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 (**NOTE:** This application was declared Administratively Complete before June 1, 2024. Application materials are available for review at the Public Viewing Location provided in the NORI.)

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, el Aviso de Recepción de Solicitud e Intención de Obtener un Permiso)
   - Inglés
   - Idioma alternativo (español)
3. Solicitud original (**NOTA:** Esta solicitud se declaró administrativamente completa antes del 1 de junio de 2024. Los materiales de la solicitud están disponibles para revisión en la ubicación de consulta pública que se indica en el NORI.)

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

PLAIN LANGUAGE SUMMARY FOR TPDES OR TLAP PERMIT APPLICATIONS

Plain Language Summary Template and Instructions for Texas Pollutant Discharge Elimination System (TPDES) and Texas Land Application (TLAP) Permit Applications

Applicants should use this template to develop a plain language summary as required by Title 30, Texas Administrative Code (30 TAC), Chapter 39, Subchapter H. Applicants may modify the template as necessary to accurately describe their facility as long as the summary includes the following information: (1) the function of the proposed plant or facility; (2) the expected output of the proposed plant or facility; (3) the expected pollutants that may be emitted or discharged by the proposed plant or facility; and (4) how the applicant will control those pollutants, so that the proposed plant will not have an adverse impact on human health or the environment.

Fill in the highlighted areas below to describe your facility and application in plain language. Instructions and examples are provided below. Make any other edits necessary to improve readability or grammar and to comply with the rule requirements.

If you are subject to the alternative language notice requirements in 30 TAC Section 39.426, **you must provide a translated copy of the completed plain language summary in the appropriate alternative language as part of your application package**. For your convenience, a Spanish template has been provided below.

ENGLISH TEMPLATE FOR TPDES or TLAP NEW/RENEWAL/AMENDMENT APPLICATIONS
Enter 'INDUSTRIAL' or 'DOMESTIC' here WASTEWATER/STORMWATER
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 TAC Chapter 39. The information provided in this summary may change during the technical review of the application and is not a federal enforceable representation of the permit application.

City of Abernathy (CN# 600248421) operates City of Abernathy Wastewater Treatment Facility (RN# 101917219), a Wastewater Treatment Facility consists of a pond system. Treatment units include bar screens, grit chambers, Imhoff tanks, Holding pond and a facultative lagoon with a surface area of 1.16 acres and volume of 17.4 acre-feet The facility is in operation. The facility is located at approximately 1/5 miles north and 0.2 mile east of the intersection of Interstate Highway 27 and Farm-to-Market Road 2060 , in Abernathy, Hale County, Texas 79311. Renewal of permit for wastewater disposal. This permit will not authorize a discharge of pollutants into water in the state.

Discharges from the facility are expected to contain BOD5, pH, TSS. Domestic wastewater is treated by facultative lagoon.

PLANTILLA EN ESPAÑOL PARA SOLICITUDES NUEVAS/RENOVACIONES/ENMIENDAS DE TPDES o TLAP

AGUAS RESIDUALES Domesticas **/AGUAS PLUVIALES**

El siguiente resumen se proporciona para esta solicitud de permiso de calidad del agua pendiente que está siendo revisada por la Comisión de Calidad Ambiental de Texas según lo requerido por el Capítulo 39 del Código Administrativo de Texas 30. La información proporcionada en este resumen puede cambiar durante la revisión técnica de la solicitud y no es una representación ejecutiva fedérale de la solicitud de permiso.

Ciudad de Abernathy (CN#600248421) opera Ciudad de Abernathy instalacion de tratamiento de aguas residuales RN # 101917219, un La instalación de tratamiento de aguas residuales consta de un sistema de estanques. Las unidades de tratamiento incluyen rejillas, desarenadores, tanques Imhoff, estanque de contención y laguna facultativa con una superficie de 1.16 acres y un volumen de 17.4 acres-pies. La instalación está en operación. . La instalación está ubicada en La instalación está ubicada aproximadamente a 1/5 de milla al norte y 0,2 milla al este de la intersección de la autopista interestatal 27 y Farm-to-Market Road 2060. , en Abernathy, Condado de Sano, Texas 79311. Renovacion de permiso para disposicion de aguas residuales. Este permiso no autorizará una descarga de contaminantes en el agua en el estado.

Se espera que las descargas de la instalación contengan BOD5, pH, TSS. Aguas residuals domesticas. 16. Elija del menú desplegable tratado por laguna facultativa.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

PERMIT NO. WQ0010774001

APPLICATION. City of Abernathy, P.O. Box 310, Abernathy, Texas 79311, has applied to the Texas Commission on Environmental Quality (TCEQ) to renew Texas Land Application Permit (TLAP) No. WQ0010774001 to authorize the disposal of treated wastewater at a volume not to exceed a daily average flow of 380,000 gallons per day via surface irrigation of 180 acres. The domestic wastewater treatment facility and disposal area are located approximately 1.5 miles north and 0.2 mile east of the intersection of Interstate Highway 27 and Farm-to-Market Road 2060, near the city of Abernathy, in Hale County, Texas 79311. TCEQ received this application on March 1, 2024. The permit application will be available for viewing and copying at Abernathy City Hall, Main Office, 811 Avenue D, Abernathy, in Hale County, Texas prior to the date this notice is published in the newspaper. 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=-101.8425,33.852777&level=18

ALTERNATIVE LANGUAGE NOTICE. Alternative language notice in Spanish is available at https://www.tceq.texas.gov/permitting/wastewater/plain-language-summaries-and-public-notices. El aviso de idioma alternativo en español está disponible en https://www.tceq.texas.gov/permitting/wastewater/plain-language-summaries-and-public-notices.

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.**

TCEQ may act on an application to renew a permit for discharge of wastewater without providing an opportunity for a contested case hearing if certain criteria are met.

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 City of Abernathy at the address stated above or by calling Mr. Don Provost, City Manager, at 806-298-2546.

Issuance Date: April 4, 2024

Comisión de Calidad Ambiental del Estado de Texas

AVISO DE RECIBO DE LA SOLICITUD Y
EL INTENTO DE OBTENER PERMISO PARA LA CALIDAD DEL AGUA
RENOVACION

PERMISO NO. WQ0010774001

SOLICITUD. _City of Abernathy, P.O. Box 310, Abernathy, Texas 79311, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) para renovar el Permiso No. WQ0010774001 de disposición de aguas residuales para autorizar Planta de tratamiento de aguas residuales la disposición de aguas residuales tratadas en un volumen que no sobrepasa un flujo promedio diario de 380,000 galones por día por medio de riego superficial de 180 acres de tierra agricola de acceso no público. La planta de tratamiento de aguas residuales tratamiento de aguas domésticos residuales tratamientos de agua potable y el área de disposición están ubicados en Aproximadamente 1.5 millas al norte y 0.2 millas al este de la intersección de la autopista interestatal 27 y farm to market road 2060 en el Condado de Hale, Texas. La TCEQ recibió esta solicitud el día 1 de marzo de 2024. La solicitud para el permiso estará disponible para leerla y copiarla en 811 Avenue D, Abernathy, Texas 79311 antes de la fecha de publicación de este aviso en el periódico. 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=-101.8425,33.852777&level=18

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

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

OPORTUNIDAD DE UNA AUDIENCIA ADMINISTRATIVA DE LO CONTENCIOSO. Después del plazo para presentar comentarios públicos, el Director Ejecutivo considerará todos los comentarios apropiados y preparará una respuesta a todo los comentarios públicos

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

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

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

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 del City of Abernathy a la dirección indicada arriba o llamando a Sr. Don Provost al 806-298-2546.

Fecha de emission: 4 de abril de 2024

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

NOTICE OF APPLICATION AND PRELIMINARY DECISION FOR WATER QUALITY LAND APPLICATION PERMIT FOR MUNICIPAL WASTEWATER

RENEWAL

PERMIT NO. WQ0010774001

APPLICATION AND PRELIMINARY DECISION. City of Abernathy, P.O. Box 310, Abernathy, Texas 79311, has applied to the Texas Commission on Environmental Quality (TCEQ) for a renewal of TCEQ Permit No. WQ0010774001, which authorizes the disposal of treated domestic wastewater at a daily average flow not to exceed 380,000 gallons per day via surface irrigation of 180 acres of non-public access agricultural land. This permit will not authorize a discharge of pollutants into water in the state. TCEQ received this application on March 1, 2024.

The wastewater treatment facility and disposal site are located approximatley 1.5 miles north and 0.2 mile east of the intersection of Interstate Highway 27 and Farm-to-Market Road 2060, in Hale County, Texas 79311. The wastewater treatment facility and disposal site are located in the drainage basin of Double Mountain Fork Brazos River in Segment No. 1241 of the Brazos River Basin. This link to an electronic map of the site or facility's general location is provided as a public courtesy and is not part of the application or notice. For the exact location, refer to the application.
https://gisweb.tceq.texas.gov/LocationMapper/?marker=-101.8425,33.852777&level=18

The TCEQ Executive Director has completed the technical review of the application and prepared a draft permit. The draft permit, if approved, would establish the conditions under which the facility must operate. The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The permit application, Executive Director's preliminary decision, and draft permit are available for viewing and copying at Abernathy City Hall, Main Office, 811 Avenue D, Abernathy, in Hale County, Texas. 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.

ALTERNATIVE LANGUAGE NOTICE. Alternative language notice in Spanish is available at https://www.tceq.texas.gov/permitting/wastewater/plain-language-summaries-and-public-notices. El aviso de idioma alternativo en español está disponible en https://www.tceq.texas.gov/permitting/wastewater/plain-language-summaries-and-public-notices.

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

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

TO REQUEST A CONTESTED CASE HEARING, YOU MUST INCLUDE THE FOLLOWING ITEMS IN YOUR REQUEST: your name, address, phone number; applicant's name and 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. TCEQ may act on an application to renew a permit for discharge of wastewater without providing an opportunity for a contested case hearing if certain criteria are met.**

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

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

All written public comments and public meeting requests must be submitted to the Office of the Chief Clerk, MC 105, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, TX 78711-3087 or electronically at www.tceq.texas.gov/goto/comment **within 30 days from the date of newspaper publication of this notice.**

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

AGENCY CONTACTS AND INFORMATION. Public comments and requests must be submitted either electronically at www.tceq.texas.gov/goto/comment, or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC 105, P.O. Box 13087, Austin, Texas 78711-3087. Any personal information you submit to the TCEQ will become part of the agency's record; this includes email addresses. For more information about this permit application or the permitting process, please call the TCEQ Public Education Program, Toll Free, at 1-800-687-4040 or visit their website at www.tceq.texas.gov/goto/pep. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from City of Abernathy at the address stated above or by calling Mr. Don Provost, City Manager, at 806-298-2546.

Issuance Date: March 12, 2025

Comisión De Calidad Ambiental Del Estado De Texas

AVISO DE LA SOLICITUD Y DECISIÓN PRELIMINAR PARA EL PERMISO DEL SISTEMA DE ELIMINACION DE DESCARGAS DE CONTAMINANTES DE TEXAS (TPDES) PARA AGUAS RESIDUALES MUNICIPALES

RENOVACIÓN

PERMISO NO. WQ0010774001

SOLICITUD Y DECISIÓN PRELIMINAR. City of Abernathy, P.O. Box 310, Abernathy, Texas 79311 ha solicitado a la Comisión de Calidad Ambiental del Estado de Texas (TCEQ) una renovación para autorizar The wastewater treatment facility and disposal site are located approximatley 1.5 miles north and 0.2 mile east of the intersection of Interstate Highway 27 and Farm-to-Market Road 2060, in Hale County, Texas 79311. The wastewater treatment facility and disposal site are located in the drainage basin of Double Mountain Fork Brazos River in Segment No. 1241 of the Brazos River Basin La TCEQ recibió esta solicitud el 3/1/2024.

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 de el CMP.

El Director Ejecutivo de la TCEQ ha completado la revisión técnica de la solicitud y ha preparado un borrador del permiso. El borrador del permiso, si es aprobado, establecería las condiciones bajo las cuales la instalación debe operar. El Director Ejecutivo ha tomado una decisión preliminar que si este permiso es emitido, cumple con todos los requisitos normativos y legales. La solicitud del permiso, la decisión preliminar del Director Ejecutivo y el borrador del permiso están disponibles para leer y copiar en 811 Ave D, Abernathy, TX 79311. La solicitud (cualquier actualización y aviso inclusive) está disponible electrónicamente en la siguiente página web: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-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://www.tceq.texas.gov/permitting/wastewater/pending-permits/tlap-applications.

AVISO DE IDIOMA ALTERNATIVO. El aviso de idioma alternativo en español está disponible en https://www.tceq.texas.gov/permitting/wastewater/plain-language-summaries-and-public-noticeshttps://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications.

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. Si ciertos criterios se cumplen, la TCEQ puede actuar sobre una solicitud para renovar un permiso para descargar aguas residuales sin proveer una oportunidad de una audiencia administrativa de lo contencioso.

ACCIÓN DEL DIRECTOR EJECUTIVO. El Director Ejecutivo puede emitir una aprobación final de la solicitud a menos que exista un pedido antes del plazo de vencimiento de una audiencia administrativa de lo contencioso o se ha presentado un pedido de reconsideración. Si un pedido ha llegado antes del plazo de vencimiento de la audiencia o el pedido de reconsideración ha sido presentado, el Director Ejecutivo no emitirá una aprobación final sobre el permiso y enviará la solicitud y el pedido a los Comisionados de la TECQ para consideración en una reunión programada de la Comisión.

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.

Todos los comentarios escritos del público y los pedidos una reunión deben ser presentados durante los 30 días después de la publicación del aviso a la Oficina del Secretario Principal, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or por el internet a www.tceq.texas.gov/about/comments.html. 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.

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

También se puede obtener información adicional del City of Abernathy a la dirección indicada arriba o llamando a Oller Engineering Inc. al 806-928-2546.

Fecha de emission: 12 de marzo de 2025

PERMIT NO. WQ0010774001

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

This is a renewal of Permit No. WQ0010774001 issued on May 29, 2014.

PERMIT TO DISCHARGE WASTES
under provisions of Chapter 26
of the Texas Water Code

City of Abernathy

whose mailing address is

P.O. Box 310
Abernathy, Texas 79311

Nature of Business Producing Waste: Domestic wastewater treatment operation, SIC Code 4952.

General Description and Location of Waste Disposal System:

Description: The City of Abernathy Wastewater Treatment Facility consists of a pond system. Treatment units include bar screens, a grit chamber, an Imhoff tank, a holding pond, and a facultative lagoon with a surface area of 1.16 acres and volume of 17.4 acre-feet. The facility is in operation. The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 0.38 million gallons per day (MGD) via surface irrigation of 180 acres of non-public access agricultural land. The facility includes one storage pond with a total surface area of 3.4 acres and total capacity of 39.8 acre-feet for storage of treated effluent prior to irrigation. Application rates to the irrigated land shall not exceed 2.4 acre-feet per year per acre irrigated. The irrigated crops include Augustine grass and Wheat.

Location: The wastewater treatment facility and disposal site are located approximatley 1.5 miles north and 0.2 mile east of the intersection of Interstate Highway 27 and Farm-to-Market Road 2060, in Hale County, Texas 79311. (See Attachment A.)

Drainage Area: The wastewater treatment facility and disposal site are located in the drainage basin of Double Mountain Fork Brazos River in Segment No. 1241 of the Brazos River Basin. No discharge of pollutants into water in the state is authorized by this permit.

This permit and the authorization contained herein shall expire at midnight, **ten years from the date of issuance**.

ISSUED DATE:

For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Conditions of the Permit: No discharge of pollutants into water in the state is authorized.

A. Effluent Limitations

Character: Treated Domestic Sewage Effluent

Volume: Daily Average Flow – 0.38 MGD from the treatment system

Quality: The following effluent limitations are required:

	Effluent Concentrations (Not to Exceed)	
Parameter	Daily Average mg/l	Single Grab mg/l
Biochemical Oxygen Demand (5-day)	N/A	100

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.

B. Monitoring Requirements:

Parameter	Monitoring Frequency	Sample Type
Flow	Five/week	Instantaneous
Biochemical Oxygen Demand (5-day)	One/month	Grab
pH	One/month	Grab

The monitoring shall be done after the final treatment unit and prior to storage of the treated effluent. If the effluent is land applied directly from the treatment system, monitoring shall be done after the final treatment unit and prior to land application. These records shall be maintained on a monthly basis and be available at the plant site for inspection by authorized representatives of the Commission for at least three years.

STANDARD PERMIT CONDITIONS

This permit is granted in accordance with the Texas Water Code and the rules and other Orders of the Commission and the laws of the State of Texas.

DEFINITIONS

All definitions in Section 26.001 of the Texas Water Code and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

1. Flow Measurements

    a. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.

    b. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with a 1 million gallons per day or greater permitted flow.

    c. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.

2. Concentration Measurements

    a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.

        i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

        ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.

    b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.

    c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.

3. Sample Type

   a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).

   b. Grab sample - an individual sample collected in less than 15 minutes.

4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.

5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids which have not been classified as hazardous waste separated from wastewater by unit processes.

6. The term "biosolids" is defined as sewage sludge that has been tested or processed to meet Class A, Class AB, or Class B pathogen standards in 30 TAC Chapter 312 for beneficial use.

7. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

MONITORING REQUIREMENTS

1. Monitoring Requirements

   Monitoring results shall be collected at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling in accordance with 30 TAC §§ 319.4 - 319.12.

   As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Texas Water Code, Chapters 26, 27, and 28, and Texas Health and Safety Code, Chapter 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record or other document submitted or required to be maintained under this permit, including monitoring reports, records or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

2. Test Procedures

   a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests and calculations shall be accurately accomplished in a representative manner.

b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification.

3. Records of Results

a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge or biosolids use and disposal activities, which shall be retained for a period of at least five years, monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, and records of all data used to complete the application for this permit shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, or application. This period shall be extended at the request of the Executive Director.

c. Records of monitoring activities shall include the following:

i. date, time and place of sample or measurement;
ii. identity of individual who collected the sample or made the measurement.
iii. date and time of analysis;
iv. identity of the individual and laboratory who performed the analysis;
v. the technique or method of analysis; and
vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in determining compliance with permit requirements.

5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Enforcement Division (MC 224).

7. Noncompliance Notification

   a. In accordance with 30 TAC § 305.125(9), any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Except as allowed by 30 TAC § 305.132, report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

   b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:

      i. Unauthorized discharges as defined in Permit Condition 2(g).

      ii. Any unanticipated bypass which exceeds any effluent limitation in the permit.

   c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.

   d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible.

8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.

9. Changes in Discharges of Toxic Substances

   All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

   a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:

i. One hundred micrograms per liter (100 µg/L);
ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
iv. The level established by the TCEQ.

b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

i. Five hundred micrograms per liter (500 µg/L);
ii. One milligram per liter (1 mg/L) for antimony;
iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
iv. The level established by the TCEQ.

10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

PERMIT CONDITIONS

1. General

a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.

b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:

i. Violation of any terms or conditions of this permit;
ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

2. Compliance

a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.

b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation or suspension, or for denial of a permit renewal application or an application for a permit for another facility.

c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation which has a reasonable likelihood of adversely affecting human health or the environment.

e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.

f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and Texas Water Code Section 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Special Provisions section of this permit.

h. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code §§ 7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties).

3. Inspections and Entry

a. Inspection and entry shall be allowed as prescribed in the Texas Water Code Chapters 26, 27, and 28, and Texas Health and Safety Code Chapter 361.

b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to

public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in Texas Water Code Section 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

4. Permit Amendment and/or Renewal

   a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:

      i. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9;

      ii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

   b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.

   c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.

   d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.

e. In accordance with the Texas Water Code § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.

5. Permit Transfer

a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.

b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal which requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

8. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

9. Relationship to Permit Application

The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

10. Notice of Bankruptcy.

a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:

i. the permittee;
ii. an entity (as that term is defined in 11 USC, § 101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or
iii. an affiliate (as that term is defined in 11 USC, § 101(2)) of the permittee.

b. This notification must indicate:

i. the name of the permittee;
ii. the permit number(s);
iii. the bankruptcy court in which the petition for bankruptcy was filed; and
iv. the date of filing of the petition.

OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.

2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge or biosolids use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.

3. Domestic wastewater treatment facilities shall comply with the following provisions:

a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.

b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.

4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.

5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.

6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under Texas Water Code § 7.302(b)(6).

7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information specified as not confidential in 30 TAC § 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities which generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.

   a. Whenever flow measurements for any domestic sewage treatment facility reach 75 percent of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90 percent of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75 percent of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

      If in the judgement of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 219) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

   b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.

   c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any

other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.

10. Facilities which generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:

    a. Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.

    b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.

    c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Corrective Action Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.

    d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Permitting and Remediation Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.

    e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.

    f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC Chapter 335 and must include the following, as it pertains to wastewater treatment and discharge:

        i. Volume of waste and date(s) generated from treatment process;
        ii. Volume of waste disposed of on-site or shipped off-site;
        iii. Date(s) of disposal;

iv. Identity of hauler or transporter;
v. Location of disposal site; and
vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

11. For industrial facilities to which the requirements of 30 TAC Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with Chapter 361 of the Texas Health and Safety Code.

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SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge or biosolids only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge. **The disposal of sludge or biosolids by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is authorized with the TCEQ. This provision does not authorize Distribution and Marketing of Class A or Class AB Biosolids. This provision does not authorize the permittee to land apply biosolids on property owned, leased or under the direct control of the permittee.**

SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS LAND APPLICATION

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge or biosolids.

2. In all cases, if the person (permit holder) who prepares the sewage sludge or biosolids supplies the sewage sludge or biosolids to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge or biosolids to assure compliance with these regulations.

3. The land application of processed or unprocessed chemical toilet waste, grease trap waste, grit trap waste, milk solids, or similar non-hazardous municipal or industrial solid wastes, or any of the wastes listed in this provision combined with biosolids, WTP residuals or domestic septage is prohibited unless the grease trap waste is added at a fats, oil and grease (FOG) receiving facility as part of an anaerobic digestion process.

B. Testing Requirements

1. Sewage sludge or biosolids shall be tested prior to sludge disposal in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method that receives the prior approval of the TCEQ for the contaminants listed in 40 CFR Part 261.24, Table 1. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 2) within seven (7) days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped, and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permitee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 2) and the Enforcement Division (MC 224).

2. Biosolids shall not be applied to the land if the concentration of the pollutants exceeds the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C. of this permit.

TABLE 1

Pollutant	Ceiling Concentration (Milligrams per kilogram)*
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site must be treated by one of the following methods to ensure that the sludge meets either the Class A, Class AB or Class B biosolids pathogen requirements.

a. For sewage sludge to be classified as Class A biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 most probable number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge must be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC § 312.82(a)(2)(A) for specific information;

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of must be treated in one of the Processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion; or

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of must be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

b. For sewage sludge to be classified as Class AB biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 MPN per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

   Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

   The temperature of the sewage sludge shall be above 52° Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

   At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50%; or

   Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(iv-vi) for specific information; or

   Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

c. Sewage sludge that meets the requirements of Class AB biosolids may be classified a Class A biosolids if a variance request is submitted in writing that is supported by substantial documentation demonstrating equivalent methods for reducing odors and written approval is granted by the executive director. The executive director may deny the variance request or revoke that approved variance if it is determined that the variance may potentially endanger human health or the environment, or create nuisance odor conditions.

d. Three alternatives are available to demonstrate compliance with Class B biosolids criteria.

Alternative 1

i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.

ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;

iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;

iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and

v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U.S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;

iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;

iv. The Executive Director will accept from the U.S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and

v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition to the Alternatives 1 – 3, the following site restrictions must be met if Class B biosolids are land applied:

i. Food crops with harvested parts that touch the biosolids /soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.

ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain the land surface for 4 months or longer prior to incorporation into the soil.

iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than 4 months prior to incorporation into the soil.

iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.

v. Domestic livestock shall not be allowed to graze on the land for 30 days after application of biosolids.

vi. Turf grown on land where biosolids are applied shall not be harvested for 1 year after application of the biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn.

vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of biosolids.

viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of biosolids.

ix. Land application of biosolids shall be in accordance with the buffer zone requirements found in 30 TAC § 312.44.

4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following Alternatives 1 through 10 for vector attraction reduction.

Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%.

Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30° and 37° Celsius. Volatile solids must be reduced by less than 17% to demonstrate compliance.

Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20° Celsius. Volatile solids must be reduced by less than 15% to demonstrate compliance.

Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20° Celsius.

Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40° Celsius and the average temperature of the sewage sludge shall be higher than 45° Celsius.

Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.

Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75% based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90% based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 9 -

i. Sewage sludge shall be injected below the surface of the land.

ii. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

iii. When sewage sludge that is injected below the surface of the land is Class A or Class AB with respect to pathogens, the biosolids shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

Alternative 10-

i. Biosolids applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.

ii. When biosolids that are incorporated into the soil is Class A or Class AB with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

C. Monitoring Requirements

Toxicity Characteristic Leaching Procedure (TCLP) Test	- prior to sludge disposal
PCBs	- prior to sludge disposal

All metal constituents and fecal coliform or *Salmonella* sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC § 312.46(a)(1):

Amount of biosolids (*) metric tons per 365-day period	Monitoring Frequency
0 to less than 290	Once/Year
290 to less than 1,500	Once/Quarter
1,500 to less than 15,000	Once/Two Months
15,000 or greater	Once/Month

(*) *The amount of bulk biosolids applied to the land (dry wt. basis).*

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC § 312.7

Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.

Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, sewage sludge or biosolids for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.

SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A, CLASS AB or B BIOSOLIDS PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3

For those permittees meeting Class A, Class AB or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

A. Pollutant Limits

Table 2

Pollutant	Cumulative Pollutant Loading Rate (pounds per acre)*
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

Pollutant	Monthly Average Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

*Dry weight basis

B. Pathogen Control

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A, Class AB or Class B biosolids pathogen reduction requirements as defined above in Section I.B.3.

C. Management Practices

1. Bulk biosolids shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge or biosolids enters a wetland or other waters in the State.

2. Bulk sewage sludge not meeting Class A biosolids requirements shall be land applied in a manner which complies with Applicability in accordance with 30 TAC §312.41 and the Management Requirements in accordance with 30 TAC § 312.44.

3. Bulk biosolids shall be applied at or below the agronomic rate of the cover crop.

4. An information sheet shall be provided to the person who receives bulk Class A or AB biosolids sold or given away. The information sheet shall contain the following information:

    a. The name and address of the person who prepared the Class A or AB biosolids that are sold or given away in a bag or other container for application to the land.

    b. A statement that application of the Class A or AB biosolids to the land is prohibited except in accordance with the instruction on the label or information sheet.

    c. The annual whole sludge application rate for the sewage sludge application rate for the biosolids that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

D. Notification Requirements

1. If bulk biosolids are applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk biosolids are proposed to be applied. The notice shall include:

    a. The location, by street address, and specific latitude and longitude, of each land application site.

    b. The approximate time period bulk biosolids will be applied to the site.

    c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk biosolids.

2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the biosolids disposal practice.

E. Record Keeping Requirements

The documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a biosolids material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative for a period

of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.

2. A description of how the pathogen reduction requirements are met (including site restrictions for Class AB and Class B biosolids, if applicable).

3. A description of how the vector attraction reduction requirements are met.

4. A description of how the management practices listed above in Section II.C are being met.

5. The following certification statement:

   "I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC § 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC § 312.83(b) have been met for each site on which bulk biosolids are applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."

6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained. The person who applies bulk biosolids shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply:

   a. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii), as applicable, and to the permittee's specific sludge or biosolids treatment activities.

   b. The location, by street address, and specific latitude and longitude, of each site on which sludge or biosolids are applied.

   c. The number of acres in each site on which bulk sludge or biosolids are applied.

   d. The date and time sludge or biosolids are applied to each site.

   e. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.

   f. The total amount of sludge applied to each site in dry tons.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

F. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permitee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 2) and the Enforcement Division (MC 224).

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

2. Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.

3. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.

4. The frequency of monitoring listed in Section I.C. that applies to the permittee.

5. Toxicity Characteristic Leaching Procedure (TCLP) results.

6. PCB concentration in sludge or biosolids in mg/kg.

7. Identity of hauler(s) and TCEQ transporter number.

8. Date(s) of transport.

9. Texas Commission on Environmental Quality registration number, if applicable.

10. Amount of sludge or biosolids disposal dry weight (lbs/acre) at each disposal site.

11. The concentration (mg/kg) in the sludge or biosolids of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.

12. Level of pathogen reduction achieved (Class A, Class AB or Class B).

13. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B biosolids, include information on how site restrictions were met.

14. Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.

15. Vector attraction reduction alternative used as listed in Section I.B.4.

16. Amount of sludge or biosolids transported in dry tons/year.

17. The certification statement listed in either 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge or biosolids treatment activities, shall be attached to the annual reporting form.

18. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.

    a. The location, by street address, and specific latitude and longitude.

    b. The number of acres in each site on which bulk biosolids are applied.

    c. The date and time bulk biosolids are applied to each site.

    d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk biosolids applied to each site.

    e. The amount of biosolids (i.e., dry tons) applied to each site.

    The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL

A. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge or biosolids meet the requirements in 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.

B. If the permittee generates sewage sludge or biosolids and supplies that sewage sludge or biosolids to the owner or operator of a municipal solid waste landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.

C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge or biosolids disposal practice.

D. Sewage sludge or biosolids shall be tested prior to sludge disposal in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR § 261.24. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

   Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 2) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

   The report shall contain test results, certification that unauthorized waste management has stopped, and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 2) and the Enforcement Division (MC 224), by September 30$_{th}$ of each year.

E. Sewage sludge or biosolids shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.

F. Record Keeping Requirements

   The permittee shall develop the following information and shall retain the information for five years.

1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.

2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

G. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permitee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 2) and the Enforcement Division (MC224).

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

2. Toxicity Characteristic Leaching Procedure (TCLP) results.

3. Annual sludge or biosolids production in dry tons/year.

4. Amount of sludge or biosolids disposed in a municipal solid waste landfill in dry tons/year.

5. Amount of sludge or biosolids transported interstate in dry tons/year.

6. A certification that the sewage sludge or biosolids meets the requirements of 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.

7. Identity of hauler(s) and transporter registration number.

8. Owner of disposal site(s).

9. Location of disposal site(s).

10. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

SECTION IV. REQUIREMENTS APPLYING TO SLUDGE OR BIOSOLIDS TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING

These provisions apply to sludge or biosolids that is transported to another wastewater treatment facility or facility that further processes sludge or biosolids. These provisions are intended to allow transport of sludge or biosolids to facilities that have been authorized to accept sludge or biosolids. These provisions do not limit the ability of the receiving facility to determine whether to accept the sludge or biosolids, nor do they limit the ability of the receiving facility to request additional testing or documentation.

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge.

2. Sludge or biosolids may only be transported using a registered transporter or using an approved pipeline.

B. Record Keeping Requirements

1. For sludge or biosolids transported by an approved pipeline, the permittee must maintain records of the following:

   a. the amount of sludge or biosolids transported;

   b. the date of transport;

   c. the name and TCEQ permit number of the receiving facility or facilities;

   d. the location of the receiving facility or facilities;

   e. the name and TCEQ permit number of the facility that generated the waste; and

   f. copy of the written agreement between the permittee and the receiving facility to accept sludge or biosolids.

2. For sludge or biosolids transported by a registered transporter, the permittee must maintain records of the completed trip tickets in accordance with 30 TAC § 312.145(a)(1)-(7) and amount of sludge or biosolids transported.

3. The above records shall be maintained on-site on a monthly basis and shall be made available to the TCEQ upon request. These records shall be retained for at least five years.

C. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permitee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 2) and the Enforcement Division (MC 224).

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

2. the annual sludge or biosolids production;

3. the amount of sludge or biosolids transported;

4. the owner of each receiving facility;

5. the location of each receiving facility; and

6. the date(s) of disposal at each receiving facility.

TCEQ Revision 06/2020

SPECIAL PROVISIONS:

1. This permit is granted subject to the policy of the Commission to encourage the development of areawide waste collection, treatment and disposal systems. The Commission reserves the right to amend this permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an areawide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such areawide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

2. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

   This Category D facility must be operated by a chief operator or an operator holding a Class D license or higher. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift which does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

3. The permittee shall maintain and operate the treatment facility in order to achieve optimum efficiency of treatment capability. This shall include required monitoring of effluent flow and quality as well as appropriate grounds and building maintenance.

4. Irrigation practices shall be designed and managed so as to prevent ponding of effluent or contamination of ground and surface waters and to prevent the occurrence of nuisance conditions in the area. Tailwater control facilities shall be provided as necessary to prevent the discharge of any effluent from the irrigated land.

5. Effluent shall not be applied for irrigation during rainfall events or when the ground is frozen or saturated.

6. The irrigated crops include Augustine grass and Wheat. Application rates to the irrigated land shall not exceed 2.4 acre-feet per year per acre irrigated. The permittee is responsible for providing equipment to determine application rates and maintaining accurate records of the volume of effluent applied. These records shall be made available for review by the Texas Commission on Environmental Quality and shall be maintained for at least three years.

7. Holding or storage ponds shall conform to the design criteria for stabilization ponds with regard to construction and levee design and shall maintain a minimum freeboard of two feet according to 30 TAC Chapter 217, Design Criteria for Wastewater Treatment Systems.

8. The permittee shall obtain representative soil samples from the root zones of the land application area. Composite sampling techniques shall be used. Each composite sample shall represent no more than 80 acres with no less than 10 to 15 subsamples representing each composite sample. Subsamples shall be composited by like sampling depth, type of crop and soil type for analysis and reporting. Soil types are soils that have like topsoil or plow layer textures. These soils shall be sampled individually from 0 to 6 inches, 6 to 18 inches, and 18 to 30 inches below ground level. The permittee shall sample soils in December to February of each year. Soil samples shall be analyzed within 30 days of sample collection.

   The permittee shall provide annual soil analyses of the land application area according to the following table:

Parameter	Method	Minimum Analytical Level (MAL)	Reporting units
pH	2:1 (v/v) water to soil mixture		Reported to 0.1 pH units after calibration of pH meter
Electrical Conductivity	Obtained from the SAR water saturated paste extract	0.01	dS/m (same as mmho/cm)
Total Nitrogen	= TKN + nitrate-nitrogen (same as, organic-nitrogen + ammonium-nitrogen + nitrate-nitrogen)		mg/kg (dry weight basis)
Plant-available: Phosphorus	Mehlich III with inductively coupled plasma	1	mg/kg (dry weight basis)
Plant-available: Potassium Calcium Magnesium Sodium Sulfur	May be determined in the same Mehlich III extract with inductively coupled plasma	5 (K) 10 (Ca) 5 (Mg) 10 (Na) 1 (S)	mg/kg (dry weight basis)
Water-soluble: Sodium Calcium Magnesium	Obtained from the SAR water saturated paste extract	1 (Na) 1 (Ca) 1 (Mg)	Water soluble constituents are *reported* in mg/L
Amendment addition, e.g., gypsum	Recommendation from analytical laboratory		Report in *short tons/acre* in the year effected

   A copy of this soil testing plan shall be provided to the analytical laboratory prior to sample analysis. The permittee shall submit the results of the annual soil sample analyses with

copies of the laboratory reports and a map depicting the areas that have received wastewater within the permanent land application fields to the TCEQ Regional Office (MC Region 2), the Water Quality Assessment Team (MC 150), and the Compliance Monitoring Team (MC 224) of the Enforcement Division, no later than September 1st of each sampling year. If wastewater is not applied in a particular year, the permittee shall notify the same TCEQ offices and indicate that wastewater has not been applied on the approved land irrigation site(s) during that year.

9. The permittee shall maintain a long term contract with the owner(s) of the land application site which is authorized for use in this permit, or own the land authorized for land application of treated effluent.

10. The permittee shall erect adequate signs stating that the irrigation water is from a non-potable water supply for any area where treated effluent is stored or where there exist hose bibs or faucets. Signs shall consist of a red slash superimposed over the international symbol for drinking water accompanied by the message "DO NOT DRINK THE WATER" in both English and Spanish. All piping transporting the effluent shall be clearly marked with these same signs.

11. Spray fixtures for the irrigation system shall be of such design that they cannot be operated by unauthorized personnel.

12. Irrigation with effluent shall be accomplished only when the area specified is not in use.

13. Permanent transmission lines shall be installed from the treatment system to each drainfield area.

14. Facilities for the retention of treated or untreated wastewater shall be adequately lined to control seepage. The following methods of pond lining are acceptable.

    a. In-situ clay soils or placed and compacted clay soils meeting the following requirements:

        l) More than 30% passing a No. 200 mesh sieve
        2) Liquid limit greater than 30%
        3) Plasticity index greater than 15
        4) A minimum thickness of 2 feet

    b. Membrane lining with a minimum thickness of 20 mils, and an underdrain leak detection system.

    c. An alternate method of pond lining may be utilized with prior approval from the Executive Director.

    The permittee shall furnish certification by a Texas Licensed Professional Engineer that the completed pond lining meets the appropriate criteria above. The certification shall be sent to the TCEQ Regional Office (MC Region 2) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division.

15. Any new or modified wastewater pond shall be adequately lined to control seepage in accordance with 30 TAC §217.203 **and** 30 TAC 309.13(d) since the facility overlies the recharge zone of an aquifer. The Permittee shall submit the liner certification for a newly-

constructed or modified wastewater pond to the Water Quality Assessment Team (MC-150), the TCEQ Lubbock Regional Office (MC-Region 2), and the TCEQ Compliance Monitoring Section (MC-224) within 30 days of completion and prior to use. The certification shall be signed and sealed by a Texas-licensed professional engineer and include a description of how the liner meets the requirements of 30 TAC §217.203 **and** 30 TAC §309.13(d) since the facility is located on the recharge zone of an aquifer.

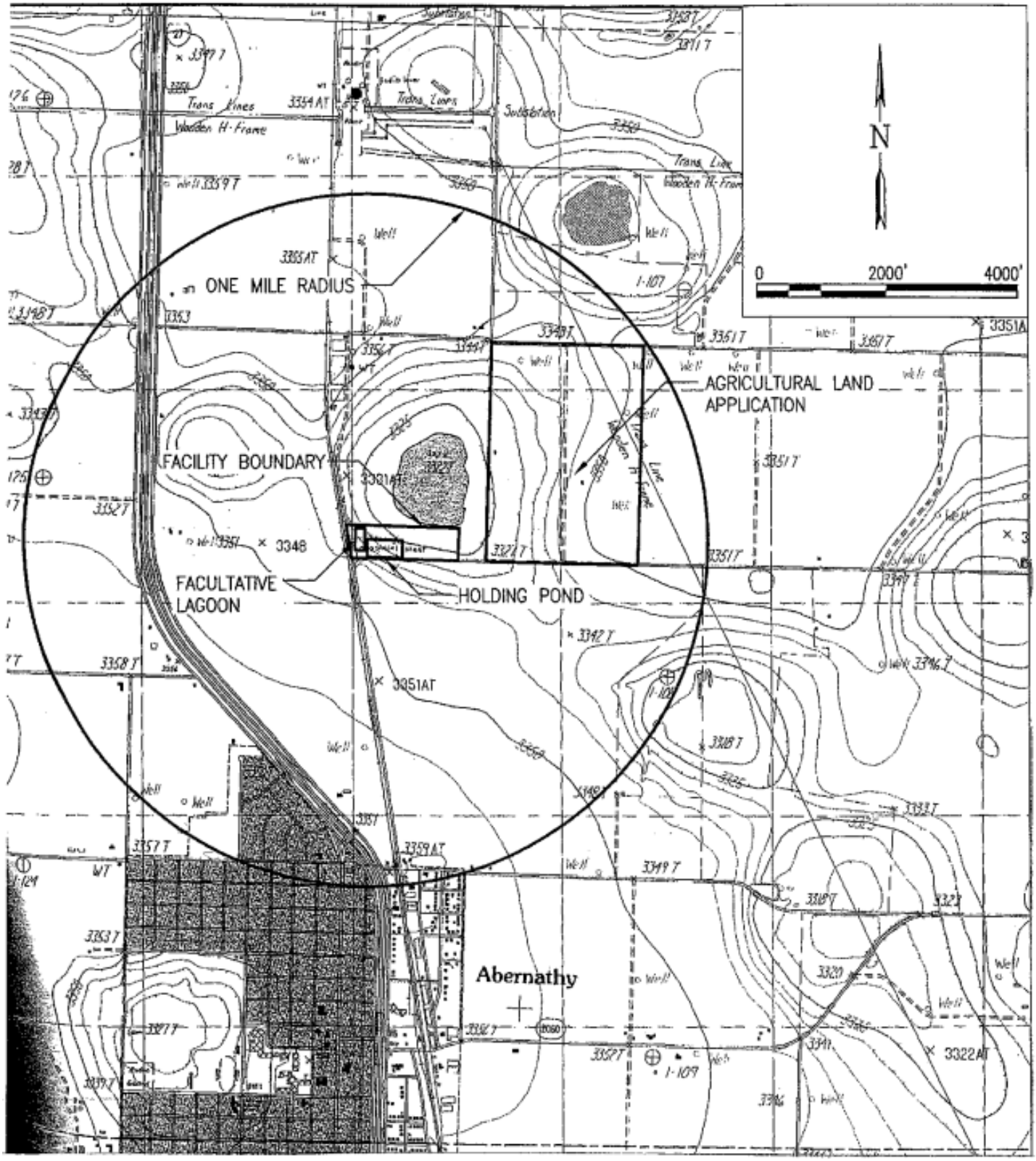
16. The two existing wastewater ponds shall be maintained and operated in a manner that prevents unauthorized discharge to water in the state and contamination of groundwater.

