance(s):	Yes ✓ No ☐

Login Person: ____ Date ____

Labeling Person (if different than log-in): ____ Date ____

Qualtrax ID 48806

DAL 09/11 - L1776394 DSENVIGDTX P1096612 NCF - OC

Shortholds

Time estimate: oh **Time spent:** oh

Members

OC Olivia Currie (responsible) DPR Dorothy Roberts

- [ ] 1 . If Chain-of-custody (COC) is not received: contact client and if necessary, fill out a COC and indicate that it was filled out by lab personnel. Note issues on this NCF.
- [ ] 2. If COC is incomplete, check applicable issues below and add details where appropiate:
- [x] *Collection date/time missing or incorrect
- [ ] *Analyses or analytes: missing or Clarification needed
- [ ] *Samples listed on COC do not match samples recieved (missing, additional,etc.)
- [ ] *Sample IDs on COC do not match sample Labels
- [ ] *Required trip blanks were not received
- [ ] *Required signatures are missing
- [ ] 3. Sample integrity issues: check applicable issues below and add details where appropriate:
- [ ] *Samples: Past holding time
- [ ] *Samples: Not Field Filtered
- [ ] *samples: Insufficent volume received
- [ ] *Samples: Cooler damaged or compromised
- [ ] *Samples: contain Chlorine or Sulfide
- [ ] *Samples: condition needs to be brought to lab personnel's attention (details below)
- [ ] *Containers: Broken or compromised
- [ ] *Containers: Incorrect
- [ ] *Custody Seals: missing or compromised on samples, trip blanks or coolers
- [ ] *Packing Material: Insufficient/Improper
- [ ] *Preservation: improper
- [ ] *Temperature:not witin acceptance criteria (typically 0-6C)
- [ ] *Temperature: Samples arrived frozen
- [ ] *Vials received with improper headspace
- [ ] *Other:
- [ ] 4. If Samples not preserved properly and Sample Receiving adjusts pH, add details below:
- [ ] Sample ID:_____
- [ ] Preserved by:_____
- [ ] Date/Time:_____
- [ ] Initial and Final pH:_____
- [ ] Amount/type pres added:_____
- [ ] Lot # of Pres added:_____
- [ ] 5. Client contact: If Client is Contacted for any issue listed above, fill in details below:
- [ ] Client:
- [x] PM Initials:dpr
- [ ] Contacted per:
- [x] Date/Time: 09-11-24 1540; 9/12 1540 / 9/13 1256

Comments

ANALYTICAL REPORT

October 28, 2024

Enviro-Ag Engineering

Sample Delivery Group:	L1789862
Samples Received:	10/17/2024
Project Number:	
Description:	Pollutant Permit

Report To:

Jourdan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Entire Report Reviewed By: Dorothy P Roberts

Dorothy P Roberts
Project Manager

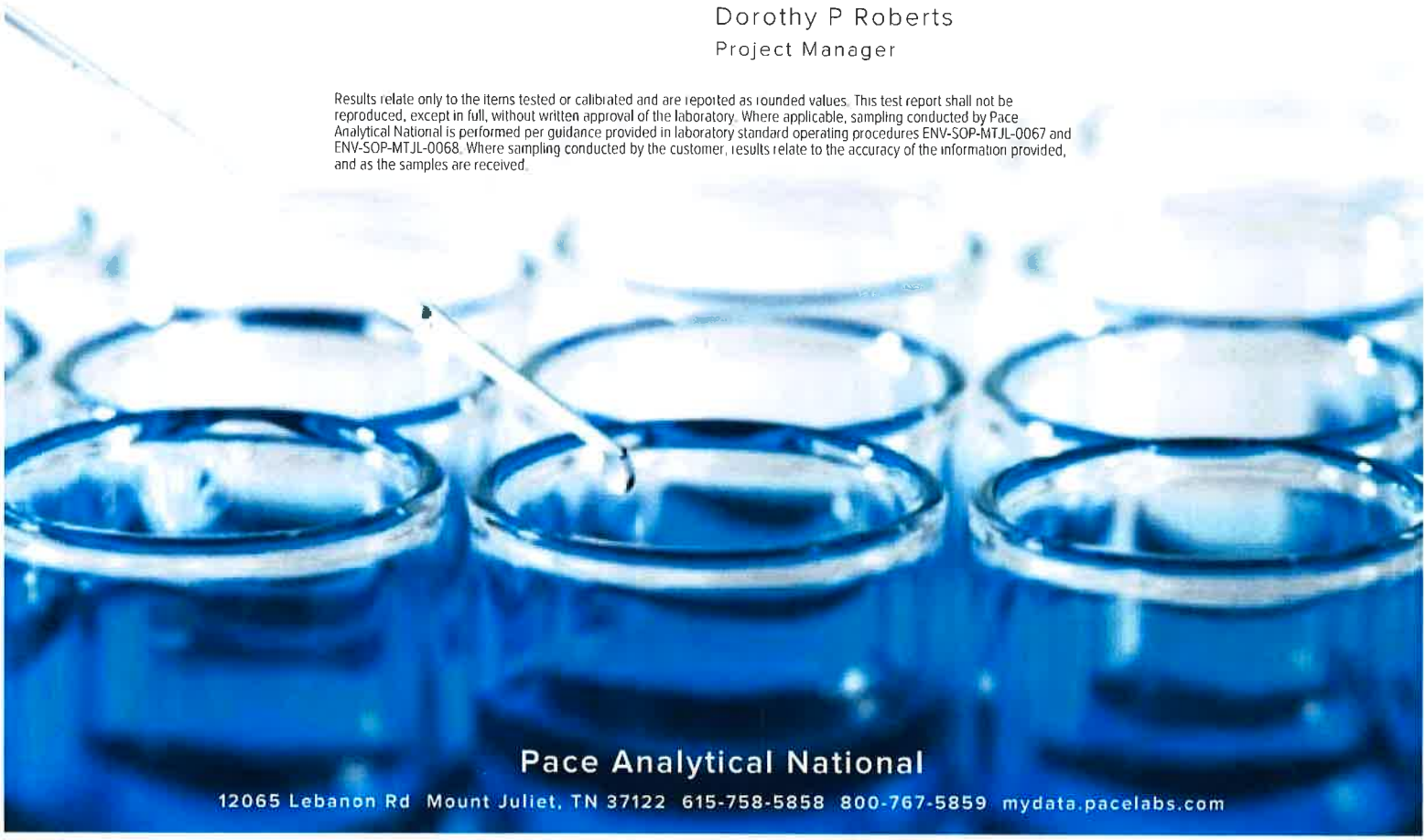

TABLE OF CONTENTS

SAMPLE SUMMARY

SCHREIBER IRRIGATION WEEK 4 L1789862-01 WW

Collected by: Corey Mullin
Collected date/time: 10/17/24 09:53
Received date/time: 10/17/24 12:57