17. Facilities for the retention of treated or untreated wastewater shall be adequately managed and lined to control seepage. At least once per month, the Permittee shall inspect the sides and bottom (if visible) of all wastewater ponds for signs of damage and leakage, and any pond leak detection systems that are in service. Leaking ponds shall be removed from service, or operated in a manner to prevent discharge, until repairs are made or replacement ponds are constructed.

18. Pond liner certifications and all liner construction and repair documentation shall be maintained by the Permittee for the life of the facility and be made available for TCEQ personnel for inspection and review.

19. The physical condition of the spray irrigation fields will be monitored on a weekly basis when the fields are being utilized for the purpose of wastewater irrigation. Any areas with problems such as surface runoff, surficial erosion, stressed or damaged vegetation will be recorded in the field log kept onsite and corrective measures will be initiated within 24 hours of discovery.

Attachment A



TECHNICAL SUMMARY AND
EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

DESCRIPTION OF APPLICATION

Applicant:	City of Abernathy TCEQ Permit No. WQ0010774001
Regulated Activity:	Domestic Wastewater Permit
Type of Application:	Renewal
Request:	Renewal with no changes
Authority:	Texas Water Code (TWC) § 26.027; 30 Texas Administrative Code (TAC) Chapters 305, 309, 312, 319, and 30; and Commission policies.

EXECUTIVE DIRECTOR RECOMMENDATION

The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The draft permit includes an expiration date of **ten years from the date of issuance,** according to 30 TAC Section 305.127(1)(C)(ii)(III), Conditions to be Determined for Individual Permits.

REASON FOR PROJECT PROPOSED

City of Abernathy has applied to the Texas Commission on Environmental Quality (TCEQ) for a renewal of Permit No. WQ0010774001 to authorize the disposal of treated domestic wastewater at a daily average flow not to exceed 0.38 million gallons per day (MGD) via surface irrigation of 180 acres of non-public access agricultural land. The facility includes one storage pond with a total surface area of 3.4 acres and total capacity of 39.8 acre-feet for storage of treated effluent prior to irrigation. The existing wastewater treatment facility serves the City of Abernathy.

PROJECT DESCRIPTION AND LOCATION

The City of Abernathy Wastewater Treatment Facility consists of a pond system. Treatment units include bar screens, a grit chamber, an Imhoff tank, a holding pond with a surface area of 3.4 acres and total holding capacity of 39.8 acre-feet, and a facultative lagoon with a surface area of 1.16 acres and volume of 17.4 acre-feet. The facility is in operation.

The facility is a pond system and sludge from the ponds has not been removed for sludge disposal to date. The draft permit authorizes the disposal of sludge at a TCEQ-authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge.

The wastewater treatment facility and disposal site are located approximatley 1.5 miles north and 0.2 mile east of the intersection of Interstate Highway 27 and Farm-to-Market Road 2060, in Hale County, Texas 79311.

The wastewater treatment facility and disposal site are located in the drainage basin of Double Mountain Fork Brazos River in Segment No. 1241 of the Brazos River Basin. No discharge of pollutants into water in the state is authorized by this permit.

SUMMARY OF EFFLUENT DATA

The following is a summary of the applicant's effluent monitoring data for the period January 2022 through October 2023. The average of Daily Average value is computed by averaging of all 30-day average values for the reporting period for each parameter: flow, five-day biochemical oxygen demand (BOD_5), and total suspended solids (TSS).

Parameter	Average of Daily Average
Flow, MGD	0.21
BOD_5, mg/l	45
TSS, mg/l	97

DRAFT PERMIT CONDITIONS

The draft permit authorizes the disposal of treated domestic wastewater effluent at a daily average flow not to exceed 0.38 MGD via surface irrigation of 180 acres of non-public access agricultural land. The facility includes one storage pond with a total surface area of 3.4 acres and total capacity of 39.8 acre-feet for storage of treated effluent prior to irrigation. Application rates to the irrigated land shall not exceed 2.4 acre-feet per year per acre irrigated. The irrigated crops include Augustine grass and Wheat.

The effluent limitation in the draft permit, based on a single grab, is 100 mg/l BOD_5.

The draft permit includes Sludge Provisions according to the requirements of 30 TAC Chapter 312, Sludge Use, Disposal, and Transportation. The facility is a pond system and sludge from the ponds has not been removed for sludge disposal to date. The draft permit authorizes the disposal of sludge at a TCEQ-authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge.

SUMMARY OF CHANGES FROM APPLICATION

None.

SUMMARY OF CHANGES FROM EXISTING PERMIT

Effluent limitations and monitoring requirements in the draft permit remain the same as the existing permit effluent limitations and monitoring requirements.

The Sludge Provisions, Special Provisions, and Standard Provisions have been revised in the draft permit.

SECTION IV, REQUIREMENTS APPLYING TO SLUDGE OR BIOSOLIDS TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING, has been added to the Sludge Provisions of the draft permit to allow the transportation of sludge or biosolids to another facility.

Certain accidental discharges or spills of treated or untreated wastewater from wastewater treatment facilities or collection systems owned or operated by a local government may be reported on a monthly basis in accordance with 30 TAC § 305.132.

Special Provision Nos. 8 and 14 in the existing permit have been revised in the draft permit.

Special Provision Nos. 15, 16, 17, 18 and 19 have been added to the draft permit.

The crops grown via irrigation were added to the permit face.

The draft permit includes all updates based on the 30 TAC 312 rule change effective April 23, 2020.

BASIS FOR DRAFT PERMIT

The following items were considered in developing the draft permit:

1. Application received on March 1, 2024, and additional information received on January 8, 2025.

2. Existing TCEQ permit: Permit No. WQ0010774001 issued on May 29, 2014.

3. Interoffice Memorandum from the Water Quality Assessment Team, Water Quality Assessment & Standards Section, Water Quality Division.

PROCEDURES FOR FINAL DECISION

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant advising the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the applicant to place a copy of the application in a public place for review and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

Once a draft permit is completed, it is sent, along with the Executive Director’s preliminary decision, as contained in the technical summary or fact sheet, to the Chief Clerk. At that time, the Notice of Application and Preliminary Decision will be mailed to the same people and published in the same newspaper as the prior notice. This notice sets a deadline for making public comments. The applicant must place a copy of the Executive Director’s preliminary decision and draft permit in the public place with the application.

Any interested person may request a public meeting on the application until the deadline for filing public comments. A public meeting is intended for the taking of public comment and is not a contested case proceeding.

After the public comment deadline, the Executive Director prepares a response to all significant

public comments on the application or the draft permit raised during the public comment period. The Chief Clerk then mails the Executive Director's response to comments and final decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that if a person is not satisfied with the Executive Director's response and decision, they can request a contested case hearing or file a request to reconsider the Executive Director's decision within 30 days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within 30 days after the Executive Director's response to comments and final decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

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

For additional information about this application, contact John Hearn at (512) 239-5239.

John Hearn — January 8, 2025

John Hearn — Date
Municipal Permits Team
Wastewater Permitting Section (MC 148)

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST

Complete and submit this checklist with the application.

APPLICANT NAME: City of Abernathy

PERMIT NUMBER (If new, leave blank): WQ00 010774001

Indicate if each of the following items is included in your application.

	Y	N
Administrative Report 1.0	☑	☐
Administrative Report 1.1	☐	☑
SPIF	☑	☐
Core Data Form	☑	☐
Public Involvement Plan Form	☐	☑
Technical Report 1.0	☑	☐
Technical Report 1.1	☐	☑
Worksheet 2.0	☐	☑
Worksheet 2.1	☐	☑
Worksheet 3.0	☑	☐
Worksheet 3.1	☐	☑
Worksheet 3.2	☐	☑
Worksheet 3.3	☐	☑
Worksheet 4.0	☐	☑
Worksheet 5.0	☐	☑
Worksheet 6.0	☐	☑
Worksheet 7.0	☐	☑

	Y	N
Original USGS Map	☐	☑
Affected Landowners Map	☐	☑
Landowner Disk or Labels	☐	☑
Buffer Zone Map	☑	☐
Flow Diagram	☑	☐
Site Drawing	☑	☐
Original Photographs	☐	☑
Design Calculations	☐	☑
Solids Management Plan	☐	☑
Water Balance	☐	☑

RECEIVED
MAR 01 2024
Water Quality Applications Team

For TCEQ Use Only

Segment Number _____ County _____
Expiration Date _____ Region _____
Permit Number _____

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

For any questions about this form, please contact the Applications Review and Processing Team at 512-239-4671.

Section 1. Application Fees (Instructions Page 26)

Indicate the amount submitted for the application fee (check only one).

Flow	New/Major Amendment	Renewal
<0.05 MGD	$350.00 ☐	$315.00 ☐
≥0.05 but <0.10 MGD	$550.00 ☐	$515.00 ☐
≥0.10 but <0.25 MGD	$850.00 ☐	$815.00 ☐
≥0.25 but <0.50 MGD	$1,250.00 ☐	$1,215.00 ☒
≥0.50 but <1.0 MGD	$1,650.00 ☐	$1,615.00 ☐
≥1.0 MGD	$2,050.00 ☐	$2,015.00 ☐

Minor Amendment (for any flow) $150.00 ☐

Payment Information:

Mailed — Check/Money Order Number: 5074

Check/Money Order Amount: $1215.00

Name Printed on Check: Oller Engineering Inc.

EPAY — Voucher Number: Click to enter text.

Copy of Payment Voucher enclosed? Yes ☐

Section 2. Type of Application (Instructions Page 26)

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

☒ Publicly-Owned Domestic Wastewater

☐ Privately-Owned Domestic Wastewater

☐ Conventional Wastewater Treatment

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

☒ Active ☐ Inactive

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

- ☐ TPDES Permit
- ☒ TLAP
- ☐ TPDES Permit with TLAP component
- ☐ Subsurface Area Drip Dispersal System (SADDS)

d. Check the box next to the appropriate application type

- ☐ New
- ☐ Major Amendment *with* Renewal
- ☐ Major Amendment *without* Renewal
- ☒ Renewal without changes
- ☐ Minor Amendment *with* Renewal
- ☐ Minor Amendment *without* Renewal
- ☐ Minor Modification of permit

e. For amendments or modifications, describe the proposed changes: Click to enter text.

f. For existing permits:

Permit Number: WQ00 010774001

EPA I.D. (TPDES only): TX

Expiration Date: March 29,2024

Section 3. Facility Owner (Applicant) and Co-Applicant Information (Instructions Page 26)

A. The owner of the facility must apply for the permit.

What is the Legal Name of the entity (applicant) applying for this permit?

City of Abernathy

(The legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal documents forming the entity.)

If the applicant is currently a customer with the TCEQ, what is the Customer Number (CN)? You may search for your CN on the TCEQ website at http://www15.tceq.texas.gov/crpub/

CN: 600248421

What is the name and title of the person signing the application? The person must be an executive official meeting signatory requirements in *30 TAC § 305.44*.

Prefix: Mr Last Name, First Name: Provost, Don

Ms

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

What is the Legal Name of the co-applicant applying for this permit?

Click to enter text.

(The legal name must be spelled exactly as filed with the TX SOS, with the County, or in the legal documents forming the entity.)

If the co-applicant is currently a customer with the TCEQ, what is the Customer Number (CN)? You may search for your CN on the TCEQ website at: http://www15.tceq.texas.gov/crpub/

CN: Click to enter text.

What is the name and title of the person signing the application? The person must be an executive official meeting signatory requirements in *30 TAC § 305.44*.

Prefix: Click to enter text. Last Name, First Name: Click to enter text.

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

Provide a brief description of the need for a co-permittee: Click to enter text.

C. Core Data Form

Complete the Core Data Form for each customer and include as an attachment. If the customer type selected on the Core Data Form is **Individual**, complete **Attachment 1** of Administrative Report 1.0. Click to enter text.

Section 4. Application Contact Information (Instructions Page 27)

This is the person(s) TCEQ will contact if additional information is needed about this application. Provide a contact for administrative questions and technical questions.

A. Prefix: Ms Last Name, First Name: Ruiz, Wendy

Title: Vice President Credential: Click to enter text.

Organization Name: Oller Engineering Inc

Mailing Address: 2811 S Loop 289 Suite 17 City, State, Zip Code: Lubbock, Texas, 79423

Phone No.: 8069936226 E-mail Address: wendy.ruiz@oei-eng.com

Check one or both: ☒ Administrative Contact ☒ Technical Contact

B. Prefix: Mr Last Name, First Name: Oller, Rich

Title: President Credential: PE

Organization Name: Oller Engineering Inc

Mailing Address: 2811 S Loop 289 Suite 17 City, State, Zip Code: Lubbock, Texas 79423

Phone No.: 8069936226 E-mail Address: rich.oller@oei-eng.com

Check one or both: ☒ Administrative Contact ☒ Technical Contact

Section 5. Permit Contact Information (Instructions Page 27)

Provide the names and contact information for two individuals that can be contacted throughout the permit term.

A. Prefix: Mr Last Name, First Name: Provost, Don

Title: City Manager Credential: Click to enter text.

Organization Name: City of Abernathy

Mailing Address: 811 Ave D City, State, Zip Code: Abernathy, Texas, 79311

Phone No.: 8062982546 E-mail Address: d.provost@cityofabernathy.org

B. Prefix: Mr Last Name, First Name: Oller, Rich

Title: President Credential: PE

Organization Name: City of Abernathy

Mailing Address: 2811 S Loop 289 Suite 17 City, State, Zip Code: Lubbock, Texas, 79423

Phone No.: 8069936226 E-mail Address: rich.oller@oei-eng.com

Section 6. Billing Contact Information (Instructions Page 27)

The permittee is responsible for paying the annual fee. The annual fee will be assessed to 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 (using form TCEQ-20029).

Prefix: Mr Last Name, First Name: Provost, Don

Title: City Manager Credential: Click to enter text.

Organization Name: City of Abernathy

Mailing Address: 811 Ave D City, State, Zip Code: Abernathy, Texas 79311

Phone No.: 8062982546 E-mail Address: d.provost@cityofabernathy.org

Section 7. DMR/MER Contact Information (Instructions Page 27)

Provide the name and complete mailing address of the person delegated to receive and submit Discharge Monitoring Reports (DMR) (EPA 3320-1) or maintain Monthly Effluent Reports (MER).

Prefix: Mr Last Name, First Name: Provost, Don

Title: City Manager Credential: Click to enter text.

Organization Name: City of Abernathy

Mailing Address: 811 Ave D City, State, Zip Code: Abernathy, Texas, 79311

Phone No.: 8062982546 E-mail Address: d.provost@cityofabernathy.orgMs

Section 8. Public Notice Information (Instructions Page 27)

A. Individual Publishing the Notices

Prefix: Ms Last Name, First Name: Ruiz, Wendy

Title: Vice President Credential: Click to enter text.

Organization Name: Oller Engineering Inc

Mailing Address: 2811 S Loop 289 Suite 17 City, State, Zip Code: Lubbock, Texas, 79423

Phone No.: 8069936226 E-mail Address: wendy.ruiz@oei-eng.com

B. Method for Receiving Notice of Receipt and Intent to Obtain a Water Quality Permit Package

Indicate by a check mark the preferred method for receiving the first notice and instructions:

☒ E-mail Address

☐ Fax

☒ Regular Mail

C. Contact permit to be listed in the Notices

Prefix: Mr Last Name, First Name: Provost, Don

Title: City Manager Credential: Click to enter text.

Organization Name: City of Abernathy

Mailing Address: 811 Ave D City, State, Zip Code: Abernathy, Texas, 79311

Phone No.: 8062982546 E-mail Address: d.provost@cityofabernathy.org

D. Public Viewing Information

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

Public building name: City Hall

Location within the building: Main Office

Physical Address of Building: 811 Ave D

City: Abernathy County: Hale

Contact (Last Name, First Name): Provost, Don

Phone No.: 8062982546 Ext.: Click to enter text.

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.

Please call the bilingual/ESL coordinator at the nearest elementary and middle schools and obtain the following information to determine whether an alternative language notices are 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** Section 9 below.

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

   ☒ Yes ☐ No

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

   ☐ Yes ☒ No

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

   ☐ Yes ☒ No

5. If the answer is **yes** to **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: Click to enter text.

G. Public Involvement Plan Form

Complete the Public Involvement Plan Form (TCEQ Form 20960) for each application for a **new permit or major amendment to a permit** and include as an attachment.

Attachment: Click to enter text.

Section 9. Regulated Entity and Permitted Site Information (Instructions Page 29)

A. If the site is currently regulated by TCEQ, provide the Regulated Entity Number (RN) issued to this site. **RN** 101917219

Search the TCEQ's Central Registry at http://www15.tceq.texas.gov/crpub/ to determine if the site is currently regulated by TCEQ.

B. Name of project or site (the name known by the community where located):

City of Abernathy Wastewater Treatment Facility

C. Owner of treatment facility: City of Abernathy

Ownership of Facility: ☒ Public ☐ Private ☐ Both ☐ Federal

D. Owner of land where treatment facility is or will be:

Prefix: Click to enter text. Last Name, First Name: Click to enter text.

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

Organization Name: Click to enter text.

Mailing Address: Click to enter text. City, State, Zip Code: Click to enter text.

Phone No.: Click to enter text. E-mail Address: Click to enter text.

If the landowner is not the same person as the facility owner or co-applicant, attach a lease agreement or deed recorded easement. See instructions.

Attachment: Click to enter text.

E. Owner of effluent disposal site:

Prefix: Click to enter text. Last Name, First Name: Click to enter text.

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

Organization Name: Click to enter text.

Mailing Address: Click to enter text. City, State, Zip Code: Click to enter text.

Phone No.: Click to enter text. E-mail Address: Click to enter text.

If the landowner is not the same person as the facility owner or co-applicant, attach a lease agreement or deed recorded easement. See instructions.

Attachment: Click to enter text.

F. Owner sewage sludge disposal site (if authorization is requested for sludge disposal on property owned or controlled by the applicant)::

Prefix: Click to enter text. Last Name, First Name: Click to enter text.

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

Organization Name: Click to enter text.

Mailing Address: Click to enter text. City, State, Zip Code: Click to enter text.

Phone No.: Click to enter text. E-mail Address: Click to enter text.

If the landowner is not the same person as the facility owner or co-applicant, attach a lease agreement or deed recorded easement. See instructions.

Attachment: Click to enter text.

Section 10. TPDES Discharge Information (Instructions Page 31)

A. Is the wastewater treatment facility location in the existing permit accurate?

☐ Yes ☐ No

If **no, or a new permit application**, please give an accurate description:

Click to enter text.

B. Are the point(s) of discharge and the discharge route(s) in the existing permit correct?

☐ Yes ☐ No

If **no, or a new or amendment permit application**, provide an accurate description of the point of discharge and the discharge route to the nearest classified segment as defined in 30 TAC Chapter 307:

Click to enter text.

City nearest the outfall(s):

County in which the outfalls(s) is/are located:

C. 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, provide copies of letters that show proof of contact and the approval letter upon receipt.

Attachment: Click to enter text.

D. 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.

Section 11. TLAP Disposal Information (Instructions Page 32)

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

☒ Yes ☐ No

If **no, or a new or amendment permit application**, provide an accurate description of the disposal site location:

Click to enter text.

B. City nearest the disposal site: Abernathy

C. County in which the disposal site is located: Hale

D. For **TLAPs**, describe the routing of effluent from the treatment facility to the disposal site:

The wastewater treatment facility and disposal site are located in the drainage basin of Double Mountain Fork Brazos River in Segment No. 1241 of the Brazos River Basin.

E. For **TLAPs**, please identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: Click to enter text.

Section 12. Miscellaneous Information (Instructions Page 32)

A. Is the facility located on or does the treated effluent cross American Indian Land?

☐ Yes ☒ No

B. If the existing permit contains an onsite sludge disposal authorization, is the location of the sewage sludge disposal site in the existing permit accurate?

☐ Yes ☐ No ☒ Not Applicable

If No, or if a new onsite sludge disposal authorization is being requested in this permit application, provide an accurate location description of the sewage sludge disposal site.

Click to enter text.

C. 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 formerly employed by the TCEQ who represented your company and was paid for service regarding the application: Click to enter text.

D. Do you owe any fees to the TCEQ?

☐ Yes ☒ No

If **yes**, provide the following information:

Account number: Click to enter text.

Amount past due: Click to enter text.

E. Do you owe any penalties to the TCEQ?

☐ Yes ☒ No

If **yes**, please provide the following information:

Enforcement order number: Click to enter text.

Amount past due: Click to enter text.

Section 13. Attachments (Instructions Page 33)

Indicate which attachments are included with the Administrative Report. Check all that apply:

☐ Lease agreement or deed recorded easement, if the land where the treatment facility is located or the effluent disposal site are not owned by the applicant or co-applicant.

☒ Original full-size USGS Topographic Map with the following information:

- Applicant's property boundary
- Treatment facility boundary
- Labeled point of discharge for each discharge point (TPDES only)
- Highlighted discharge route for each discharge point (TPDES only)
- Onsite sewage sludge disposal site (if applicable)
- Effluent disposal site boundaries (TLAP only)
- New and future construction (if applicable)
- 1 mile radius information
- 3 miles downstream information (TPDES only)
- All ponds.

☐ Attachment 1 for Individuals as co-applicants

☐ Other Attachments. Please specify: Click to enter text.

Section 14. Signature Page (Instructions Page 34)

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

Permit Number: WQ0010774001

Applicant: City of Abernathy

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering 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): Don Provost

Signatory title: City Manager

Signature: _____ Date: 2-28-2024

(Use blue ink)

Subscribed and Sworn to before me by the said Jessica Wilbanks

on this 28 day of February, 2024.

My commission expires on the 29 day of August, 2027.

Jessica Wilbanks

Notary Public

[SEAL]

Hale

County, Texas

Jessica Brooke Wilbanks
My Commission Expires
8/29/2027
Notary ID134531782

DOMESTIC WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

The following information is required for new and amendment applications.

Section 1. Affected Landowner Information (Instructions Page 36)

A. Indicate by a check mark that the landowners map or drawing, with scale, includes the following information, as applicable:

- ☐ 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 (for example, irrigation area or subsurface drainfield site) and all evaporation/holding ponds within the applicant's property
- ☐ The property boundaries of all landowners surrounding the effluent disposal site
- ☐ The boundaries of the sludge land application site (for land application of sewage sludge for beneficial use) and the property boundaries of landowners surrounding 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 (for example, sludge surface disposal site or sludge monofill) is located

B. ☐ Indicate by a check mark that a separate list with the landowners' names and mailing addresses cross-referenced to the landowner's map has been provided.

C. Indicate by a check mark in which format the landowners list is submitted:

☐ USB Drive ☐ Four sets of labels

D. Provide the source of the landowners' names and mailing addresses: Click to enter text.

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.

Section 2. Original Photographs (Instructions Page 38)

Provide original ground level photographs. Indicate with checkmarks that the following information is provided.

- ☐ 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

Section 3. Buffer Zone Map (Instructions Page 38)

A. Buffer zone map. Provide a buffer zone map on 8.5 x 11-inch paper with all of the following information. The applicant's property line and the buffer zone line may be distinguished by using dashes or symbols and appropriate labels.

- The applicant's property boundary;
- The required buffer zone; and
- Each treatment unit; and
- The distance from each treatment unit to the property boundaries.

B. Buffer zone compliance method. Indicate how the buffer zone requirements will be met. Check all that apply.

- ☐ Ownership
- ☐ Restrictive easement
- ☐ Nuisance odor control
- ☐ Variance

C. Unsuitable site characteristics. Does the facility comply with the requirements regarding unsuitable site characteristic found in 30 TAC § 309.13(a) through (d)?

☐ Yes ☐ No

DOMESTIC WASTEWATER PERMIT APPLICATION

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

This form applies to TPDES permit applications only. Complete and attach the Supplemental Permit information Form (SPIF) (TCEQ Form 20971).

Attachment: Click to enter text.

ATTACHMENT 1

INDIVIDUAL INFORMATION

Section 1. Individual Information (Instructions Page 41)

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

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

Full legal name (Last Name, First Name, Middle Initial): Click to enter text.

Driver's License or State Identification Number: Click to enter text.

Date of Birth: Click to enter text.

Mailing Address: Click to enter text.

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

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

E-mail Address: Click to enter text.

CN: Click to enter text.

For Commission Use Only:
Customer Number:
Regulated Entity Number:
Permit Number:

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

PLAIN LANGUAGE SUMMARY FOR TPDES OR TLAP PERMIT APPLICATIONS

Plain Language Summary Template and Instructions for Texas Pollutant Discharge Elimination System (TPDES) and Texas Land Application (TLAP) Permit Applications

Applicants should use this template to develop a plain language summary as required by Title 30, Texas Administrative Code (30 TAC), Chapter 39, Subchapter H. Applicants may modify the template as necessary to accurately describe their facility as long as the summary includes the following information: (1) the function of the proposed plant or facility; (2) the expected output of the proposed plant or facility; (3) the expected pollutants that may be emitted or discharged by the proposed plant or facility; and (4) how the applicant will control those pollutants, so that the proposed plant will not have an adverse impact on human health or the environment.

Fill in the highlighted areas below to describe your facility and application in plain language. Instructions and examples are provided below. Make any other edits necessary to improve readability or grammar and to comply with the rule requirements.

If you are subject to the alternative language notice requirements in 30 TAC Section 39.426, **you must provide a translated copy of the completed plain language summary in the appropriate alternative language as part of your application package**. For your convenience, a Spanish template has been provided below.

ENGLISH TEMPLATE FOR TPDES or TLAP NEW/RENEWAL/AMENDMENT APPLICATIONS
Enter 'INDUSTRIAL' or 'DOMESTIC' here WASTEWATER/STORMWATER
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 TAC Chapter 39. The information provided in this summary may change during the technical review of the application and is not a federal enforceable representation of the permit application.

City of Abernathy (CN# 600248421) operates City of Abernathy Wastewater Treatment Facility (RN# 101917219), a Wastewater Treatment Facility consists of a pond system. Treatment units include bar screens, grit chambers, Imhoff tanks, Holding pond and a facultative lagoon with a surface area of 1.16 acres and volume of 17.4 acre-feet The facility is in operation. The facility is located at approximately 1/5 miles north and 0.2 mile east of the intersection of Interstate Highway 27 and Farm-to-Market Road 2060 , in Abernathy, Hale County, Texas 79311. Renewal of permit for wastewater disposal. This permit will not authorize a discharge of pollutants into water in the state.

Discharges from the facility are expected to contain BOD5, pH, TSS. Domestic wastewater is treated by facultative lagoon.

PLANTILLA EN ESPAÑOL PARA SOLICITUDES NUEVAS/RENOVACIONES/ENMIENDAS DE TPDES o TLAP

AGUAS RESIDUALES Domesticas **/AGUAS PLUVIALES**

El siguiente resumen se proporciona para esta solicitud de permiso de calidad del agua pendiente que está siendo revisada por la Comisión de Calidad Ambiental de Texas según lo requerido por el Capítulo 39 del Código Administrativo de Texas 30. La información proporcionada en este resumen puede cambiar durante la revisión técnica de la solicitud y no es una representación ejecutiva fedérale de la solicitud de permiso.

Ciudad de Abernathy (CN#600248421) opera Ciudad de Abernathy instalacion de tratamiento de aguas residuales RN # 101917219, un La instalación de tratamiento de aguas residuales consta de un sistema de estanques. Las unidades de tratamiento incluyen rejillas, desarenadores, tanques Imhoff, estanque de contención y laguna facultativa con una superficie de 1.16 acres y un volumen de 17.4 acres-pies. La instalación está en operación. . La instalación está ubicada en La instalación está ubicada aproximadamente a 1/5 de milla al norte y 0,2 milla al este de la intersección de la autopista interestatal 27 y Farm-to-Market Road 2060. , en Abernathy, Condado de Sano, Texas 79311. Renovacion de permiso para disposicion de aguas residuales. Este permiso no autorizará una descarga de contaminantes en el agua en el estado.

Se espera que las descargas de la instalación contengan BOD5, pH, TSS. Aguas residuals domesticas. 16. Elija del menú desplegable tratado por laguna facultativa.

INSTRUCTIONS

1. Enter the name of applicant in this section. The applicant name should match the name associated with the customer number.
2. Enter the Customer Number in this section. Each Individual or Organization is issued a unique 11-digit identification number called a CN (e.g. CN123456789).
3. Choose "operates" in this section for existing facility applications or choose "proposes to operate" for new facility applications.
4. Enter the name of the facility in this section. The facility name should match the name associated with the regulated entity number.
5. Enter the Regulated Entity number in this section. Each site location is issued a unique 11-digit identification number called an RN (e.g. RN123456789).
6. Choose the appropriate article (a or an) to complete the sentence.
7. Enter a description of the facility in this section. For example: steam electric generating facility, nitrogenous fertilizer manufacturing facility, etc.
8. Choose "is" for an existing facility or "will be" for a new facility.
9. Enter the location of the facility in this section.
10. Enter the City nearest the facility in this section.
11. Enter the County nearest the facility in this section.
12. Enter the zip code for the facility address in this section.
13. Enter a summary of the application request in this section. For example: renewal to discharge 25,000 gallons per day of treated domestic wastewater, new application to discharge process wastewater and stormwater on an intermittent and flow-variable basis, or major amendment to reduce monitoring frequency for pH, etc. If more than one outfall is included in the application, provide applicable information for each individual outfall.
14. List all pollutants expected in the discharge from this facility in this section. If applicable, refer to the pollutants from any federal numeric effluent limitations that apply to your facility.
15. Enter the discharge types from your facility in this section (e.g., stormwater, process wastewater, once through cooling water, etc.)
16. Choose the appropriate verb tense to complete the sentence.
17. Enter a description of the wastewater treatment used at your facility. Include a description of each process, starting with initial treatment and finishing with the outfall/point of disposal. Use additional lines for individual discharge types if necessary.

Questions or comments concerning this form may be directed to the Water Quality Division's Application Review and Processing Team by email at WQ-ARPTeam@tceq.texas.gov or by phone at (512) 239-4671.

Example

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 TAC 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.

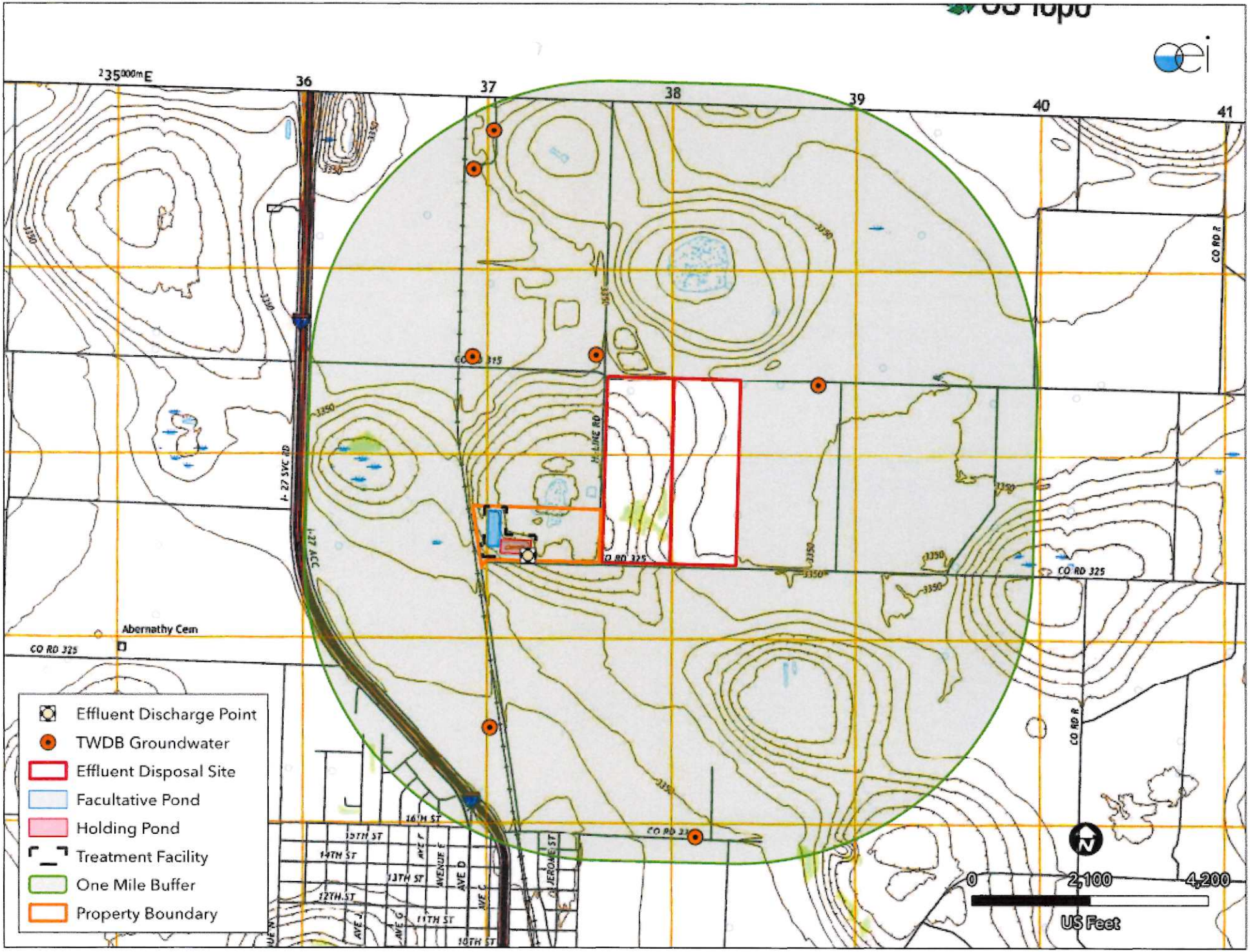
ABC Corporation (CN600000000) operates the Starr Power Station (RN10000000000), a two-unit gas-fired electric generating facility. Unit 1 has a generating capacity of 393 megawatts (MWs) and Unit 2 has a generating capacity of 528 MWs. The facility is located at 1356 Starr Street, near the City of Austin, Travis County, Texas 78753.

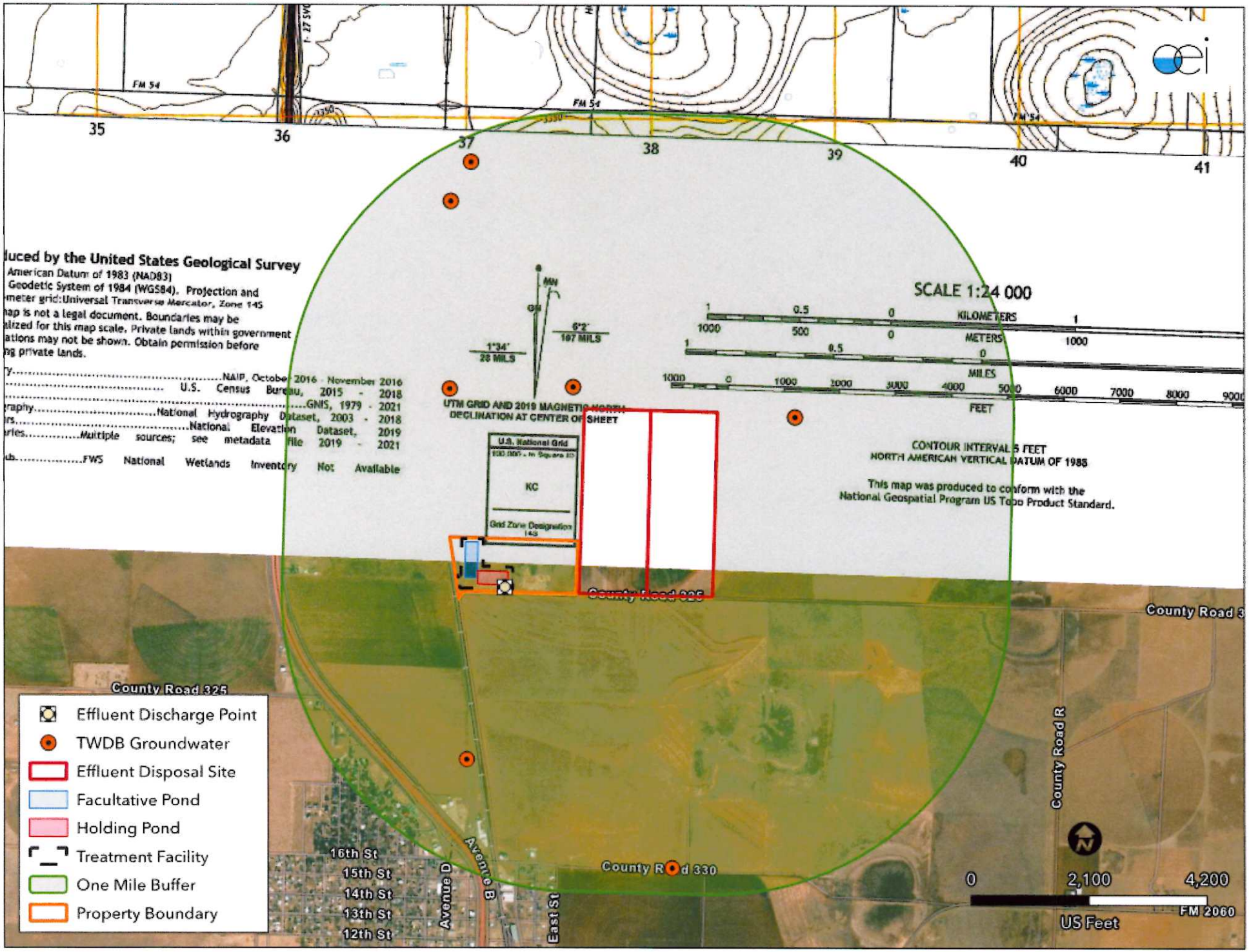
This application is for a renewal to discharge 870,000,000 gallons per day of once through cooling water, auxiliary cooling water, and also authorizes the following waste streams monitored inside the facility (internal outfalls) before it is mixed with the other wastewaters authorized for discharge via main Outfall 001, referred to as "previously monitored effluents" (low-volume wastewater, metal-cleaning waste, and stormwater (from diked oil storage area yards and storm drains)) via Outfall 001. Low-volume waste sources, metal-cleaning waste, and stormwater drains on a continuous and flow-variable basis via internal Outfall 101.