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2387681	1	10/23/24 14:02	10/23/24 14:02	EIG	Allen, TX
Calculated Results	WG2387938	1	10/25/24 09:47	10/25/24 09:47	JTM	Mt. Juliet, TN
Gravimetric Analysis by Method 2540C	WG2384442	1	10/17/24 17:21	10/17/24 18:35	QQT	Allen, TX
Gravimetric Analysis by Method 2540D	WG2386142	1	10/21/24 04:50	10/21/24 06:06	QQT	Allen, TX
Wet Chemistry by Method 1664B	WG2388420	1	10/24/24 08:22	10/24/24 12:11	TJL	Mt. Juliet, TN
Wet Chemistry by Method 2320B	WG2386264	1	10/21/24 09:22	10/21/24 09:22	JBS	Allen, TX
Wet Chemistry by Method 300.0	WG2384266	1	10/17/24 15:30	10/17/24 15:30	SMC	Allen, TX
Wet Chemistry by Method 300.0	WG2384266	1	10/17/24 15:45	10/17/24 15:45	SMC	Allen, TX
Wet Chemistry by Method 300.0	WG2384266	1	10/17/24 17:06	10/17/24 17:06	SMC	Allen, TX
Wet Chemistry by Method 300.0	WG2384266	1	10/17/24 17:21	10/17/24 17:21	SMC	Allen, TX
Wet Chemistry by Method 3500Cr-B	WG2383960	1	10/17/24 16:19	10/17/24 16:19	KCM	Allen, TX
Wet Chemistry by Method 351.2	WG2386892	10	10/22/24 10:48	10/22/24 21:00	EIG	Allen, TX
Wet Chemistry by Method 360.1	WG2384786	1	10/18/24 09:10	10/18/24 09:10	SKW	Allen, TX
Wet Chemistry by Method 4500Cl G-2011	WG2386049	1	10/22/24 16:11	10/22/24 16:11	CAH	Mt. Juliet, TN
Wet Chemistry by Method 4500CN-E	WG2384784	1	10/22/24 09:30	10/22/24 17:17	KCM	Allen, TX
Wet Chemistry by Method 4500CN-G	WG2388465	1	10/24/24 16:31	10/24/24 16:31	KCM	Allen, TX
Wet Chemistry by Method 4500P-E	WG2386234	50	10/21/24 16:28	10/21/24 16:28	SMC	Allen, TX
Wet Chemistry by Method 5210 B-2016	WG2384055	1	10/17/24 15:28	10/22/24 10:46	JBS	Allen, TX
Wet Chemistry by Method 5210 B-2016	WG2384798	1	10/18/24 16:48	10/23/24 11:38	SKW	Allen, TX
Wet Chemistry by Method 5220D	WG2386267	2	10/21/24 12:32	10/21/24 13:43	JBS	Allen, TX
Wet Chemistry by Method 5310C	WG2386939	1	10/23/24 00:34	10/23/24 00:34	EIG	Allen, TX
Wet Chemistry by Method SM 4500-H+B	WG2386894	1	10/22/24 09:40	10/22/24 09:40	JBS	Allen, TX
Wet Chemistry by Method SM4500NH3H	WG2387681	1	10/23/24 14:02	10/23/24 14:02	EIG	Allen, TX
Mercury by Method 245.1	WG2384904	1	10/20/24 16:39	10/21/24 13:04	AKB	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG2387938	1	10/24/24 17:22	10/25/24 09:47	JTM	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Dorothy P Roberts
Project Manager

Sample Delivery Group (SDG) Narrative

Analysis was filtered in the laboratory.

Lab Sample ID	Project Sample ID	Method
L1789862-01	SCHREIBER IRRIGATION WEEK 4	3500Cr-B

Calculated Results

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chromium,Trivalent	ND		0.00300	1	10/25/2024 09:47	WG2387938
Organic Nitrogen	13.1		0.100	1	10/23/2024 14:02	WG2387681

Gravimetric Analysis by Method 2540C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Total Dissolved Solids	3840		250	1	10/17/2024 18:35	WG2384442

Gravimetric Analysis by Method 2540D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Suspended Solids	347		41.7	1	10/21/2024 06:06	WG2386142

Wet Chemistry by Method 1664B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Oil & Grease (Hexane Extr)	ND		5.00	1	10/24/2024 12:11	WG2388420

Wet Chemistry by Method 2320B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	825		20.0	1	10/21/2024 09:22	WG2386264

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	1370		0.800	1	10/17/2024 17:21	WG2384266
Fluoride	ND		0.500	1	10/17/2024 15:30	WG2384266
Nitrate	31.6	J5	0.500	1	10/17/2024 15:45	WG2384266
Sulfate	183	J5	0.700	1	10/17/2024 17:06	WG2384266

Wet Chemistry by Method 3500Cr-B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chromium,Hexavalent	ND		0.00300	1	10/17/2024 16:19	WG2383960

Wet Chemistry by Method 351.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Kjeldahl Nitrogen, TKN	13.2		2.50	10	10/22/2024 21:00	WG2386892

Wet Chemistry by Method 360.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Oxygen	8.86	T8	1	1	10/18/2024 09:10	WG2384786

Wet Chemistry by Method 4500Cl G-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chlorine,residual	ND	T8	0.100	1	10/22/2024 16:11	WG2386049

SAMPLE RESULTS - 01
L1789862

Wet Chemistry by Method 4500CN-E

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.0100	1	10/22/2024 17:17	WG2384784

Wet Chemistry by Method 4500CN-G

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide,amenable	ND		0.0100	1	10/24/2024 16:31	WG2388465

Wet Chemistry by Method 4500P-E

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Phosphorus,Total	10.3		2.50	50	10/21/2024 16:28	WG2386234

Wet Chemistry by Method 5210 B-2016

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
BOD	ND		60.0	1	10/22/2024 10:46	WG2384055
CBOD	ND	B1	60.0	1	10/23/2024 11:38	WG2384798

Wet Chemistry by Method 5220D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	576		70.0	2	10/21/2024 13:43	WG2386267

Wet Chemistry by Method 5310C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	15.1		0.700	1	10/23/2024 00:34	WG2386939

Wet Chemistry by Method SM 4500-H+B

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	8.20	T8	1	10/22/2024 09:40	WG2386894

Sample Narrative:
L1789862-01 WG2386894: 8.2 at 20.2C

Wet Chemistry by Method SM4500NH3H

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Ammonia Nitrogen	0.106		0.100	1	10/23/2024 14:02	WG2387681

Mercury by Method 245.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	10/21/2024 13:04	WG2384904

SAMPLE RESULTS - 01
L1789862

Metals (ICP) by Method 200.7

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum	0.898		0.200	1	10/25/2024 09:47	WG2387938
Antimony	ND		0.0100	1	10/25/2024 09:47	WG2387938
Arsenic	ND		0.0100	1	10/25/2024 09:47	WG2387938
Barium	0.0362		0.00500	1	10/25/2024 09:47	WG2387938
Beryllium	ND		0.00200	1	10/25/2024 09:47	WG2387938
Cadmium	ND		0.00200	1	10/25/2024 09:47	WG2387938
Chromium	ND		0.0100	1	10/25/2024 09:47	WG2387938
Copper	ND		0.0100	1	10/25/2024 09:47	WG2387938
Lead	ND		0.00500	1	10/25/2024 09:47	WG2387938
Nickel	ND		0.0100	1	10/25/2024 09:47	WG2387938
Selenium	ND		0.0100	1	10/25/2024 09:47	WG2387938
Silver	ND		0.00500	1	10/25/2024 09:47	WG2387938
Thallium	ND		0.0100	1	10/25/2024 09:47	WG2387938
Zinc	ND		0.0500	1	10/25/2024 09:47	WG2387938

Method Blank (MB)

(MB) R4134965-1 10/17/24 18:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Total Dissolved Solids	U		25.0	25.0

L1788671-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1788671-03 10/17/24 18:35 • (DUP) R4134965-3 10/17/24 18:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Total Dissolved Solids	510	543	1	6.27		10

L1788671-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1788671-04 10/17/24 18:35 • (DUP) R4134965-4 10/17/24 18:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Total Dissolved Solids	896	567	1	45.0	J3	10

Laboratory Control Sample (LCS)

(LCS) R4134965-2 10/17/24 18:35

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Total Dissolved Solids	2260	2530	112	85.0-115	

Method Blank (MB)

(MB) R4135359-1 10/21/24 06:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Suspended Solids	U		2.50	2.50

L1790285-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1790285-01 10/21/24 06:06 • (DUP) R4135359-3 10/21/24 06:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Suspended Solids	10700	10700	1	0.373		10

L1790285-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1790285-02 10/21/24 06:06 • (DUP) R4135359-4 10/21/24 06:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Suspended Solids	760	750	1	1.32		10

Laboratory Control Sample (LCS)

(LCS) R4135359-2 10/21/24 06:06

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Suspended Solids	854	880	103	85.0-115	

Method Blank (MB)

(MB) R4137035-1 10/24/24 12:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Oil & Grease (Hexane Extr)	U		1.40	5.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4137035-2 10/24/24 12:11 • (LCSD) R4137035-3 10/24/24 12:11

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Oil & Grease (Hexane Extr)	40.0	38.9	36.1	97.3	90.3	78.0-114			7.47	20

L1789898-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1789898-02 10/24/24 12:11 • (MS) R4137035-4 10/24/24 12:11

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Oil & Grease (Hexane Extr)	40.0	ND	27.4	68.6	1	78.0-114	J6

Cp
Tc
Ss
Cn
Sr
Qc
Gl
Al
Sc

Method Blank (MB)

(MB) R4135421-1 10/21/24 09:22

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Alkalinity	U		20.0	20.0

L1789288-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1789288-01 10/21/24 09:22 • (DUP) R4135421-3 10/21/24 09:22

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Alkalinity	203	200	1	1.24		20

Laboratory Control Sample (LCS)

(LCS) R4135421-2 10/21/24 09:22

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Alkalinity	250	240	96.0	90.0-110	

Cp
Tc
Ss
Cn
Sr
Qc
Gl
Al
Sc

QUALITY CONTROL SUMMARY

L1789862-01

Method Blank (MB)

(MB) R4134394-1 10/17/24 14:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Chloride	0.366	J	0.325	0.800
Fluoride	U		0.0947	0.500
Nitrate	U		0.379	0.500
Sulfate	U		0.211	0.700

Laboratory Control Sample (LCS)

(LCS) R4134394-2 10/17/24 14:45

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Chloride	5.00	5.36	107	90.0-110	
Fluoride	5.00	5.37	107	90.0-110	
Nitrate	5.00	5.32	106	90.0-110	
Sulfate	5.00	5.47	109	90.0-110	

L1789862-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789862-01 10/17/24 17:21 • (MS) R4134394-3 10/17/24 17:36 • (MSD) R4134394-4 10/17/24 17:51

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Chloride	1000	1370	2470	2470	110	110	1	90.0-110			0.0211	20

L1789862-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789862-01 10/17/24 15:30 • (MS) R4134394-5 10/17/24 18:36 • (MSD) R4134394-6 10/17/24 18:50

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Fluoride	5.00	ND	5.18	5.25	98.8	100	1	90.0-110			1.36	20

L1789862-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789862-01 10/17/24 15:45 • (MS) R4134394-7 10/17/24 19:05 • (MSD) R4134394-8 10/17/24 19:20

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Nitrate	50.0	31.6	110	110	156	158	1	90.0-110	J5	J5	0.542	20

QUALITY CONTROL SUMMARY

L1789862-01

L1789862-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789862-01 10/17/24 17:06 • (MS) R4134394-9 10/17/24 19:35 • (MSD) R4134394-10 10/17/24 19:50

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	100	183	464	460	281	277	1	90.0-110	EJ5	EJ5	0.853	20

Method Blank (MB)

(MB) R4134190-1 10/17/24 16:19

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Chromium,Hexavalent	U		0.00200	0.00300