The discharge of once through cooling water via Outfall 001 and low-volume waste and metal-cleaning waste via Outfall 101 from this facility is subject to federal effluent limitation guidelines at 40 CFR Part 423. The pollutants expected from these discharges based on 40 CFR Part 423 are: free available chlorine, total residual chlorine, total suspended solids, oil and grease, total iron, total copper, and pH. Temperature is also expected from these discharges. Additional potential pollutants are included in the Industrial Wastewater Application Technical Report, Worksheet 2.0.

Cooling water and boiler make-up water are supplied by Lake Starr Reservoir. The City of Austin municipal water plant (CN600000000, PWS 00000) supplies the facility's potable water and serves as an alternate source of boiler make-up water. Water from the Lake Starr Reservoir is withdrawn at the intake structure and treated with sodium hypochlorite to prevent biofouling and sodium bromide as a chlorine enhancer to improve efficacy and then passed through condensers and auxiliary equipment on a once-through basis to cool equipment and condense exhaust steam.

Low-volume wastewater from blowdown of boiler Units 1 and 2 and metal-cleaning wastes receive no treatment prior to discharge via Outfall 101. Plant floor and equipment drains and stormwater runoff from diked oil storage areas, yards, and storm drains are routed through an oil and water separator prior to discharge via Outfall 101. Domestic wastewater, blowdown, and backwash water from the service water filter, clarifier, and sand filter are routed to the Starr Creek Domestic Sewage Treatment Plant, TPDES Permit No. WQ0010000001, for treatment and disposal. Metal-cleaning waste from equipment cleaning is generally disposed of off-site.


235000mE
36
37
38
39
40
41
CO RD 325
Abernathy Cem
Effluent Discharge Point
TWDB Groundwater
Effluent Disposal Site
Facultative Pond
Holding Pond
Treatment Facility
One Mile Buffer
Property Boundary
0
2,100
4,200
US Feet



duced by the United States Geological Survey
American Datum of 1983 (NAD83)
Geodetic System of 1984 (WGS84). Projection and
meter grid: Universal Transverse Mercator, Zone 14S
map is not a legal document. Boundaries may be
ilized for this map scale. Private lands within government
ations may not be shown. Obtain permission before
ng private lands.

ty	NAIP, October 2016 - November 2016
	U.S. Census Bureau, 2015 - 2018
	GNIS, 1979 - 2021
raphy	National Hydrography Dataset, 2003 - 2018
rs	National Elevation Dataset, 2019
ries	Multiple sources; see metadata file 2019 - 2021
ub	FWS National Wetlands Inventory Not Available

ORIGINAL

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 600248421		RN 101917219

SECTION II: Customer Information

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

☐ 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:*

City of Abernathy

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
	17560007043	756000704	102472362

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 ☐ Other:
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant

15. Mailing Address:

PO Box 310, 811 Avenue D

City	Abernathy	State	TX	ZIP	79311	ZIP + 4	

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

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

(806) 298-2546		( ) -

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.)*

City of Abernathy

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	811 Ave D							
	City	Abernathy	**State**	TX	**ZIP**	79311	**ZIP + 4**	
24. County	Hale							

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)

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

34. Mailing Address:	PO Box 310, 811 Avenue D							
	City	Abernathy	**State**	TX	**ZIP**	79311	**ZIP + 4**	
35. E-Mail Address:	d.provost@cityofabernathy.org							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(806) 298-2546		( ) -

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:	Wendy Ruiz		41. Title:	Vice President
42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**	
(806) 993-6226		( ) -	Wendy.ruiz@oei-eng.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:	Oller Engineering, Inc.	**Job Title:**	Vice President
Name *(In Print):*	Wendy Ruiz	**Phone:**	(806) 993- **6226**
Signature:	Wendy A Ruiz	**Date:**	2/29/24

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.0

For any questions about this form, please contact the Domestic Wastewater Permitting Team at 512-239-4671.

The following information is required for all renewal, new, and amendment applications.

Section 1. Permitted or Proposed Flows (Instructions Page 43)

A. Existing/Interim I Phase

Design Flow (MGD): 0.38 MGD

2-Hr Peak Flow (MGD): 0.76 MGD

Estimated construction start date: 1987

Estimated waste disposal start date: 1987

B. Interim II Phase

Design Flow (MGD): N/A

2-Hr Peak Flow (MGD): N/A

Estimated construction start date: N/A

Estimated waste disposal start date: N/A

C. Final Phase

Design Flow (MGD): N/A

2-Hr Peak Flow (MGD): N/A

Estimated construction start date: N/A

Estimated waste disposal start date: N/A

D. Current Operating Phase

Provide the startup date of the facility: 1987

Section 2. Treatment Process (Instructions Page 43)

A. Current Operating Phase

Provide a detailed description of the treatment process. **Include the type of treatment plant, mode of operation, and all treatment units.** Start with the plant's head works and

finish with the point of discharge. Include all sludge processing and drying units. **If more than one phase exists or is proposed, a description of *each phase* must be provided.**

Raw wastewater at a design flow of 0.38 MGD passes through a bar screen and grit removal. Solids from the bar screen and grit removal are sent to the Lubbock landfill. After grit removal, water flows to the Imhoff tank, then to the facultative lagoon, and finally to a holding pond before it is land irrigated on 180 acres of wheat.

B. Treatment Units

In Table 1.0(1), provide the treatment unit type, the number of units, and dimensions (length, width, depth) **of each treatment unit, accounting for *all* phases of operation.**

Table 1.0(1) - Treatment Units

Treatment Unit Type	Number of Units	Dimensions (L x W x D)
Bar Screen	1	1. 1.5' X 1.5' x3'
Parshall Flume	1	6-inch Throat
Imhoff Tank	1	26' x 34'
Facultative Lagoon	1	220' x 550' x 15'd
Holding Pond	1	220' x 660' (D = 3'-15')

C. Process Flow Diagram

Provide flow diagrams for the existing facilities and **each** proposed phase of construction.

Attachment: A

Section 3. Site Information and Drawing (Instructions Page 44)

Provide the TPDES discharge outfall latitude and longitude. Enter N/A if not applicable.

- Latitude: N/A
- Longitude: N/A

Provide the TLAP disposal site latitude and longitude. Enter N/A if not applicable.

- Latitude: 101.8319837 W
- Longitude: 33.8555883 N

Provide a site drawing for the facility that shows the following:

- The boundaries of the treatment facility;
- The boundaries of the area served by the treatment facility;
- If land disposal of effluent, the boundaries of the disposal site and all storage/holding ponds; and
- If sludge disposal is authorized in the permit, the boundaries of the land application or disposal site.

Attachment: B

Provide the name **and** a description of the area served by the treatment facility.

The City of Abernathy approximately 1.2 square miles of residential homes, light commercial.

Collection System Information **for wastewater TPDES permits only**: Provide information for each **uniquely owned** collection system, existing and new, served by this facility, including satellite collection systems. **Please see the instructions for a detailed explanation and examples.**

Collection System Information

Collection System Name	Owner Name	Owner Type	Population Served
N/A		Choose an item.	
		Choose an item.	
		Choose an item.	
		Choose an item.	

Section 4. Unbuilt Phases (Instructions Page 45)

Is the application for a renewal of a permit that contains an unbuilt phase or phases?

☐ Yes ☒ No

If yes, does the existing permit contain a phase that has not been constructed **within five years** of being authorized by the TCEQ?

☐ Yes ☐ No

If yes, provide a detailed discussion regarding the continued need for the unbuilt phase. **Failure to provide sufficient justification may result in the Executive Director recommending denial of the unbuilt phase or phases.**

Click to enter text.

Section 5. Closure Plans (Instructions Page 45)

Have any treatment units been taken out of service permanently, or will any units be taken out of service in the next five years?

☐ Yes ☒ No

If yes, was a closure plan submitted to the TCEQ?

☐ Yes ☐ No

If yes, provide a brief description of the closure and the date of plan approval.

Click to enter text.

Section 6. Permit Specific Requirements (Instructions Page 45)

For applicants with an existing permit, check the Other Requirements or Special Provisions of the permit.

A. Summary transmittal

Have plans and specifications been approved for the existing facilities and each proposed phase?

☐ Yes ☐ No

If yes, provide the date(s) of approval for each phase: Click to enter text.

Provide information, including dates, on any actions taken to meet a *requirement or provision* pertaining to the submission of a summary transmittal letter. **Provide a copy of an approval letter from the TCEQ, if applicable**.

Click to enter text.

B. Buffer zones

Have the buffer zone requirements been met?

☐ Yes ☐ No

Provide information below, including dates, on any actions taken to meet the conditions of the buffer zone. If available, provide any new documentation relevant to maintaining the buffer zones.

Click to enter text.

C. Other actions required by the current permit

Does the *Other Requirements* or *Special Provisions* section in the existing permit require submission of any other information or other required actions? Examples include Notification of Completion, progress reports, soil monitoring data, etc.

☐ Yes ☒ No

If yes, provide information below on the status of any actions taken to meet the conditions of an *Other Requirement* or *Special Provision.*

Click to enter text.

D. Grit and grease treatment

1. Acceptance of grit and grease waste

Does the facility have a grit and/or grease processing facility onsite that treats and decants or accepts transported loads of grit and grease waste that are discharged directly to the wastewater treatment plant prior to any treatment?

☐ Yes ☒ No

If No, stop here and continue with Subsection E. Stormwater Management.

2. Grit and grease processing

Describe below how the grit and grease waste is treated at the facility. In your description, include how and where the grit and grease is introduced to the treatment works and how it is separated or processed. Provide a flow diagram showing how grit and grease is processed at the facility.

Click to enter text.

3. Grit disposal

Does the facility have a Municipal Solid Waste (MSW) registration or permit for grit disposal?

☐ Yes ☒ No

If No, contact the TCEQ Municipal Solid Waste team at 512-239-2335. Note: A registration or permit is required for grit disposal. Grit shall not be combined with treatment plant sludge. See the instruction booklet for additional information on grit disposal requirements and restrictions.

Describe the method of grit disposal.

Click to enter text.

4. ***Grease and decanted liquid disposal***

Note: A registration or permit is required for grease disposal. Grease shall not be combined with treatment plant sludge. For more information, contact the TCEQ Municipal Solid Waste team at 512-239-2335.

Describe how the decant and grease are treated and disposed of after grit separation.

Click to enter text.

E. Stormwater management

1. ***Applicability***

Does the facility have a design flow of 1.0 MGD or greater in any phase?

☐ Yes ☒ No

Does the facility have an approved pretreatment program, under 40 CFR Part 403?

☐ Yes ☐ No

If no to both of the above, then skip to Subsection F, Other Wastes Received.

2. ***MSGP coverage***

Is the stormwater runoff from the WWTP and dedicated lands for sewage disposal currently permitted under the TPDES Multi-Sector General Permit (MSGP), TXR050000?

☐ Yes ☐ No

If yes, please provide MSGP Authorization Number and skip to Subsection F, Other Wastes Received:

TXR05 Click to enter text. or TXRNE Click to enter text.

If no, do you intend to seek coverage under TXR050000?

☐ Yes ☐ No

3. ***Conditional exclusion***

Alternatively, do you intend to apply for a conditional exclusion from permitting based TXR050000 (Multi Sector General Permit) Part II B.2 or TXR050000 (Multi Sector General Permit) Part V, Sector T 3(b)?

☐ Yes ☐ No

If yes, please explain below then proceed to Subsection F, Other Wastes Received:

Click to enter text.

4. ***Existing coverage in individual permit***

Is your stormwater discharge currently permitted through this individual TPDES or TLAP permit?

☐ Yes ☐ No

If yes, provide a description of stormwater runoff management practices at the site that are authorized in the wastewater permit then skip to Subsection F, Other Wastes Received.

Click to enter text.

5. ***Zero stormwater discharge***

Do you intend to have no discharge of stormwater via use of evaporation or other means?

☐ Yes ☐ No

If yes, explain below then skip to Subsection F. Other Wastes Received.

Click to enter text.

Note: If there is a potential to discharge any stormwater to surface water in the state as the result of any storm event, then permit coverage is required under the MSGP or an individual discharge permit. This requirement applies to all areas of facilities with treatment plants or systems that treat, store, recycle, or reclaim domestic sewage, wastewater or sewage sludge (including dedicated lands for sewage sludge disposal located within the onsite property boundaries) that meet the applicability criteria of above. You have the option of obtaining coverage under the MSGP for direct discharges, (recommended), or obtaining coverage under this individual permit.

6. ***Request for coverage in individual permit***

Are you requesting coverage of stormwater discharges associated with your treatment plant under this individual permit?

☐ Yes ☐ No

If yes, provide a description of stormwater runoff management practices at the site for which you are requesting authorization in this individual wastewater permit and describe whether you intend to comingle this discharge with your treated effluent or discharge it via a separate dedicated stormwater outfall. Please also indicate if you intend to divert stormwater to the treatment plant headworks and indirectly discharge it to water in the state.

Click to enter text.

Note: Direct stormwater discharges to waters in the state authorized through this individual permit will require the development and implementation of a stormwater pollution prevention plan (SWPPP) and will be subject to additional monitoring and reporting requirements. Indirect discharges of stormwater via headworks recycling will require compliance with all individual permit requirements including 2-hour peak flow limitations. All stormwater discharge authorization requests will require additional information during the technical review of your application.

F. Discharges to the Lake Houston Watershed

Does the facility discharge in the Lake Houston watershed?

☐ Yes ☒ No

If yes, attach a Sewage Sludge Solids Management Plan. See Example 5 in the instructions.
Click to enter text.

G. Other wastes received including sludge from other WWTPs and septic waste

1. *Acceptance of sludge from other WWTPs*

Does or will the facility accept sludge from other treatment plants at the facility site?

☐ Yes ☒ No

If yes, attach sewage sludge solids management plan. See Example 5 of the instructions.

In addition, provide the date the plant started or is anticipated to start accepting sludge, an estimate of monthly sludge acceptance (gallons or millions of gallons), an estimate of the BOD_5 concentration of the sludge, and the design BOD_5 concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

Click to enter text.

Note: Permits that accept sludge from other wastewater treatment plants may be required to have influent flow and organic loading monitoring.

2. *Acceptance of septic waste*

Is the facility accepting or will it accept septic waste?

☐ Yes ☐ No

If yes, does the facility have a Type V processing unit?

☐ Yes ☐ No

If yes, does the unit have a Municipal Solid Waste permit?

☐ Yes ☐ No

If yes to any of the above, provide the date the plant started or is anticipated to start accepting septic waste, an estimate of monthly septic waste acceptance (gallons or millions of gallons), an estimate of the BOD_5 concentration of the septic waste, and the design BOD_5 concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

Click to enter text.

Note: Permits that accept sludge from other wastewater treatment plants may be required to have influent flow and organic loading monitoring.

3. ***Acceptance of other wastes (not including septic, grease, grit, or RCRA, CERCLA or as discharged by IUs listed in Worksheet 6)***

Is or will the facility accept wastes that are not domestic in nature excluding the categories listed above?

☐ Yes ☐ No

If yes, provide the date that the plant started accepting the waste, an estimate how much waste is accepted on a monthly basis (gallons or millions of gallons), a description of the entities generating the waste, and any distinguishing chemical or other physical characteristic of the waste. Also note if this information has or has not changed since the last permit action.

Click to enter text.

Section 7. Pollutant Analysis of Treated Effluent (Instructions Page 50)

Is the facility in operation?

☒ Yes ☐ No

If no, this section is not applicable. Proceed to Section 8.

If yes, provide effluent analysis data for the listed pollutants. ***Wastewater treatment facilities*** complete Table 1.0(2). ***Water treatment facilities*** discharging filter backwash water, complete Table 1.0(3). Provide copies of the laboratory results sheets. **These tables are not applicable for a minor amendment without renewal.** See the instructions for guidance.

Note: The sample date must be within 1 year of application submission.

Table1.0(2) – Pollutant Analysis for Wastewater Treatment Facilities

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
$CBOD_5$, mg/l	16.9		1	Grab	15:00 11/27/23
Total Suspended Solids, mg/l	80.7		1	Grab	15:00 11/27/23

Ammonia Nitrogen, mg/l	<0.015		1	Grab	15:00 11/27/23
Nitrate Nitrogen, mg/l	4.44		1	Grab	15:00 11/27/23
Total Kjeldahl Nitrogen, mg/l	10.2 mg/l		1	Grab	15:00 11/27/23
Sulfate, mg/l	60 mg/l		1	Grab	15:00 11/27/23
Chloride, mg/l	119 mg/l		1	Grab	15:00 11/27/23
Total Phosphorus, mg/l	6.29 mg/l		1	Grab	15;00 11/27/23
pH, standard units	7.7		1	Grab	15:00 11/27/23
Dissolved Oxygen*, mg/l	N/A				
Chlorine Residual, mg/l	0.686		1	Grab	15:00 11/27/23
E.coli (CFU/100ml) freshwater	1600		1	Grab	15:00 11/27/23
Entercocci (CFU/100ml) saltwater	N/A				
Total Dissolved Solids, mg/l	N/A				15:00 11/27/23
Electrical Conductivity, µmohs/cm, †	1.0 ds/m		1	Grab	15:00 11/27/23
Oil & Grease, mg/l	N/A				
Alkalinity ($CaCO_3$)*, mg/l	N/A				

*TPDES permits only
†TLAP permits only

Table1.0(3) – Pollutant Analysis for Water Treatment Facilities

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
Total Suspended Solids, mg/l	80.7		1	Grab	15:00 11/27/23
Total Dissolved Solids, mg/l	N/A			Grab	
pH, standard units	7.7		1	Grab	15:00

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
Fluoride, mg/l	N/A				
Aluminum, mg/l	0.074		1	Grab	15:00 11/27/23
Alkalinity ($CaCO_3$), mg/l	N/A				

Section 8. Facility Operator (Instructions Page 50)

Facility Operator Name: Ricky Patterson

Facility Operator's License Classification and Level: Class C

Facility Operator's License Number: WW0066780 3

Section 9. Sludge and Biosolids Management and Disposal (Instructions Page 51)

A. WWTP's Biosolids Management Facility Type

Check all that apply. See instructions for guidance

- ☐ Design flow>= 1 MGD
- ☐ Serves >= 10,000 people
- ☐ Class I Sludge Management Facility (per 40 CFR § 503.9)
- ☐ Biosolids generator
- ☐ Biosolids end user - land application (onsite)
- ☐ Biosolids end user - surface disposal (onsite)
- ☐ Biosolids end user - incinerator (onsite)

B. WWTP's Biosolids Treatment Process

Check all that apply. See instructions for guidance.

- ☐ Aerobic Digestion
- ☐ Air Drying (or sludge drying beds)
- ☐ Lower Temperature Composting
- ☐ Lime Stabilization
- ☐ Higher Temperature Composting
- ☐ Heat Drying
- ☐ Thermophilic Aerobic Digestion
- ☐ Beta Ray Irradiation
- ☐ Gamma Ray Irradiation

- ☐ Pasteurization
- ☐ Preliminary Operation (e.g. grinding, de-gritting, blending)
- ☐ Thickening (e.g. gravity thickening, centrifugation, filter press, vacuum filter)
- ☐ Sludge Lagoon
- ☐ Temporary Storage (< 2 years)
- ☐ Long Term Storage (>= 2 years)
- ☐ Methane or Biogas Recovery
- ☐ Other Treatment Process: Click to enter text.

C. Biosolids Management

Provide information on the *intended* biosolids management practice. Do not enter every management practice that you want authorized in the permit, as the permit will authorize all biosolids management practices listed in the instructions. Rather indicate the management practice the facility plans to use.

Biosolids Management

Management Practice	Handler or Preparer Type	Bulk or Bag Container	Amount (dry metric tons)	Pathogen Reduction Options	Vector Attraction Reduction Option
Choose an item.	Choose an item.	Choose an item.		Choose an item.	Choose an item.
Choose an item.	Choose an item.	Choose an item.		Choose an item.	Choose an item.
Choose an item.	Choose an item.	Choose an item.		Choose an item.	Choose an item.

If "Other" is selected for Management Practice, please explain (e.g. monofill or transport to another WWTP): Click to enter text.

D. Disposal site

Disposal site name: Click to enter text.

TCEQ permit or registration number: Click to enter text.