Laboratory Control Sample (LCS)

(LCS) R4134190-2 10/17/24 16:19

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Chromium,Hexavalent	0.200	0.192	95.8	85.0-115	

L1787303-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1787303-01 10/17/24 16:19 • (MS) R4134190-3 10/17/24 16:19 • (MSD) R4134190-4 10/17/24 16:19

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Chromium,Hexavalent	0.200	ND	0.187	0.188	93.7	94.1	1	85.0-115			0.462	20

L1787826-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1787826-01 10/17/24 16:19 • (MS) R4134190-5 10/17/24 16:19 • (MSD) R4134190-6 10/17/24 16:19

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Chromium,Hexavalent	0.200	ND	0.166	0.169	83.2	84.5	1	85.0-115	J6	J6	1.55	20

QUALITY CONTROL SUMMARY

L1789862-01

Method Blank (MB)

(MB) R4136539-1 10/22/24 20:51

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Kjeldahl Nitrogen, TKN	U		0.140	0.250

Laboratory Control Sample (LCS)

(LCS) R4136539-3 10/22/24 21:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Kjeldahl Nitrogen, TKN	4.00	3.92	98.0	90 0-110	

L1789286-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789286-01 10/22/24 20:55 • (MS) R4136539-4 10/22/24 21:19 • (MSD) R4136539-5 10/22/24 21:21

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Kjeldahl Nitrogen, TKN	4.00	ND	3.68	3.57	92.0	89.3	1	90.0-110		J6	3.03	20

L1789310-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789310-01 10/22/24 20:58 • (MS) R4136539-6 10/22/24 21:22 • (MSD) R4136539-7 10/22/24 21:23

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Kjeldahl Nitrogen, TKN	4.00	ND	3.94	4.01	98.5	100	1	90.0-110			1.76	20

L1789862-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1789862-01 10/18/24 09:10 • (DUP) R4134425-1 10/18/24 09:10

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Oxygen	8.86	8.95	1	1.01	T8	10

Method Blank (MB)

(MB) R4135983-1 10/22/24 16:05

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Chlorine,residual	U		0.0415	0.100

L1789158-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1789158-01 10/22/24 16:10 • (DUP) R4135983-4 10/22/24 16:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Chlorine,residual	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4135983-2 10/22/24 16:10 • (LCSD) R4135983-3 10/22/24 16:10

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Chlorine,residual	1.00	0.925	0.924	92.5	92.4	85.0-115			0.108	20

QUALITY CONTROL SUMMARY

L1789862-01

Method Blank (MB)

(MB) R4136604-1 10/22/24 17:17

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00730	0.0100

Laboratory Control Sample (LCS)

(LCS) R4136604-2 10/22/24 17:17

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Cyanide	0.100	0.0993	99.3	85.0-115	

L1790449-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790449-02 10/22/24 17:17 • (MS) R4136604-3 10/22/24 17:17 • (MSD) R4136604-4 10/22/24 17:17

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0898	0.0977	89.8	97.7	1	85.0-115			8.33	20

L1790449-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790449-06 10/22/24 17:17 • (MS) R4136604-5 10/22/24 17:17 • (MSD) R4136604-6 10/22/24 17:17

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0929	0.0875	84.9	79.4	1	85.0-115	J6	J6	6.02	20

Method Blank (MB)

(MB) R4135492-1 10/21/24 16:28

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Phosphorus,Total	U		0.0152	0.0500

Laboratory Control Sample (LCS)

(LCS) R4135492-2 10/21/24 16:28

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Phosphorus,Total	0.500	0.508	102	80.0-120	

L1789270-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789270-02 10/21/24 16:28 • (MS) R4135492-3 10/21/24 16:29 • (MSD) R4135492-4 10/21/24 16:29

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Phosphorus,Total	0.500	0.0681	0.580	0.582	102	103	1	80.0-120			0.399	20

L1790304-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790304-01 10/21/24 16:29 • (MS) R4135492-5 10/21/24 16:29 • (MSD) R4135492-6 10/21/24 16:29

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Phosphorus,Total	0.500	5.22	5.55	5.67	67.1	90.3	10	80.0-120	V		2.06	20

QUALITY CONTROL SUMMARY

L1789862-01

Method Blank (MB)

(MB) R4135748-1 10/22/24 10:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
BOD	U		0.200	0.200

L1789925-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1789925-03 10/22/24 10:56 • (DUP) R4135748-3 10/22/24 10:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
BOD	179	199	1	10.5		20

Laboratory Control Sample (LCS)

(LCS) R4135748-2 10/22/24 10:20

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
BOD	198	201	102	85-115	

QUALITY CONTROL SUMMARY

L1789862-01

Method Blank (MB)

(MB) R4136472-1 10/23/24 11:29

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
CBOD	0.210	B1	0.200	0.200

L1790358-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1790358-02 10/23/24 12:24 • (DUP) R4136472-3 10/23/24 12:29

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
CBOD	5.97	5.61	1	6.22		20

Laboratory Control Sample (LCS)

(LCS) R4136472-2 10/23/24 11:34

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
CBOD	198	198	100	85-115	

QUALITY CONTROL SUMMARY

L1789862-01

Method Blank (MB)

(MB) R4135396-1 10/21/24 13:43

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
COD	U		16.1	35.0

Laboratory Control Sample (LCS)

(LCS) R4135396-2 10/21/24 13:43

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
COD	500	525	105	80.0-120	

L1789313-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789313-01 10/21/24 13:43 • (MS) R4135396-3 10/21/24 13:43 • (MSD) R4135396-4 10/21/24 13:43

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	57.8	527	537	93.8	95.9	1	80.0-120			1.97	20

L1790264-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790264-01 10/21/24 13:43 • (MS) R4135396-5 10/21/24 13:43 • (MSD) R4135396-6 10/21/24 13:43

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	ND	508	520	97.5	100	1	80.0-120			2.44	20

Method Blank (MB)

(MB) R4136547-1 10/22/24 18:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
TOC (Total Organic Carbon)	U		0.270	0.700

Laboratory Control Sample (LCS)

(LCS) R4136547-2 10/22/24 18:32

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
TOC (Total Organic Carbon)	10.0	10.3	103	90.0-110	

L1789289-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789289-01 10/22/24 18:55 • (MS) R4136547-3 10/22/24 19:42 • (MSD) R4136547-4 10/22/24 20:05

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
TOC (Total Organic Carbon)	10.0	5.89	15.9	15.7	100	97.9	1	80.0-120			1.46	20

L1789324-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789324-01 10/22/24 23:33 • (MS) R4136547-5 10/22/24 20:28 • (MSD) R4136547-6 10/22/24 20:52

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
TOC (Total Organic Carbon)	10.0	4.65	14.6	14.7	99.8	100	1	80.0-120			0.273	20

QUALITY CONTROL SUMMARY

L1789862-01

L1789862-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1789862-01 10/22/24 09:40 • (DUP) R4135740-2 10/22/24 09:40

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.20	8.21	1	0.122		20

Sample Narrative:
OS: 8.2 at 20.2C
DUP: 8.21 at 20.1C

Laboratory Control Sample (LCS)

(LCS) R4135740-1 10/22/24 09:40

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	6.00	5.96	99.3	99.0-101	

Sample Narrative:
LCS: 5.96 at 21.4C

Cp
Tc
Ss
Cn
Sr
Qc
Gl
Al
Sc

Method Blank (MB)

(MB) R4136560-1 10/23/24 13:25

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Ammonia Nitrogen	U		0.0280	0.100

Laboratory Control Sample (LCS)

(LCS) R4136560-2 10/23/24 13:27

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Ammonia Nitrogen	5.00	5.25	105	80.0-120	

L1788923-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1788923-02 10/23/24 13:36 • (MS) R4136560-3 10/23/24 13:29 • (MSD) R4136560-4 10/23/24 13:30

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Ammonia Nitrogen	5.00	0.582	5.50	5.51	98.4	98.6	1	80.0-120			0.182	20

L1788932-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1788932-01 10/23/24 13:39 • (MS) R4136560-5 10/23/24 13:32 • (MSD) R4136560-6 10/23/24 13:34

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Ammonia Nitrogen	5.00	0.368	5.26	5.27	97.8	98.0	1	80.0-120			0.190	20

Method Blank (MB)

(MB) R4135420-1 10/21/24 11:47

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Mercury	U		0.000130	0.000200

Laboratory Control Sample (LCS)

(LCS) R4135420-2 10/21/24 11:49

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Mercury	0.00300	0.00292	97.2	85.0-115	

L1789854-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789854-01 10/21/24 12:28 • (MS) R4135420-4 10/21/24 12:33 • (MSD) R4135420-5 10/21/24 12:35

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.00300	ND	0.00306	0.00313	102	104	1	70.0-130			2.30	20

L1790075-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790075-06 10/21/24 12:38 • (MS) R4135420-6 10/21/24 12:40 • (MSD) R4135420-7 10/21/24 12:43

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.00300	ND	0.00313	0.00314	104	105	1	70.0-130			0.564	20

Method Blank (MB)

(MB) R4137739-1 10/25/24 09:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum	U		0.0592	0.200
Antimony	0.00716	J	0.00398	0.0100
Arsenic	U		0.00645	0.0100
Barium	U		0.000795	0.00500
Beryllium	U		0.000401	0.00200
Cadmium	U		0.000552	0.00200
Chromium	U		0.00163	0.0100
Copper	U		0.00226	0.0100
Lead	0.00230	J	0.00227	0.00500
Nickel	U		0.00182	0.0100
Selenium	U		0.00616	0.0100
Silver	U		0.00131	0.00500
Thallium	U		0.00460	0.0100
Zinc	U		0.00578	0.0500

Laboratory Control Sample (LCS)

(LCS) R4137739-2 10/25/24 09:04

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum	10.0	10.2	102	85.0-115	
Antimony	1.00	1.00	100	85.0-115	
Arsenic	1.00	0.995	99.5	85.0-115	
Barium	1.00	1.01	101	85.0-115	
Beryllium	1.00	1.00	100	85.0-115	
Cadmium	1.00	0.951	95.1	85.0-115	
Chromium	1.00	0.986	98.6	85.0-115	
Copper	1.00	0.904	90.4	85.0-115	
Lead	1.00	1.01	101	85.0-115	
Nickel	1.00	0.969	96.9	85.0-115	
Selenium	1.00	1.03	103	85.0-115	
Silver	0.200	0.199	99.7	85.0-115	
Thallium	1.00	0.994	99.4	85.0-115	
Zinc	1.00	1.02	102	85.0-115	

QUALITY CONTROL SUMMARY

L1789862-01

L1788784-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1788784-03 10/25/24 09:05 • (MS) R4137739-4 10/25/24 09:09 • (MSD) R4137739-5 10/25/24 09:10

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	10.0	ND	9.69	10.1	96.9	101	1	70.0-130			4.27	20
Antimony	1.00	ND	0.945	0.992	94.5	99.2	1	70.0-130			4.92	20
Arsenic	1.00	0.0150	0.983	1.02	96.8	100	1	70.0-130			3.33	20
Barium	1.00	0.0106	0.977	1.02	96.6	101	1	70.0-130			4.13	20
Beryllium	1.00	ND	0.965	1.01	96.5	101	1	70.0-130			4.06	20
Cadmium	1.00	ND	0.933	0.967	93.2	96.7	1	70.0-130			3.64	20
Chromium	1.00	ND	0.955	0.987	95.5	98.7	1	70.0-130			3.28	20
Copper	1.00	ND	0.889	0.917	88.9	91.7	1	70.0-130			3.03	20
Lead	1.00	ND	0.972	1.01	97.2	101	1	70.0-130			4.23	20
Nickel	1.00	ND	0.941	0.980	94.1	98.0	1	70.0-130			3.99	20
Selenium	1.00	ND	0.991	1.03	99.1	103	1	70.0-130			3.43	20
Silver	0.200	ND	0.193	0.200	96.3	99.8	1	70.0-130			3.58	20
Thallium	1.00	ND	0.960	0.991	96.0	99.1	1	70.0-130			3.18	20
Zinc	1.00	ND	1.01	1.05	97.8	102	1	70.0-130			3.76	20

L1790169-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790169-02 10/25/24 09:12 • (MS) R4137739-6 10/25/24 09:14 • (MSD) R4137739-7 10/25/24 09:15