County where disposal site is located: Click to enter text.

E. Transportation method

Method of transportation (truck, train, pipe, other): Click to enter text.

Name of the hauler: Click to enter text.

Hauler registration number: Click to enter text.

Sludge is transported as a:

Liquid ☐ semi-liquid ☐ semi-solid ☐ solid ☐

Section 10. Permit Authorization for Sewage Sludge Disposal

(Instructions Page 53)

A. Beneficial use authorization

Does the existing permit include authorization for land application of sewage sludge for beneficial use?

☐ Yes ☒ No

If yes, are you requesting to continue this authorization to land apply sewage sludge for beneficial use?

☐ Yes ☐ No

If yes, is the completed **Application for Permit for Beneficial Land Use of Sewage Sludge (TCEQ Form No. 10451)** attached to this permit application (see the instructions for details)?

☐ Yes ☐ No

B. Sludge processing authorization

Does the existing permit include authorization for any of the following sludge processing, storage or disposal options?

Sludge Composting	☐ Yes	☐ No
Marketing and Distribution of sludge	☐ Yes	☐ No
Sludge Surface Disposal or Sludge Monofill	☐ Yes	☐ No
Temporary storage in sludge lagoons	☐ Yes	☐ No

If yes to any of the above sludge options and the applicant is requesting to continue this authorization, is the completed **Domestic Wastewater Permit Application: Sewage Sludge Technical Report (TCEQ Form No. 10056)** attached to this permit application?

☐ Yes ☐ No

Section 11. Sewage Sludge Lagoons (Instructions Page 53)

Does this facility include sewage sludge lagoons?

☐ Yes ☒ No

If yes, complete the remainder of this section. If no, proceed to Section 12.

A. Location information

The following maps are required to be submitted as part of the application. For each map, provide the Attachment Number.

- Original General Highway (County) Map:

  Attachment: Click to enter text.
- USDA Natural Resources Conservation Service Soil Map:

  Attachment: Click to enter text.
- Federal Emergency Management Map:

  Attachment: Click to enter text.

- Site map:

  Attachment: Click to enter text.

Discuss in a description if any of the following exist within the lagoon area. Check all that apply.

- ☐ Overlap a designated 100-year frequency flood plain
- ☐ Soils with flooding classification
- ☐ Overlap an unstable area
- ☐ Wetlands
- ☐ Located less than 60 meters from a fault
- ☐ None of the above

Attachment: Click to enter text.

If a portion of the lagoon(s) is located within the 100-year frequency flood plain, provide the protective measures to be utilized including type and size of protective structures:

Click to enter text.

B. Temporary storage information

Provide the results for the pollutant screening of sludge lagoons. These results are in addition to pollutant results in *Section 7 of Technical Report 1.0.*

Nitrate Nitrogen, mg/kg: Click to enter text.

Total Kjeldahl Nitrogen, mg/kg: Click to enter text.

Total Nitrogen (=nitrate nitrogen + TKN), mg/kg: Click to enter text.

Phosphorus, mg/kg: Click to enter text.

Potassium, mg/kg: Click to enter text.

pH, standard units: Click to enter text.

Ammonia Nitrogen mg/kg: Click to enter text.

Arsenic: Click to enter text.

Cadmium: Click to enter text.

Chromium: Click to enter text.

Copper: Click to enter text.

Lead: Click to enter text.

Mercury: Click to enter text.

Molybdenum: Click to enter text.

Nickel: Click to enter text.

Selenium: Click to enter text.

Zinc: Click to enter text.

Total PCBs: Click to enter text.

Provide the following information:

Volume and frequency of sludge to the lagoon(s): Click to enter text.

Total dry tons stored in the lagoons(s) per 365-day period: Click to enter text.

Total dry tons stored in the lagoons(s) over the life of the unit: Click to enter text.

C. Liner information

Does the active/proposed sludge lagoon(s) have a liner with a maximum hydraulic conductivity of $1x10^{-7}$ cm/sec?

☐ Yes ☐ No

If yes, describe the liner below. Please note that a liner is required.

Click to enter text.

D. Site development plan

Provide a detailed description of the methods used to deposit sludge in the lagoon(s):

Click to enter text.

Attach the following documents to the application.

- Plan view and cross-section of the sludge lagoon(s)

  Attachment: Click to enter text.
- Copy of the closure plan

  Attachment: Click to enter text.
- Copy of deed recordation for the site

  Attachment: Click to enter text.
- Size of the sludge lagoon(s) in surface acres and capacity in cubic feet and gallons

  Attachment: Click to enter text.
- Description of the method of controlling infiltration of groundwater and surface water from entering the site

  Attachment: Click to enter text.
- Procedures to prevent the occurrence of nuisance conditions

  Attachment: Click to enter text.

E. Groundwater monitoring

Is groundwater monitoring currently conducted at this site, or are any wells available for groundwater monitoring, or are groundwater monitoring data otherwise available for the sludge lagoon(s)?

☐ Yes ☐ No

If groundwater monitoring data are available, provide a copy. Provide a profile of soil types encountered down to the groundwater table and the depth to the shallowest groundwater as a separate attachment.

Attachment: Click to enter text.

Section 12. Authorizations/Compliance/Enforcement (Instructions Page 55)

A. Additional authorizations

Does the permittee have additional authorizations for this facility, such as reuse authorization, sludge permit, etc?

☐ Yes ☒ No

If yes, provide the TCEQ authorization number and description of the authorization:

Click to enter text.

B. Permittee enforcement status

Is the permittee currently under enforcement for this facility?

☐ Yes ☐ No

Is the permittee required to meet an implementation schedule for compliance or enforcement?

☐ Yes ☐ No

If yes to either question, provide a brief summary of the enforcement, the implementation schedule, and the current status:

Click to enter text.

Section 13. RCRA/CERCLA Wastes (Instructions Page 55)

A. RCRA hazardous wastes

Has the facility received in the past three years, does it currently receive, or will it receive RCRA hazardous waste?

☐ Yes ☒ No

B. Remediation activity wastewater

Has the facility received in the past three years, does it currently receive, or will it receive CERCLA wastewater, RCRA remediation/corrective action wastewater or other remediation activity wastewater?

☐ Yes ☐ No

C. Details about wastes received

If yes to either Subsection A or B above, provide detailed information concerning these wastes with the application.

Attachment: Click to enter text.

Section 14. Laboratory Accreditation (Instructions Page 56)

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: Rich Oller, P.E.

Title: President Oller Engineering, Inc.

Signature: Rich Oller

Date: 2/27/24

DOMESTIC WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.1

The following information is required for new and amendment major applications.

Section 1. Justification for Permit (Instructions Page 57)

A. Justification of permit need

Provide a detailed discussion regarding the need for any phase(s) not currently permitted. Failure to provide sufficient justification may result in the Executive Director recommending denial of the proposed phase(s) or permit.

Click to enter text.

B. Regionalization of facilities

For additional guidance, please review TCEQ's Regionalization Policy for Wastewater Treatment[1].

Provide the following information concerning the potential for regionalization of domestic wastewater treatment facilities:

1. *Municipally incorporated areas*

If the applicant is a city, then Item 1 is not applicable. Proceed to Item 2 Utility CCN areas.

Is any portion of the proposed service area located in an incorporated city?

☐ Yes ☐ No ☐ Not Applicable

If yes, within the city limits of: Click to enter text.

If yes, attach correspondence from the city.

Attachment: Click to enter text.

If consent to provide service is available from the city, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the city versus the cost of the proposed facility or expansion attached.

Attachment: Click to enter text.

2. *Utility CCN areas*

Is any portion of the proposed service area located inside another utility's CCN area?

☐ Yes ☐ No

[1] https://www.tceq.texas.gov/permitting/wastewater/tceq-regionalization-for-wastewater

If yes, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the CCN facilities versus the cost of the proposed facility or expansion.

Attachment: Click to enter text.

3. ***Nearby WWTPs or collection systems***

Are there any domestic permitted wastewater treatment facilities or collection systems located within a three-mile radius of the proposed facility?

☐ Yes ☐ No

If yes, attach a list of these facilities and collection systems that includes each permittee's name and permit number, and an area map showing the location of these facilities and collection systems.

Attachment: Click to enter text.

If yes, attach proof of mailing a request for service to each facility and collection system, the letters requesting service, and correspondence from each facility and collection system.

Attachment: Click to enter text.

If the facility or collection system agrees to provide service, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the facility or collection system versus the cost of the proposed facility or expansion.

Attachment: Click to enter text.

Section 2. Proposed Organic Loading (Instructions Page 59)

Is this facility in operation?

☐ Yes ☐ No

If no, proceed to Item B, Proposed Organic Loading.

If yes, provide organic loading information in Item A, Current Organic Loading

A. Current organic loading

Facility Design Flow (flow being requested in application): Click to enter text.

Average Influent Organic Strength or BOD_5 Concentration in mg/l: Click to enter text.

Average Influent Loading (lbs/day = total average flow X average BOD_5 conc. X 8.34): Click to enter text.

Provide the source of the average organic strength or BOD_5 concentration.

Click to enter text.

B. Proposed organic loading

This table must be completed if this application is for a facility that is not in operation or if this application is to request an increased flow that will impact organic loading.

Table 1.1(1) – Design Organic Loading

Source	Total Average Flow (MGD)	Influent BOD5 Concentration (mg/l)
Municipality		
Subdivision		
Trailer park – transient		
Mobile home park		
School with cafeteria and showers		
School with cafeteria, no showers		
Recreational park, overnight use		
Recreational park, day use		
Office building or factory		
Motel		
Restaurant		
Hospital		
Nursing home		
Other		
TOTAL FLOW from all sources		
AVERAGE BOD_5 from all sources		

Section 3. Proposed Effluent Quality and Disinfection (Instructions Page 59)

A. Existing/Interim I Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: Click to enter text.

Total Suspended Solids, mg/l: Click to enter text.

Ammonia Nitrogen, mg/l: Click to enter text.

Total Phosphorus, mg/l: Click to enter text.

Dissolved Oxygen, mg/l: Click to enter text.

Other: Click to enter text.

B. Interim II Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: Click to enter text.

Total Suspended Solids, mg/l: Click to enter text.

Ammonia Nitrogen, mg/l: Click to enter text.

Total Phosphorus, mg/l: Click to enter text.

Dissolved Oxygen, mg/l: Click to enter text.

Other: Click to enter text.

C. Final Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: Click to enter text.

Total Suspended Solids, mg/l: Click to enter text.

Ammonia Nitrogen, mg/l: Click to enter text.

Total Phosphorus, mg/l: Click to enter text.

Dissolved Oxygen, mg/l: Click to enter text.

Other: Click to enter text.

D. Disinfection Method

Identify the proposed method of disinfection.

☐ Chlorine: Click to enter text. mg/l after Click to enter text. minutes detention time at peak flow

Dechlorination process: Click to enter text.

☐ Ultraviolet Light: Click to enter text. seconds contact time at peak flow

☐ Other: Click to enter text.

Section 4. Design Calculations (Instructions Page 59)

Attach design calculations and plant features for each proposed phase. Example 4 of the instructions includes sample design calculations and plant features.

Attachment: Click to enter text.

Section 5. Facility Site (Instructions Page 60)

A. 100-year floodplain

Will the proposed facilities be located above the 100-year frequency flood level?

☐ Yes ☐ No

If no, describe measures used to protect the facility during a flood event. Include a site map showing the location of the treatment plant within the 100-year frequency flood level. If applicable, provide the size and types of protective structures.

Click to enter text.

Provide the source(s) used to determine 100-year frequency flood plain.

Click to enter text.

For a new or expansion of a facility, will a wetland or part of a wetland be filled?

☐ Yes ☐ No

If yes, has the applicant applied for a US Corps of Engineers 404 Dredge and Fill Permit?

☐ Yes ☐ No

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

If no, provide the approximate date you anticipate submitting your application to the Corps: Click to enter text.

B. Wind rose

Attach a wind rose: Click to enter text.

Section 6. Permit Authorization for Sewage Sludge Disposal (Instructions Page 60)

A. Beneficial use authorization

Are you requesting to include authorization to land apply sewage sludge for beneficial use on property located adjacent to the wastewater treatment facility under the wastewater permit?

☐ Yes ☐ No

If yes, attach the completed **Application for Permit for Beneficial Land Use of Sewage Sludge (TCEQ Form No. 10451)**: Click to enter text.

B. Sludge processing authorization

Identify the sludge processing, storage or disposal options that will be conducted at the wastewater treatment facility:

☐ Sludge Composting

☐ Marketing and Distribution of sludge

☐ Sludge Surface Disposal or Sludge Monofill

If any of the above, sludge options are selected, attach the completed **Domestic Wastewater Permit Application: Sewage Sludge Technical Report (TCEQ Form No. 10056)**: Click to enter text.

Section 7. Sewage Sludge Solids Management Plan (Instructions Page 61)

Attach a solids management plan to the application.

Attachment: Click to enter text.

The sewage sludge solids management plan must contain the following information:

- Treatment units and processes dimensions and capacities

- Solids generated at 100, 75, 50, and 25 percent of design flow
- Mixed liquor suspended solids operating range at design and projected actual flow
- Quantity of solids to be removed and a schedule for solids removal
- Identification and ownership of the ultimate sludge disposal site
- For facultative lagoons, design life calculations, monitoring well locations and depths, and the ultimate disposal method for the sludge from the facultative lagoon

An example of a sewage sludge solids management plan has been included as Example 5 of the instructions.

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 2.0: RECEIVING WATERS

The following information is required for all TPDES permit applications.

Section 1. Domestic Drinking Water Supply (Instructions Page 64)

Is there a surface water intake for domestic drinking water supply located within 5 miles downstream from the point or proposed point of discharge?

☐ Yes ☐ No

If **no**, proceed it Section 2. **If yes**, provide the following:

Owner of the drinking water supply: Click to enter text.

Distance and direction to the intake: Click to enter text.

Attach a USGS map that identifies the location of the intake.

Attachment: Click to enter text.

Section 2. Discharge into Tidally Affected Waters (Instructions Page 64)

Does the facility discharge into tidally affected waters?

☐ Yes ☐ No

If **no**, proceed to Section 3. **If yes**, complete the remainder of this section. If no, proceed to Section 3.

A. Receiving water outfall

Width of the receiving water at the outfall, in feet: Click to enter text.

B. Oyster waters

Are there oyster waters in the vicinity of the discharge?

☐ Yes ☐ No

If yes, provide the distance and direction from outfall(s).

Click to enter text.

C. Sea grasses

Are there any sea grasses within the vicinity of the point of discharge?

☐ Yes ☐ No

If yes, provide the distance and direction from the outfall(s).

Click to enter text.

Section 3. Classified Segments (Instructions Page 64)

Is the discharge directly into (or within 300 feet of) a classified segment?

☐ Yes ☐ No

If yes, this Worksheet is complete.

If no, complete Sections 4 and 5 of this Worksheet.

Section 4. Description of Immediate Receiving Waters (Instructions Page 65)

Name of the immediate receiving waters: Click to enter text.

A. Receiving water type

Identify the appropriate description of the receiving waters.

☐ Stream

☐ Freshwater Swamp or Marsh

☐ Lake or Pond

Surface area, in acres: Click to enter text.

Average depth of the entire water body, in feet: Click to enter text.

Average depth of water body within a 500-foot radius of discharge point, in feet: Click to enter text.

☐ Man-made Channel or Ditch

☐ Open Bay

☐ Tidal Stream, Bayou, or Marsh

☐ Other, specify: Click to enter text.

B. Flow characteristics

If a stream, man-made channel or ditch was checked above, provide the following. For existing discharges, check one of the following that best characterizes the area *upstream* of the discharge. For new discharges, characterize the area *downstream* of the discharge (check one).

☐ Intermittent - dry for at least one week during most years

☐ Intermittent with Perennial Pools - enduring pools with sufficient habitat to maintain significant aquatic life uses

☐ Perennial - normally flowing

Check the method used to characterize the area upstream (or downstream for new dischargers).

☐ USGS flow records

☐ Historical observation by adjacent landowners

☐ Personal observation

☐ Other, specify: Click to enter text.

C. Downstream perennial confluences

List the names of all perennial streams that join the receiving water within three miles downstream of the discharge point.

Click to enter text.

D. Downstream characteristics

Do the receiving water characteristics change within three miles downstream of the discharge (e.g., natural or man-made dams, ponds, reservoirs, etc.)?

☐ Yes ☐ No

If yes, discuss how.

Click to enter text.

E. Normal dry weather characteristics

Provide general observations of the water body during normal dry weather conditions.

Click to enter text.

Date and time of observation: Click to enter text.

Was the water body influenced by stormwater runoff during observations?

☐ Yes ☐ No

Section 5. General Characteristics of the Waterbody (Instructions Page 66)

A. Upstream influences

Is the immediate receiving water upstream of the discharge or proposed discharge site influenced by any of the following? Check all that apply.

☐ Oil field activities
☐ Urban runoff
☐ Upstream discharges
☐ Agricultural runoff
☐ Septic tanks
☐ Other(s), specify: Click to enter text.

B. Waterbody uses

Observed or evidences of the following uses. Check all that apply.

- ☐ Livestock watering
- ☐ Irrigation withdrawal
- ☐ Fishing
- ☐ Domestic water supply
- ☐ Park activities
- ☐ Contact recreation
- ☐ Non-contact recreation
- ☐ Navigation
- ☐ Industrial water supply
- ☐ Other(s), specify: Click to enter text.

C. Waterbody aesthetics

Check one of the following that best describes the aesthetics of the receiving water and the surrounding area.

- ☐ Wilderness: outstanding natural beauty; usually wooded or unpastured area; water clarity exceptional
- ☐ Natural Area: trees and/or native vegetation; some development evident (from fields, pastures, dwellings); water clarity discolored
- ☐ Common Setting: not offensive; developed but uncluttered; water may be colored or turbid
- ☐ Offensive: stream does not enhance aesthetics; cluttered; highly developed; dumping areas; water discolored

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 2.1: STREAM PHYSICAL CHARACTERISTICS

Required for new applications, major facilities, and applications adding an outfall.

Worksheet 2.1 is not required for discharges to intermittent streams or discharges directly to (or within 300 feet of) a classified segment.

Section 1. General Information (Instructions Page 66)

Date of study: Click to enter text. Time of study: Click to enter text.

Stream name: Click to enter text.

Location: Click to enter text.

Type of stream upstream of existing discharge or downstream of proposed discharge (check one).

☐ Perennial ☐ Intermittent with perennial pools

Section 2. Data Collection (Instructions Page 66)

Number of stream bends that are well defined: Click to enter text.

Number of stream bends that are moderately defined: Click to enter text.

Number of stream bends that are poorly defined: Click to enter text.

Number of riffles: Click to enter text.

Evidence of flow fluctuations (check one):

☐ Minor ☐ moderate ☐ severe

Indicate the observed stream uses and if there is evidence of flow fluctuations or channel obstruction/modification.

Click to enter text.

Stream transects

In the table below, provide the following information for each transect downstream of the existing or proposed discharges. Use a separate row for each transect.

Table 2.1(1) - Stream Transect Records

Stream type at transect Select riffle, run, glide, or pool. See Instructions, Definitions section.	**Transect location**	**Water surface width (ft)**	**Stream depths (ft)** at 4 to 10 points along each transect from the channel bed to the water surface. Separate the measurements with commas.
Choose an item.			
Choose an item.			
Choose an item.			
Choose an item.			
Choose an item.			
Choose an item.			
Choose an item.			
Choose an item.			
Choose an item.			
Choose an item.			

Section 3. Summarize Measurements (Instructions Page 66)

Streambed slope of entire reach, from USGS map in feet/feet: Click to enter text.

Approximate drainage area above the most downstream transect (from USGS map or county highway map, in square miles): Click to enter text.

Length of stream evaluated, in feet: Click to enter text.

Number of lateral transects made: Click to enter text.

Average stream width, in feet: Click to enter text.

Average stream depth, in feet: Click to enter text.

Average stream velocity, in feet/second: Click to enter text.

Instantaneous stream flow, in cubic feet/second: Click to enter text.

Indicate flow measurement method (type of meter, floating chip timed over a fixed distance, etc.): Click to enter text.