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	10.0	ND	9.83	9.81	98.3	98.1	1	70.0-130			0.220	20
Antimony	1.00	ND	0.921	0.933	92.1	93.3	1	70.0-130			1.30	20
Arsenic	1.00	0.0154	1.02	1.02	100	101	1	70.0-130			0.440	20
Barium	1.00	0.280	1.24	1.26	96.3	98.3	1	70.0-130			1.59	20
Beryllium	1.00	ND	0.981	0.985	98.1	98.5	1	70.0-130			0.364	20
Cadmium	1.00	ND	0.954	0.967	95.3	96.6	1	70.0-130			1.36	20
Chromium	1.00	ND	0.954	0.965	95.0	96.2	1	70.0-130			1.22	20
Copper	1.00	ND	0.936	0.945	93.6	94.5	1	70.0-130			0.893	20
Lead	1.00	ND	0.982	0.990	98.2	99.0	1	70.0-130			0.818	20
Nickel	1.00	ND	0.961	0.969	95.8	96.7	1	70.0-130			0.872	20
Selenium	1.00	ND	1.02	1.04	102	104	1	70.0-130			1.74	20
Silver	0.200	ND	0.201	0.203	100	101	1	70.0-130			1.04	20
Thallium	1.00	ND	0.967	0.969	96.7	96.9	1	70.0-130			0.266	20
Zinc	1.00	ND	0.992	1.01	98.6	99.9	1	70.0-130			1.37	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B1	The blank depletion was greater than the recommended maximum depletion of 0.2mg/L.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

Arkansas	88-0647	Kansas	E10388
Florida	E871118	Texas	T104704232-23-39
Iowa	408	Oklahoma	8727
Louisiana	30686		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Enviro-Ag Engineering

3404 Airway Blvd.
Amarillo, TX 79118

Billing Information:
Bryan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Pres Chk

Report to:
Jourdan Mullin

Email To: **cmullin@enviroag.com;rgeorge@enviroag.com;mshoemaker@enviroag.com;jmullin@enviroag.com**

Project Description:
Pollutant Permit

City/State Collected:

Please Circle: PT MT CT ET

Phone: **254-965-3500**

Client Project #

Lab Project #

Collected by (print): Corey Mullin

Site/Facility ID #: Schreiber

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALLALK 125mlHDPE-NoPres	ALLBOD 1L-HDPE NoPres	ALLCBOD 1L-HDPE NoPres	ALLCN/ CNAM 250mlHDPE-NaOH	ALLOGHEX 1L-Amb-Add HCl	ALLPHOS 500mlHDPE-Add H2SO4	ALLTDS 1L-HDPE NoPres	ALLTOC 250mlAmb-H2SO4	ALLTSS 1L-HDPE-NoPres	CHLORR 250mlHDPE-NoPres	Remarks	Sample # (lab only)
Schreiber Week 4	Grab	WW		10/17/24	9:59AM	15	X	X	X	X	X	X	X	X	X	X	-01	

Analysis / Container / Preservative

Chain of Custody Page 13 of 16

Pace Analytical
190 Allen, TX 75013

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG #

Table # L178982

Acctnum: **DSENVIGDTX**

Template: **T258910**

Prelogin: **P1096614**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: Field TEMP 53°
Metals, Al,Sb,As,Ba,Be,Cd,Cr,CR6,CR3,Cu,Pb,Ni,Se,Ag,Tl,Zn, Hg

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP	__Y __N
COC Signed/Accurate:		__Y __N
Bottles arrive intact:		__Y __N
Correct bottles used:		__Y __N
Sufficient volume sent:		__Y __N
If Applicable		
VOA Zero Headspace:		__Y __N
Preservation Correct/Checked:		__Y __N
RAD Screen <0.5 mR/hr:		__Y __N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Corey Mullin	10/17/24	10:22	John Mullin		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
John Mullin	10/17/24	1257	Arturo Marsen Ramos	PACE 10/17/24 1257	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK

Company Name/Address:
Enviro-Ag Engineering

3404 Airway Blvd.
Amarillo, TX 79118

Billing Information:
Bryan Mullin
3404 Airway Blvd.
Amarillo, TX 79118

Pres Chk

Report to:
Jourdan Mullin

Email To: **cmullin@enviroag.com;rgeorge@enviroag.com;mshoemaker@enviroag.com;jmullin@enviroag.com**

Project Description:
Pollutant Permit

City/State Collected:

Please Circle: PT MT CT ET

Phone: **254-965-3500**

Client Project #

Lab Project #

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Date Results Needed

Quote #

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Metals ICP site spec 250mlHDPE HNO3	WetChem COD,NH3 TKN 500mlHDPE-Add H2SO4	WetChem CR6, CR3, DO 500mlHDPE-NoPres	WetChem anioins,pH 125mlHDPE-NoPres	Remarks	Sample # (lab only)
Schreiber weekly	Grab	WW		10/17/24	0953	15	X	X	X	X		-01

Analysis / Container / Preservative

Chain of Custody Page 14 of 16

Pace Analytical®
190 Allen, TX 75013

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SDG #

Table # 178962

Acctnum: **DSENVIGDTX**

Template: **T258910**

Prelogin: **P1096614**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: **Field TEMP ____**
Metals, Al,Sb,As,Ba,Be,Cd,Cr,CR6,CR3,Cu,Pb,Ni,Se,Ag,Tl,Zn, Hg

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP	__Y __N
COC Signed/Accurate:		__Y __N
Bottles arrive intact:		__Y __N
Correct bottles used:		__Y __N
Sufficient volume sent:		__Y __N
If Applicable		
VOA Zero Headspace:		__Y __N
Preservation Correct/Checked:		__Y __N
RAD Screen <0.5 mR/hr:		__Y __N

	Date:	Time:		
Relinquished by : (Signature)			Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by : (Signature) John Mullin	10/17/24	1257	Received by: (Signature) Arturo Ramos	Temp: °C Bottles Received: 10/17/24 1257
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: Enviro-Ag Engineering Project Work order (place label): L1789802

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☑ LSO ☐ PACE ☐ Other: _____

Tracking #: _____

Custody Seal on Cooler/Box: Yes ☐ No ☑

Received on ice: Wet ☑ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: 1219 Cooler Temp °C: 1.8 (Recorded) -0.2 (Correction Factor) 1.6 (Actual)

Receiving Lab 2 Thermometer Used: _____ Cooler Temp °C: _____ (Recorded) _____ (Correction Factor) _____ (Actual)

Chain of Custody relinquished	Yes ☑ No ☐
Sampler name & signature on COC	Yes ☑ No ☐
Short HT analyses (<72 hrs)	Yes ☑ No ☐

Temperature should be above freezing to 6°C unless collected same day as receipt in which evidence of cooling is acceptable.