Size of pools (large, small, moderate, none): Click to enter text.

Maximum pool depth, in feet: Click to enter text.

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.0: LAND DISPOSAL OF EFFLUENT

The following is required for renewal, new, and amendment permit applications.

Section 1. Type of Disposal System (Instructions Page 68)

Identify the method of land disposal:

- ☒ Surface application
- ☒ Irrigation
- ☐ Drip irrigation system
- ☐ Evaporation
- ☐ Other (describe in detail): Click to enter text.
- ☐ Subsurface application
- ☐ Subsurface soils absorption
- ☐ Subsurface area drip dispersal system
- ☐ Evapotranspiration beds

NOTE: All applicants without authorization or proposing new/amended subsurface disposal MUST complete and submit Worksheet 7.0.

For existing authorizations, provide Registration Number: WQ0010774001

Section 2. Land Application Site(s) (Instructions Page 68)

In table 3.0(1), provide the requested information for the land application sites. Include the agricultural or cover crop type (wheat, cotton, alfalfa, bermuda grass, native grasses, etc.), land use (golf course, hayland, pastureland, park, row crop, etc.), irrigation area, amount of effluent applied, and whether or not the public has access to the area. Specify the amount of land area and the amount of effluent that will be allotted to each agricultural or cover crop, if more than one crop will be used.

Table 3.0(1) – Land Application Site Crops

Crop Type & Land Use	Irrigation Area (acres)	Effluent Application (GPD)	Public Access? Y/N
Wheat	180		N

Section 3. Storage and Evaporation Lagoons/Ponds (Instructions Page 68)

Table 3.0(2) – Storage and Evaporation Ponds

Pond Number	Surface Area (acres)	Storage Volume (acre-feet)	Dimensions	Liner Type
Holding Pond	2.8	22.2	220' x 550' x 8 d (Avg.)	Clay

Attach a copy of a liner certification that was prepared, signed, and sealed by a Texas licensed professional engineer for each pond.

Attachment: D Note: The existing facility was constructed in 1987 using a 2-foot-thick Randall Clay liner constructed in 6-inch lifts compacted to 95% maximum density. There has been no evidence of seepage or leakage in any downstream irrigation wells reported.

Section 4. Flood and Runoff Protection (Instructions Page 68)

Is the land application site within the 100-year frequency flood level?

☐ Yes ☒ No

If yes, describe how the site will be protected from inundation.

Click to enter text.

Provide the source used to determine the 100-year frequency flood level:

FEMA Flood Hazard Maps – non defined see Attachment E

Provide a description of tailwater controls and rainfall run-on controls used for the land application site.

The natural drainage of the site allows the tailwater pond to capture the runoff from the irrigated land. Run-on is controlled by diking around the irrigated area.

Section 5. Annual Cropping Plan (Instructions Page 68)

Attach an Annual Cropping Plan which includes a discussion of each of the following items. If not applicable, provide a detailed explanation indicating why. **Attachment: F**

- Soils map with crops
- Cool and warm season plant species
- Crop yield goals
- Crop growing season
- Crop nutrient requirements
- Additional fertilizer requirements
- Minimum/maximum harvest height (for grass crops)
- Supplemental watering requirements
- Crop salt tolerances
- Harvesting method/number of harvests
- Justification for not removing existing vegetation to be irrigated

Section 6. Well and Map Information (Instructions Page 69)

Attach a USGS map with the following information shown and labeled. If not applicable, provide a detailed explanation indicating why. **Attachment: G**

- The boundaries of the land application site(s)
- Waste disposal or treatment facility site(s)
- On-site buildings
- Buffer zones
- Effluent storage and tailwater control facilities
- All water wells within 1-mile radius of the disposal site or property boundaries
- All springs and seeps onsite and within 500 feet of the property boundaries
- All surface waters in the state onsite and within 500 feet of the property boundaries
- All faults and sinkholes onsite and within 500 feet of the property

List and cross reference all water wells located within a half-mile radius of the disposal site or property boundaries shown on the USGS map in the following table. Attach additional pages as necessary to include all of the wells.

Table 3.0(3) – Water Well Data

Well ID	Well Use	Producing? Y/N	Open, cased, capped, or plugged?	Proposed Best Management Practice
			Choose an item.	

Well ID	Well Use	Producing? Y/N	Open, cased, capped, or plugged?	Proposed Best Management Practice
			Choose an item.	
			Choose an item.	
			Choose an item.	
			Choose an item.	

If water quality data or well log information is available please include the information in an attachment listed by Well ID.

Attachment: Click to enter text.

Section 7. Groundwater Quality (Instructions Page 69)

Attach a Groundwater Quality Technical Report which assesses the impact of the wastewater disposal system on groundwater. This report shall include an evaluation of the water wells (including the information in the well table provided in Item 6. above), the wastewater application rate, and pond liners. Indicate by a check mark that this report is provided.

Attachment: **H**

Are groundwater monitoring wells available onsite? ☐ Yes ☒ No

Do you plan to install ground water monitoring wells or lysimeters around the land application site? ☐ Yes ☒ No

If yes, provide the proposed location of the monitoring wells or lysimeters on a site map.

Attachment: Click to enter text.

Section 8. Soil Map and Soil Analyses (Instructions Page 70)

A. Soil map

Attach a USDA Soil Survey map that shows the area to be used for effluent disposal.

Attachment: **F**

B. Soil analyses

Attach the laboratory results sheets from the soil analyses. **Note**: for renewal applications, the current annual soil analyses required by the permit are acceptable as long as the test date is less than one year prior to the submission of the application.

Attachment: Click to enter text.

List all USDA designated soil series on the proposed land application site. Attach additional pages as necessary.

Table 3.0(4) – Soil Data

Soil Series	Depth from Surface	Permeability	Available Water Capacity	Curve Number
Amarillo Fine Sandy Loam	38	2.0-6.3	0.11-0.14	
Lofton Clay Loam	72	0.2 - 0.63	0.16 - 0.19	
Mansker Loam	6	0.63 - 2.0	0.14 - 0.18	
Olton Loam, 0-1 percent slopes	14	0.63 - 2.0	0.16 - 0.19	
Olton Loam, 1-3 percent slopes	42	0.2 - 0.63	0.16 - 0.19	

Section 9. Effluent Monitoring Data (Instructions Page 71)

Is the facility in operation?

☒ Yes ☐ No

If no, this section is not applicable and the worksheet is complete.

If yes, provide the effluent monitoring data for the parameters regulated in the existing permit. If a parameter is not regulated in the existing permit, enter N/A.

Table 3.0(5) – Effluent Monitoring Data

Date	30 Day Avg Flow MGD	BOD5 mg/l	TSS mg/l	pH	Chlorine Residual mg/l	Acres irrigated
1/31/22	0.298065	74.1	27.4	7.9	N/A	180
2/28/22	0.199607	22.3	107	8.0	N/A	180
3/31/22	0.183194	36.0	50	7.7	N/A	180
4/30/22	0.175400	11.3	31.7	8.0	N/A	180
5/31/22	0.157548	89.6	129	7.8	N/A	180
6/30/22	0.213000	76.7	67.8	8.1	N/A	180
7/31/22	0.211645	31.9	391	8.6	N/A	180
8/31/22	0.230323	19.2	77	8.3	N/A	180
9/30/22	0.232300	40.7	98	7.5	N/A	180
10/31/22	0.236419					
11/30/22	0.272900	5.76	9.9	8.1	N/A	180
12/31/22	0.203903	49.4	70.5	8.3	N/A	180
1/31/23	0.201290	36.6	81.5	8.1	N/A	180

Date	30 Day Avg Flow MGD	BOD5 mg/l	TSS mg/l	pH	Chlorine Residual mg/l	Acres irrigated
2/28/23	0.221571	27.7	71.0	8.2	N/A	180
3/31/23	0.206806	32.1	44	7.9	N/A	180
4/30/23	0.214700	64.8	107	7.3	N/A	180
5/31/23	0.203032	63.7	131	No Data	N/A	180
6/30/23	0.180270	56.3	91.5	No Data	N/A	180
7/31/23	0.189290	88.7	85.3	No Data	N/A	180
8/31/23	0.192387	42.9	138	No Data	N/A	180
9/30/23	0.200200	33.7	128	No Data	N/A	180
10/31/23	0.195968	50.7	98	No Data	N/A	180

Provide a discussion of all persistent excursions above the permitted limits and any corrective actions taken.

Oct 23 thru Dec 23 the City's SCADA system and utility computers were breached, and all systems were confiscated by the FBI. There is no data for the last 3 months of 2023.

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.1: SURFACE LAND DISPOSAL OF EFFLUENT

The following is required for new and major amendment permit applications. Renewal and minor amendment permit applications may be asked for this worksheet on a case by case basis.

Section 1. Surface Disposal (Instructions Page 72)

Complete the item that applies for the method of disposal being used.

A. Irrigation

Area under irrigation, in acres: Click to enter text.

Design application frequency:

hours/day Click to enter text. **And** days/week Click to enter text.

Land grade (slope):

average percent (%): Click to enter text.

maximum percent (%): Click to enter text.

Design application rate in acre-feet/acre/year: Click to enter text.

Design total nitrogen loading rate, in lbs N/acre/year: Click to enter text.

Soil conductivity (mmhos/cm): Click to enter text.

Method of application: center pivot

Attach a separate engineering report with the water balance and storage volume calculations, method of application, irrigation efficiency, and nitrogen balance.

Attachment: Click to enter text.

B. Evaporation ponds

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

Attach a separate engineering report with the water balance and storage volume calculations.

Attachment: Click to enter text.

C. Evapotranspiration beds

Number of beds: Click to enter text.

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

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

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

Storage volume within the beds, in acre-feet: Click to enter text.

Attach a separate engineering report with the water balance and storage volume calculations, and a description of the lining.

Attachment: Click to enter text.

D. Overland flow

Area used for application, in acres: Click to enter text.

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

Design application rate, in gpm/foot of slope width: Click to enter text.

Slope length, in feet: Click to enter text.

Design BOD_5 loading rate, in lbs BOD_5/acre/day: Click to enter text.

Design application frequency:

hours/day: Click to enter text. **And** days/week: Click to enter text.

Attach a separate engineering report with the method of application and design requirements according to *30 TAC Chapter 217*.

Attachment: Click to enter text.

Section 2. Edwards Aquifer (Instructions Page 73)

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

☐ Yes ☐ No

If **yes**, is the facility located on the Edwards Aquifer Recharge Zone?

☐ Yes ☐ No

If yes, attach a geological report addressing potential recharge features.

Attachment: Click to enter text.

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.2: SURFACE LAND DISPOSAL OF EFFLUENT

The following **is required** for **new and major amendment** permit applications. Renewal and minor amendments applicants may be asked for the worksheet on a case by case basis.

NOTE: All applicants proposing new/amended subsurface disposal MUST complete and submit Worksheet 7.0. This worksheet applies to any subsurface disposal system that **does not meet** the definition of a subsurface area drip dispersal system as defined in *30 TAC Chapter 222, Subsurface Area Drip Dispersal System.*

Section 1. Subsurface Application (Instructions Page 74)

Identify the type of system:

- ☐ Conventional Gravity Drainfield, Beds, or Trenches (new systems must be less than 5,000 GPD)
- ☐ Low Pressure Dosing
- ☐ Other, specify: Click to enter text.

Application area, in acres: Click to enter text.

Area of drainfield, in square feet: Click to enter text.

Application rate, in gal/square foot/day: Click to enter text.

Depth to groundwater, in feet: Click to enter text.

Area of trench, in square feet: Click to enter text.

Dosing duration per area, in hours: Click to enter text.

Number of beds: Click to enter text.

Dosing amount per area, in inches/day: Click to enter text.

Infiltration rate, in inches/hour: Click to enter text.

Storage volume, in gallons: Click to enter text.

Area of bed(s), in square feet: Click to enter text.

Soil Classification: Click to enter text.

Attach a separate engineering report with the information required in *30 TAC § 309.20,* excluding the requirements of § 309.20 b(3)(A) and (B) design analysis which may be asked for on a case by case basis. Include a description of the schedule of dosing basin rotation.

Attachment: Click to enter text.

Section 2. Edwards Aquifer (Instructions Page 74)

Is the subsurface system over the Edwards Aquifer Recharge Zone as mapped by TCEQ?

☐ Yes ☐ No

Is the subsurface system over the Edwards Aquifer Transition Zone as mapped by TCEQ?

☐ Yes ☐ No

If yes to either question, the subsurface system may be prohibited by *30 TAC §213.8.* Please call the Municipal Permits Team, at 512-239-4671, to schedule a pre-application meeting.

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.3: SUBSURFACE AREA DRIP DISPERSAL (SADDS) LAND DISPOSAL OF EFFLUENT

The following **is required** for **new and major amendment** subsurface area drip dispersal system permit applications. Renewal and minor amendments applicants may be asked for the worksheet on a case by case basis.

NOTE: All applicants proposing new/amended subsurface disposal MUST complete and submit Worksheet 7.0. This worksheet applies to any subsurface disposal system that **meets** the definition of a subsurface area drip dispersal system as defined in *30 TAC Chapter 222, Subsurface Area Drip Dispersal System.*

Section 1. Administrative Information (Instructions Page 75)

A. Provide the legal name of all corporations or other business entities managed, owned, or otherwise closely related to the owner of the treatment facility:

B. Click to enter text. Is the owner of the land where the treatment facility is located the same as the owner of the treatment facility?

☐ Yes ☐ No

If **no**, provide the legal name of all corporations or other business entities managed, owned, or otherwise closely related to the owner of the land where the treatment facility is located.

Click to enter text.

C. Owner of the subsurface area drip dispersal system: Click to enter text.

D. Is the owner of the subsurface area drip dispersal system the same as the owner of the wastewater treatment facility or the site where the wastewater treatment facility is located?

☐ Yes ☐ No

If **no**, identify the names of all corporations or other business entities managed, owned, or otherwise closely related to the entity identified in Item 1.C.

Click to enter text.

E. Owner of the land where the subsurface area drip dispersal system is located: Click to enter text.

F. Is the owner of the land where the subsurface area drip dispersal system is located the same as owner of the wastewater treatment facility, the site where the wastewater treatment facility is located, or the owner of the subsurface area drip dispersal system?

☐ Yes ☐ No

If **no**, identify the name of all corporations or other business entities managed, owned, or otherwise closely related to the entity identified in item 1.E.

Click to enter text.

Section 2. Subsurface Area Drip Dispersal System (Instructions Page 75)

A. Type of system

☐ Subsurface Drip Irrigation

☐ Surface Drip Irrigation

☐ Other, specify: Click to enter text.

B. Irrigation operations

Application area, in acres: Click to enter text.

Infiltration Rate, in inches/hour: Click to enter text.

Average slope of the application area, percent (%): Click to enter text.

Maximum slope of the application area, percent (%): Click to enter text.

Storage volume, in gallons: Click to enter text.

Major soil series: Click to enter text.

Depth to groundwater, in feet: Click to enter text.

C. Application rate

Is the facility located **west** of the boundary shown in *30 TAC § 222.83* **and** also using a vegetative cover of non-native grasses over seeded with cool season grasses during the winter months (October-March)?

☐ Yes ☐ No

If yes, then the facility may propose a hydraulic application rate not to exceed 0.1 gal/square foot/day.

Is the facility located **east** of the boundary shown in *30 TAC § 222.83* **or** in any part of the state when the vegetative cover is any crop other than non-native grasses?

☐ Yes ☐ No

If **yes**, the facility must use the formula in *30 TAC §222.83* to calculate the maximum hydraulic application rate.

Do you plan to submit an alternative method to calculate the hydraulic application rate for approval by the executive director?

☐ Yes ☐ No

Hydraulic application rate, in gal/square foot/day: Click to enter text.

Nitrogen application rate, in lbs/gal/day: Click to enter text.

D. Dosing information

Number of doses per day: Click to enter text.

Dosing duration per area, in hours: Click to enter text.

Rest period between doses, in hours: Click to enter text.

Dosing amount per area, in inches/day: Click to enter text.

Number of zones: Click to enter text.

Does the proposed subsurface drip irrigation system use tree vegetative cover as a crop?

☐ Yes ☐ No

If **yes**, provide a vegetation survey by a certified arborist. Please call the Water Quality Assessment Team at (512) 239-4671 to schedule a pre-application meeting.

Attachment: Click to enter text.

Section 3. Required Plans (Instructions Page 75)

A. Recharge feature plan

Attach a Recharge Feature Plan with all information required in *30 TAC §222.79.*

Attachment: Click to enter text.

B. Soil evaluation

Attach a Soil Evaluation with all information required in *30 TAC §222.73.*

Attachment: Click to enter text.

C. Site preparation plan

Attach a Site Preparation Plan with all information required in *30 TAC §222.75.*

Attachment: Click to enter text.

D. Soil sampling/testing

Attach soil sampling and testing that includes all information required in *30 TAC §222.157.*

Attachment: Click to enter text.

Section 4. Floodway Designation (Instructions Page 76)

A. Site location

Is the existing/proposed land application site within a designated floodway?

☐ Yes ☐ No

B. Flood map

Attach either the FEMA flood map or alternate information used to determine the floodway.

Attachment: Click to enter text.

Section 5. Surface Waters in the State (Instructions Page 76)

A. Buffer Map

Attach a map showing appropriate buffers on surface waters in the state, water wells, and springs/seeps.

Attachment: Click to enter text.

B. Buffer variance request

Do you plan to request a buffer variance from water wells or waters in the state?

☐ Yes ☐ No

If yes, then attach the additional information required in *30 TAC § 222.81(c).*

Attachment: Click to enter text.

Section 6. Edwards Aquifer (Instructions Page 76)

A. Is the SADDS located over the Edwards Aquifer Recharge Zone as mapped by TCEQ?

☐ Yes ☐ No

B. Is the SADDS located over the Edwards Aquifer Transition Zone as mapped by TCEQ?

☐ Yes ☐ No

If yes to either question, then the SADDS may be prohibited by *30 TAC §213.8.* Please call the Municipal Permits Team at 512-239-4671 to schedule a pre-application meeting.

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 4.0: POLLUTANT ANALYSIS REQUIREMENTS

The following **is required** for facilities with a permitted or proposed flow of **1.0 MGD or greater**, facilities with an approved **pretreatment** program, or facilities classified as a **major** facility. See instructions for further details.

This worksheet is not required minor amendments without renewal.

Section 1. Toxic Pollutants (Instructions Page 78)

For pollutants identified in Table 4.0(1), indicate the type of sample.

Grab ☐ Composite ☐

Date and time sample(s) collected: Click to enter text.