Triage Person: AR Date: 10/17

Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips: 04402007	Yes ☑ No ☐ NA ☐
Residual Chlorine Present Cl Strips: 148e0	Yes ☐ No ☑ NA ☐
Sulfide Present Lead Acetate Strips: 14807	Yes ☐ No ☑ NA ☐
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☐ NA ☑
Project sampled in USDA Regulated Area outside of Texas State Sampled: _____	Yes ☐ No ☐ NA ☑
Non-Conformance(s):	Yes ☐ No ☑

Login Person: AR Date: 10/17

Labeling Person (if different than log-in): _____ Date: _____

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

Corporate Office:
3404 Airway Blvd.
Amarillo TX 79118

Central Texas:
9855 FM 847
Dublin TX 76446

New Mexico:
203 East Main Street
Artesia NM 88210

January 20, 2025

TCEQ
Attn: Leah Whallon
Applications Review and Processing Team, MC-148
PO Box 13087
Austin, TX 78711-3087

Re: Requested Information, New TLAP Permit Application
WQ#5478 (RN102073137) Vanden Berge Farms – Erath County

Dear Ms. Whallon,

This letter is in response to your January 9, 2025, email regarding the above-referenced facility. From your email specifically:

1. Per a pre-application meeting with the TCEQ and Corey Mullin with Enviro-Ag Engineering, Inc. It was decided to list Schreiber Foods, Inc. on the permit as the owner of the facility.
2. Attached are the electronic copy of the full size USGS quadrangle maps.
3. Attached is the revised technical report1.0, Item 4-Outfall Flow Information Table.
4. Attached is the Spanish NORI.

If you have any questions, please do not hesitate to contact our office.

Respectfully Submitted,

Jourdan Mullin

Enviro-Ag Engineering, Inc.

Item 4. Outfall/Disposal Method Information (Instructions, Page 42)

Complete the following tables to describe the location and wastewater discharge or disposal operations for each outfall for discharge, and for each point of disposal for TLAP operations.

If there are more outfalls/points of disposal at the facility than the spaces provided, copies of pages 6 and/0r numbered accordingly (i.e., page 6a, 6b, etc.) may be used to provide information on the additional outfalls.

For TLAP applications: Indicate the disposal method and each individual irrigation area **I**, evaporation pond **E**, or subsurface drainage system **S** by providing the appropriate letter designation for the disposal method followed by a numerical designation for each disposal area in the space provided for **Outfall** number (e.g. **E1** for evaporation pond 1, **I2** for irrigation area No. 2, etc.).

Outfall Longitude and Latitude

Outfall No.	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)
I1	32.252953°	-98.175865°
I2	32.250234°	-98.181426°
I3	32.257028°	-98.175490°
I4	32.261027°	-98.179119°
I5	32.256366°	-98.181642°

Outfall Location Description

Outfall No.	Location Description

Description of Sampling Point(s) (if different from Outfall location)

Outfall No.	Description of sampling point

Outfall Flow Information – Permitted and Proposed

Outfall No.	Permitted Daily Avg Flow (MGD)	Permitted Daily Max Flow (MGD)	Proposed Daily Avg Flow (MGD)	Proposed Daily Max Flow (MGD)	Anticipated Discharge Date (mm/dd/yy)
I1-I5			192,000 intermittent & flow Variable	No limit	6/1/2025

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF TEXAS
TEXAS WATER COMMISSION
BRAZOS RIVER AUTHORITY CITY OF STEPHENVILLE

KNOB HILL QUADRANGLE
TEXAS-ERATH CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

6348 IV NE (TURKEY CREEK)
6348 I NW (MORGAN MILL)
6348 I NE (BLUFF DALE NE)
6348 IV SE (HUCKABAY)
6348 II NW (STEPHENVILLE)
6348 II NE (JOHNSVILLE)
(BUNYAN)

MORGAN MILL 3.8 MI.
MINERAL WELLS 32 MI.
18 MI. TO U.S. 80
STEPHENVILLE 2.8 MI.
2.2 MI. TO U.S. 377
STEPHENVILLE 2.5 MI.
STEPHENVILLE 3 MI.
DUBLIN 15 MI.
18 MI. TO U.S. 80
HUCKABAY 4.9 MI.
LINGLEVILLE 9.9 MI.
BLUFF DALE 2.7 MI.
GRANBURY 25 MI.

1 800 000 FEET
1 770 000 FEET
250 000 FEET
220 000 FEET

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1960–1961. Field checked 1961

Polyconic projection. 1927 North American datum
10,000-foot based on Texas coordinate system, north central zone
1000-meter Universal Transverse Mercator grid ticks, zone 14 shown in blue

Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked

Revisions shown in purple and woodland compiled from aerial photographs taken 1976 and other source data
This information not field checked. Map edited 1979

UTM GRID AND 1979 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET
MN
GN
0°26'
8 MILS
7½°
133 MILS

SCALE 1:24 000
1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER

CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5 FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

TEXAS
QUADRANGLE LOCATION

3298–142

ROAD CLASSIFICATION
Heavy-duty
Medium-duty
Light-duty
Unimproved dirt
U.S. Route
State Route

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1979

JUL 18 1979

USGS
Historical File
Topographic Division

KNOB HILL, TEX.
N3215–W9807.5/7.5
1961
PHOTOREVISED 1979
AMS 6348 I SW–SERIES V882

2050

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF TEXAS
TEXAS WATER COMMISSION
BRAZOS RIVER AUTHORITY CITY OF STEPHENVILLE

STEPHENVILLE QUADRANGLE
TEXAS–ERATH CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

6348 IV SE (HUCKABAY)
6348 I SE (BLUFF DALE)
6348 III NE (DUBLIN)
6348 II NE (JOHNSVILLE)
6348 I SW (KNOB HILL)

LINGLEVILLE 11 MI.
21 MI. TO U.S. 80
HUCKABAY 8 MI.
MINERAL WELLS 39 MI.
MORGAN MILL 9 MI.
FT. WORTH 64 MI.
BLUFF DALE 11 MI.
LINGLEVILLE 8 MI.
COMANCHE 31 MI.
DUBLIN 10 MI.
BLUFF DALE 15 MI.
THREE WAY 6.4 MI.
GLEN ROSE 24 MI.
DUBLIN 6.2 MI.
HARBIN 14 MI.
ALEXANDER 5.5 MI.
HICO 11 MI.
HAMILTON 33 MI.
SELDEN 1.4 MI.

STEPHENVILLE
(BM 1277)

WDA #2

1-Mile From Property Boundary

Texas A & M College Substation No 20

Tarleton State College Farm

Tarleton State College

Stephenville Municipal Airport

Welcome Valley

Valley Grove Ch

Valley Grove Cem

Mt Olive Cem

East Memorial Cem

Drive-in Theater

Golf Course

Gas

Water

Hospital

City Hall

P.O.

High Sch

Chamberlain-Ward Sch

Central Ward Sch

Park

Stadium

West End Cem

Gaging Sta

National Guard Armory

Pumping Sta

Sewage Disposal

Substation

Oil Well

Johnson Cem

Rocky Point Ch

Pleasant Hill Ch

Indian Creek Cem

Ogan Cem

Provident Ch

Borrow Pits

Borrow Pit

Alford Cem

BM 1307

BM 1236

BM 1389

BM 1289

1223

1208

North Bosque River

South Fork North Bosque River

Dry Branch

Bosque River

Pole Hollow Branch

Indian Creek

Alarm Creek

Live Oak Creek

Sims Creek

SANTA FE

ATCHISON TOPEKA AND SANTA FE

RAILROAD GRADE

OLD RR GRADE

LINGLEVILLE RD

ELM ST

FREY ST

TARLETON ST

WASHINGTON ST

LONG MARY ST

HARDIN AVE

LILLIAN AVE

GRAHAM AVE

ATCHISON

1 800 000 FEET

180 000 FEET

210 000 FEET

98°15′ 98°07′30″ 32°15′ 32°07′30″ 12′30″ 10′

3568000m.N. 3567 3566 3565 3564 3563 3562 3561 3560 3559 3558 3557 3556 3555000m.N.

571000m.E. 581000m.E.

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1961. Field checked 1961

Polyconic projection. 1927 North American datum
10,000-foot grid based on Texas coordinate system, north central zone
1000-meter Universal Transverse Mercator grid ticks, zone 14, shown in blue

Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked

Red tint indicates areas in which only landmark buildings are shown

Revisions shown in purple and woodland compiled from aerial photographs taken 1976 and other source data
This information not field checked. Map edited 1979

MN GN 7½° 133 MILS 0°26′ 8 MILS
UTM GRID AND 1979 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

Purple tint indicates extension of urban areas

SCALE 1:24 000
1 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

TEXAS
QUADRANGLE LOCATION

3298–113

ROAD CLASSIFICATION
Heavy-duty
Medium-duty
Light-duty
Unimproved dirt
U.S. Route
State Route

AUG 3 1979

USGS
Historical File
Topographic Division

STEPHENVILLE, TEX.
N3207.5–W9807.5/7.5
1961
PHOTOREVISED 1979
AMS 6348 II NW–SERIES V882

1850

INTERIOR–GEOLOGICAL SURVEY, RESTON, VIRGINIA–1979

Comisión de Calidad Ambiental del Estado de Texas

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

PERMISO NO. WQ0005478000

SOLICITUD. Jack Vanden Berge, Ellen Vanden Berge, Jacob Vanden Berge, y Kayla Vanden Berge, 404 Morgan Mill Road, Stephenville, Texas 76401, que poseen un sitio de disposición para el almacenamiento y aplicación a tierra del efluente tratado de la instalación de fabricación de alimentos lácteos autorizada bajo el existente Permiso para la Aplicación en Terrenos de Texas No. WQ0003074000, han solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) por el propuesto Permiso para la Aplicación en Terrenos de Texas (TLAP) No. WQ0005478000 para autorizar la disposición de aguas residuales tratadas en un volumen que no exceda un flujo promedio diario de 192,000 galones por día mediante el riego superficial de 223 acres. El sitio de disposición estará ubicado en 2435 County Road 177, cerca de la ciudad de Stephenville, en el Condado de Erath, Texas 76401. La TCEQ recibió esta solicitud el día 25 de noviembre de 2024. La solicitud para el permiso estará disponible para leerla y copiarla en el Palacio de Justicia del Condado de Earth - Oficina de Extensión del Condado de Erath, Sala 206, 100 West Washington Street, Stephenville, en el Condado de Erath, Texas, antes de la fecha de publicación de este aviso en el periódico. 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/tlap-applications. Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación es proporcionado como una cortesía y no es parte de la solicitud o del aviso. Para la ubicación exacta, consulte la solicitud. https://gisweb.tceq.texas.gov/LocationMapper/?marker=-98.1775,32.251666&level=18

Include the following non-italicized sentence if the facility is located in the Coastal Management Program boundary and is an application for a major amendment which will increase the pollutant loads to coastal waters or would result in relocation of an outfall to a critical areas, or a renewal with such a major amendment. The Coastal Management Program boundary is the area along the Texas Coast of the Gulf of México as depicted on the map in 31 TAC §503.1 and includes part or all of the following counties: Cameron, Willacy, Kenedy, Kleberg, Nueces, San Patricio, Aransas, Refugio, Calhoun, Victoria, Jackson, Matagorda, Brazoria, Galveston, Harris, Chambers, Jefferson y Orange. If the application is for amendment that does not meet the above description, do not include the sentence: El Director Ejecutivo de la TCEQ ha revisado esta medida para ver si está de acuerdo con los objetivos y las regulaciones del Programa

de Administración Costero de Texas (CMP) de acuerdo con las regulaciones del Consejo Coordinador de la Costa (CCC) y ha determinado que la acción es conforme con las metas y regulaciones pertinentes del CMP.

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 especifico. 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 información adicional de Jack Vanden Berge, Ellen Vanden Berge, Jacob Vanden Berge, y Kayla Vanden Berge a la dirección indicada arriba o llamando al Sr. Corey Mullin, Enviro-Ag Engineering, al 254-485-3892.

Fecha de emisión _____ *[Date notice issued]*