Table 4.0(1) – Toxics Analysis

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acrylonitrile				50
Aldrin				0.01
Aluminum				2.5
Anthracene				10
Antimony				5
Arsenic				0.5
Barium				3
Benzene				10
Benzidine				50
Benzo(a)anthracene				5
Benzo(a)pyrene				5
Bis(2-chloroethyl)ether				10
Bis(2-ethylhexyl)phthalate				10
Bromodichloromethane				10
Bromoform				10
Cadmium				1
Carbon Tetrachloride				2
Carbaryl				5
Chlordane*				0.2
Chlorobenzene				10
Chlorodibromomethane				10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Chloroform				10
Chlorpyrifos				0.05
Chromium (Total)				3
Chromium (Tri) **(*1)**				N/A
Chromium (Hex)				3
Copper				2
Chrysene				5
p-Chloro-m-Cresol				10
4,6-Dinitro-o-Cresol				50
p-Cresol				10
Cyanide **(*2)**				10
4,4'- DDD				0.1
4,4'- DDE				0.1
4,4'- DDT				0.02
2,4-D				0.7
Demeton (O and S)				0.20
Diazinon				0.5/0.1
1,2-Dibromoethane				10
m-Dichlorobenzene				10
o-Dichlorobenzene				10
p-Dichlorobenzene				10
3,3'-Dichlorobenzidine				5
1,2-Dichloroethane				10
1,1-Dichloroethylene				10
Dichloromethane				20
1,2-Dichloropropane				10
1,3-Dichloropropene				10
Dicofol				1
Dieldrin				0.02
2,4-Dimethylphenol				10
Di-n-Butyl Phthalate				10
Diuron				0.09
Endosulfan I (alpha)				0.01

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Endosulfan II (beta)				0.02
Endosulfan Sulfate				0.1
Endrin				0.02
Ethylbenzene				10
Fluoride				500
Guthion				0.1
Heptachlor				0.01
Heptachlor Epoxide				0.01
Hexachlorobenzene				5
Hexachlorobutadiene				10
Hexachlorocyclohexane (alpha)				0.05
Hexachlorocyclohexane (beta)				0.05
gamma-Hexachlorocyclohexane (Lindane)				0.05
Hexachlorocyclopentadiene				10
Hexachloroethane				20
Hexachlorophene				10
Lead				0.5
Malathion				0.1
Mercury				0.005
Methoxychlor				2
Methyl Ethyl Ketone				50
Mirex				0.02
Nickel				2
Nitrate-Nitrogen				100
Nitrobenzene				10
N-Nitrosodiethylamine				20
N-Nitroso-di-n-Butylamine				20
Nonylphenol				333
Parathion (ethyl)				0.1
Pentachlorobenzene				20
Pentachlorophenol				5
Phenanthrene				10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Polychlorinated Biphenyls (PCB's) (*3)				0.2
Pyridine				20
Selenium				5
Silver				0.5
1,2,4,5-Tetrachlorobenzene				20
1,1,2,2-Tetrachloroethane				10
Tetrachloroethylene				10
Thallium				0.5
Toluene				10
Toxaphene				0.3
2,4,5-TP (Silvex)				0.3
Tributyltin (see instructions for explanation)				0.01
1,1,1-Trichloroethane				10
1,1,2-Trichloroethane				10
Trichloroethylene				10
2,4,5-Trichlorophenol				50
TTHM (Total Trihalomethanes)				10
Vinyl Chloride				10
Zinc				5

(*1) Determined by subtracting hexavalent Cr from total Cr.

(*2) Cyanide, amenable to chlorination or weak-acid dissociable.

(*3) The sum of seven PCB congeners 1242, 1254, 1221, 1232, 1248, 1260, and 1016.

Section 2. Priority Pollutants

For pollutants identified in Tables 4.0(2)A-E, indicate type of sample.

Grab ☐ Composite ☐

Date and time sample(s) collected: Click to enter text.

Table 4.0(2)A – Metals, Cyanide, and Phenols

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Antimony				5
Arsenic				0.5
Beryllium				0.5
Cadmium				1
Chromium (Total)				3
Chromium (Hex)				3
Chromium (Tri) **(*1)**				N/A
Copper				2
Lead				0.5
Mercury				0.005
Nickel				2
Selenium				5
Silver				0.5
Thallium				0.5
Zinc				5
Cyanide **(*2)**				10
Phenols, Total				10

(*1) Determined by subtracting hexavalent Cr from total Cr.

(*2) Cyanide, amenable to chlorination or weak-acid dissociable

Table 4.0(2)B – Volatile Compounds

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acrolein				50
Acrylonitrile				50
Benzene				10
Bromoform				10
Carbon Tetrachloride				2
Chlorobenzene				10
Chlorodibromomethane				10
Chloroethane				50
2-Chloroethylvinyl Ether				10
Chloroform				10
Dichlorobromomethane [Bromodichloromethane]				10
1,1-Dichloroethane				10
1,2-Dichloroethane				10
1,1-Dichloroethylene				10
1,2-Dichloropropane				10
1,3-Dichloropropylene [1,3-Dichloropropene]				10
1,2-Trans-Dichloroethylene				10
Ethylbenzene				10
Methyl Bromide				50
Methyl Chloride				50
Methylene Chloride				20
1,1,2,2-Tetrachloroethane				10
Tetrachloroethylene				10
Toluene				10
1,1,1-Trichloroethane				10
1,1,2-Trichloroethane				10
Trichloroethylene				10
Vinyl Chloride				10

Table 4.0(2)C – Acid Compounds

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
2-Chlorophenol				10
2,4-Dichlorophenol				10
2,4-Dimethylphenol				10
4,6-Dinitro-o-Cresol				50
2,4-Dinitrophenol				50
2-Nitrophenol				20
4-Nitrophenol				50
P-Chloro-m-Cresol				10
Pentalchlorophenol				5
Phenol				10
2,4,6-Trichlorophenol				10

Table 4.0(2)D – Base/Neutral Compounds

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acenaphthene				10
Acenaphthylene				10
Anthracene				10
Benzidine				50
Benzo(a)Anthracene				5
Benzo(a)Pyrene				5
3,4-Benzofluoranthene				10
Benzo(ghi)Perylene				20
Benzo(k)Fluoranthene				5
Bis(2-Chloroethoxy)Methane				10
Bis(2-Chloroethyl)Ether				10
Bis(2-Chloroisopropyl)Ether				10
Bis(2-Ethylhexyl)Phthalate				10
4-Bromophenyl Phenyl Ether				10
Butyl benzyl Phthalate				10
2-Chloronaphthalene				10
4-Chlorophenyl phenyl ether				10
Chrysene				5
Dibenzo(a,h)Anthracene				5
1,2-(o)Dichlorobenzene				10
1,3-(m)Dichlorobenzene				10
1,4-(p)Dichlorobenzene				10
3,3-Dichlorobenzidine				5
Diethyl Phthalate				10
Dimethyl Phthalate				10
Di-n-Butyl Phthalate				10
2,4-Dinitrotoluene				10
2,6-Dinitrotoluene				10
Di-n-Octyl Phthalate				10
1,2-Diphenylhydrazine (as Azo-benzene)				20
Fluoranthene				10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Fluorene				10
Hexachlorobenzene				5
Hexachlorobutadiene				10
Hexachlorocyclo-pentadiene				10
Hexachloroethane				20
Indeno(1,2,3-cd)pyrene				5
Isophorone				10
Naphthalene				10
Nitrobenzene				10
N-Nitrosodimethylamine				50
N-Nitrosodi-n-Propylamine				20
N-Nitrosodiphenylamine				20
Phenanthrene				10
Pyrene				10
1,2,4-Trichlorobenzene				10

Table 4.0(2)E - Pesticides

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Aldrin				0.01
alpha-BHC (Hexachlorocyclohexane)				0.05
beta-BHC (Hexachlorocyclohexane)				0.05
gamma-BHC (Hexachlorocyclohexane)				0.05
delta-BHC (Hexachlorocyclohexane)				0.05
Chlordane				0.2
4,4-DDT				0.02
4,4-DDE				0.1
4,4,-DDD				0.1
Dieldrin				0.02
Endosulfan I (alpha)				0.01
Endosulfan II (beta)				0.02
Endosulfan Sulfate				0.1
Endrin				0.02
Endrin Aldehyde				0.1
Heptachlor				0.01
Heptachlor Epoxide				0.01
PCB-1242				0.2
PCB-1254				0.2
PCB-1221				0.2
PCB-1232				0.2
PCB-1248				0.2
PCB-1260				0.2
PCB-1016				0.2
Toxaphene				0.3

* For PCBS, if all are non-detects, enter the highest non-detect preceded by a "<".

Section 3. Dioxin/Furan Compounds

A. Indicate which of the following compounds from may be present in the influent from a contributing industrial user or significant industrial user. Check all that apply.

- ☐ 2,4,5-trichlorophenoxy acetic acid

  Common Name 2,4,5-T, CASRN 93-76-5

- ☐ 2-(2,4,5-trichlorophenoxy) propanoic acid

  Common Name Silvex or 2,4,5-TP, CASRN 93-72-1

- ☐ 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate

  Common Name Erbon, CASRN 136-25-4

- ☐ 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate

  Common Name Ronnel, CASRN 299-84-3

- ☐ 2,4,5-trichlorophenol

  Common Name TCP, CASRN 95-95-4

- ☐ hexachlorophene

  Common Name HCP, CASRN 70-30-4

For each compound identified, provide a brief description of the conditions of its/their presence at the facility.

Click to enter text.

B. Do you know or have any reason to believe that 2,3,7,8 Tetrachlorodibenzo-P-Dioxin (TCDD) or any congeners of TCDD may be present in your effluent?

☐ Yes ☐ No

If **yes**, provide a brief description of the conditions for its presence.

Click to enter text.

C. If any of the compounds in Subsection A **or** B are present, complete Table 4.0(2)F.

For pollutants identified in Table 4.0(2)F, indicate the type of sample.

Grab ☐ Composite ☐

Date and time sample(s) collected: Click to enter text.

Table 4.0(2)F – Dioxin/Furan Compounds

Compound	Toxic Equivalency Factors	Wastewater Concentration (ppq)	Wastewater Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Equivalents (ppt)	MAL (ppq)
2,3,7,8 TCDD	1					10
1,2,3,7,8 PeCDD	0.5					50
2,3,7,8 HxCDDs	0.1					50
1,2,3,4,6,7,8 HpCDD	0.01					50
2,3,7,8 TCDF	0.1					10
1,2,3,7,8 PeCDF	0.05					50
2,3,4,7,8 PeCDF	0.5					50
2,3,7,8 HxCDFs	0.1					50
2,3,4,7,8 HpCDFs	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					0.5
PCB 81	0.0003					0.5
PCB 126	0.1					0.5
PCB 169	0.03					0.5
Total						

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 5.0: TOXICITY TESTING REQUIREMENTS

The following **is required** for facilities with a current operating design flow of **1.0 MGD or greater**, with an EPA-approved **pretreatment** program (or those required to have one under 40 CFR Part 403), or are required to perform Whole Effluent Toxicity testing. See instructions for further details.

This worksheet is not required minor amendments without renewal.

Section 1. Required Tests (Instructions Page 88)

Indicate the number of 7-day chronic or 48-hour acute Whole Effluent Toxicity (WET) tests performed in the four and one-half years prior to submission of the application.

7-day Chronic: Click to enter text.

48-hour Acute: Click to enter text.

Section 2. Toxicity Reduction Evaluations (TREs)

Has this facility completed a TRE in the past four and a half years? Or is the facility currently performing a TRE?

☐ Yes ☐ No

If yes, describe the progress to date, if applicable, in identifying and confirming the toxicant.

Click to enter text.

Section 3. Summary of WET Tests

If the required biomonitoring test information has not been previously submitted via both the Discharge Monitoring Reports (DMRs) and the Table 1 (as found in the permit), provide a summary of the testing results for all valid and invalid tests performed over the past four and one-half years. Make additional copies of this table as needed.

Table 5.0(1) Summary of WET Tests

Test Date	Test Species	NOEC Survival	NOEC Sub-lethal

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 6.0: INDUSTRIAL WASTE CONTRIBUTION

The following **is required** for **all publicly owned treatment works**.

Section 1. All POTWs (Instructions Page 89)

A. Industrial users (IUs)

Provide the number of each of the following types of industrial users (IUs) that discharge to your POTW and the daily flows from each user. See the Instructions for definitions of Categorical IUs, Significant IUs - non-categorical, and Other IUs.

If there are no users, enter 0 (zero).

Categorical IUs:

Number of IUs: Click to enter text.

Average Daily Flows, in MGD: Click to enter text.

Significant IUs - non-categorical:

Number of IUs: Click to enter text.

Average Daily Flows, in MGD: Click to enter text.

Other IUs:

Number of IUs: Click to enter text.

Average Daily Flows, in MGD: Click to enter text.

B. Treatment plant interference

In the past three years, has your POTW experienced treatment plant interference (see instructions)?

☐ Yes ☐ No

If yes, identify the dates, duration, description of interference, and probable cause(s) and possible source(s) of each interference event. Include the names of the IUs that may have caused the interference.

Click to enter text.

C. Treatment plant pass through

In the past three years, has your POTW experienced pass through (see instructions)?

☐ Yes ☐ No

If yes, identify the dates, duration, a description of the pollutants passing through the treatment plant, and probable cause(s) and possible source(s) of each pass through event. Include the names of the IUs that may have caused pass through.

Click to enter text.

D. Pretreatment program

Does your POTW have an approved pretreatment program?

☐ Yes ☐ No

If yes, complete Section 2 only of this Worksheet.

Is your POTW required to develop an approved pretreatment program?

☐ Yes ☐ No

If yes, complete Section 2.c. and 2.d. only, and skip Section 3.

If no to either question above, skip Section 2 and complete Section 3 for each significant industrial user and categorical industrial user.

E. Service Area Map

Attach a map indicating the service area of the POTW. The map should include the applicant's service area boundaries and the location of any known industrial users discharging to the POTW. Please see the instructions for guidance.

Attachment: Click to enter text.

Section 2. POTWs with Approved Programs or Those Required to Develop a Program (Instructions Page 90)

A. Substantial modifications

Have there been any **substantial modifications** to the approved pretreatment program that have not been submitted to the TCEQ for approval according to *40 CFR §403.18*?

☐ Yes ☐ No

If yes, identify the modifications that have not been submitted to TCEQ, including the purpose of the modification.

Click to enter text.

B. Non-substantial modifications

Have there been any **non-substantial modifications** to the approved pretreatment program that have not been submitted to TCEQ for review and acceptance?

☐ Yes ☐ No

If yes, identify all non-substantial modifications that have not been submitted to TCEQ, including the purpose of the modification.

Click to enter text.

C. Effluent parameters above the MAL

In Table 6.0(1), list all parameters measured above the MAL in the POTW's effluent monitoring during the last three years. Submit an attachment if necessary.

Table 6.0(1) – Parameters Above the MAL

Pollutant	Concentration	MAL	Units	Date

D. Industrial user interruptions

Has any SIU, CIU, or other IU caused or contributed to any problems (excluding interferences or pass throughs) at your POTW in the past three years?

☐ Yes ☐ No

If yes, identify the industry, describe each episode, including dates, duration, description of the problems, and probable pollutants.

Click to enter text.

Section 3. Significant Industrial User (SIU) Information and Categorical Industrial User (CIU) (Instructions Page 90)

A. General information

Company Name: Click to enter text.

SIC Code: Click to enter text.

Contact name: Click to enter text.

Address: Click to enter text.

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

Telephone number: Click to enter text.

Email address: Click to enter text.

B. Process information

Describe the industrial processes or other activities that affect or contribute to the SIU(s) or CIU(s) discharge (i.e., process and non-process wastewater).

Click to enter text.

C. Product and service information

Provide a description of the principal product(s) or services performed.

Click to enter text.

D. Flow rate information

See the Instructions for definitions of "process" and "non-process wastewater."

Process Wastewater:

Discharge, in gallons/day: Click to enter text.

Discharge Type: ☐ Continuous ☐ Batch ☐ Intermittent

Non-Process Wastewater:

Discharge, in gallons/day: Click to enter text.

Discharge Type: ☐ Continuous ☐ Batch ☐ Intermittent

E. Pretreatment standards

Is the SIU or CIU subject to technically based local limits as defined in the instructions?

☐ Yes ☐ No

Is the SIU or CIU subject to categorical pretreatment standards found in *40 CFR Parts 405-471*?

☐ Yes ☐ No

If subject to categorical pretreatment standards, indicate the applicable category and subcategory for each categorical process.

Category: Subcategories: Click to enter text.

Click or tap here to enter text. Click to enter text.

Category: Click to enter text.

Subcategories: Click to enter text.

Category: Click to enter text.

Subcategories: Click to enter text.

Category: Click to enter text.

Subcategories: Click to enter text.

Category: Click to enter text.

Subcategories: Click to enter text.

F. Industrial user interruptions

Has the SIU or CIU caused or contributed to any problems (e.g., interferences, pass through, odors, corrosion, blockages) at your POTW in the past three years?

☐ Yes ☐ No

If yes, identify the SIU, describe each episode, including dates, duration, description of problems, and probable pollutants.

Click to enter text.

WORKSHEET 7.0

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CLASS V INJECTION WELL INVENTORY/AUTHORIZATION FORM

Submit the completed form to:

TCEQ
IUC Permits Team
Radioactive Materials Division
MC-233
PO Box 13087
Austin, Texas 78711-3087
512-239-6466

For TCEQ Use Only
Reg. No._____
Date Received_____
Date Authorized_____

Section 1. General Information (Instructions Page 92)

1. **TCEQ Program Area**

   Program Area (PST, VCP, IHW, etc.): Click to enter text.

   Program ID: Click to enter text.

   Contact Name: Click to enter text.

   Phone Number: Click to enter text.

2. **Agent/Consultant Contact Information**

   Contact Name: Click to enter text.

   Address: Click to enter text.

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

   Phone Number: Click to enter text.

3. **Owner/Operator Contact Information**

   ☐ Owner ☐ Operator

   Owner/Operator Name: Click to enter text.

   Contact Name: Click to enter text.

   Address: Click to enter text.

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

   Phone Number: Click to enter text.

4. **Facility Contact Information**

   Facility Name: Click to enter text.

   Address: Click to enter text.

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

   Location description (if no address is available): Click to enter text.

   Facility Contact Person: Click to enter text.

   Phone Number: Click to enter text.

5. **Latitude and Longitude, in degrees-minutes-seconds**

Latitude: Click to enter text.

Longitude: Click to enter text.

Method of determination (GPS, TOPO, etc.): Click to enter text.

Attach topographic quadrangle map as attachment A.

6. **Well Information**

Type of Well Construction, select one:

- ☐ Vertical Injection
- ☐ Subsurface Fluid Distribution System
- ☐ Infiltration Gallery
- ☐ Temporary Injection Points
- ☐ Other, Specify: Click to enter text.

Number of Injection Wells: Click to enter text.

7. **Purpose**

Detailed Description regarding purpose of Injection System:

Click to enter text.

Attach a Site Map as Attachment B (Attach the Approved Remediation Plan, if appropriate.)

8. **Water Well Driller/Installer**

Water Well Driller/Installer Name: Click to enter text.

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

Phone Number: Click to enter text.

License Number: Click to enter text.

Section 2. Proposed Down Hole Design

Attach a diagram signed and sealed by a licensed engineer as Attachment C.

Table 7.0(1) – Down Hole Design Table

Name of String	Size	Setting Depth	Sacks Cement/Grout – Slurry Volume – Top of Cement	Hole Size	Weight (lbs/ft) PVC/Steel
Casing					
Tubing					
Screen					

Section 3. Proposed Trench System, Subsurface Fluid Distribution System, or Infiltration Gallery

Attach a diagram signed and sealed by a licensed engineer as Attachment D.

System(s) Dimensions: Click to enter text.

System(s) Construction: Click to enter text.

Section 4. Site Hydrogeological and Injection Zone Data

1. Name of Contaminated Aquifer: Click to enter text.
2. Receiving Formation Name of Injection Zone: Click to enter text.
3. Well/Trench Total Depth: Click to enter text.
4. Surface Elevation: Click to enter text.
5. Depth to Ground Water: Click to enter text.
6. Injection Zone Depth: Click to enter text.
7. Injection Zone vertically isolated geologically? ☐ Yes ☐ No

   Impervious Strata between Injection Zone and nearest Underground Source of Drinking Water:

   Name: Click to enter text.

   Thickness: Click to enter text.
8. Provide a list of contaminants and the levels (ppm) in contaminated aquifer

   Attach as Attachment E.
9. Horizontal and Vertical extent of contamination and injection plume

   Attach as Attachment F.
10. Formation (Injection Zone) Water Chemistry (Background levels) TDS, etc.

    Attach as Attachment G.
11. Injection Fluid Chemistry in PPM at point of injection

    Attach as Attachment H.
12. Lowest Known Depth of Ground Water with < 10,000 PPM TDS: Click to enter text.
13. Maximum injection Rate/Volume/Pressure: Click to enter text.
14. Water wells within 1/4 mile radius (attach map as Attachment I): Click to enter text.
15. Injection wells within 1/4 mile radius (attach map as Attachment J): Click to enter text.
16. Monitor wells within 1/4 mile radius (attach drillers logs and map as Attachment K): Click to enter text.
17. Sampling frequency: Click to enter text.
18. Known hazardous components in injection fluid: Click to enter text.

Section 5. Site History

1. Type of Facility: Click to enter text.
2. Contamination Dates: Click to enter text.
3. Original Contamination (VOCs, TPH, BTEX, etc.) and Concentrations (attach as Attachment L): Click to enter text.
4. Previous Remediation (attach results of any previous remediation as attachment M): Click to enter text.

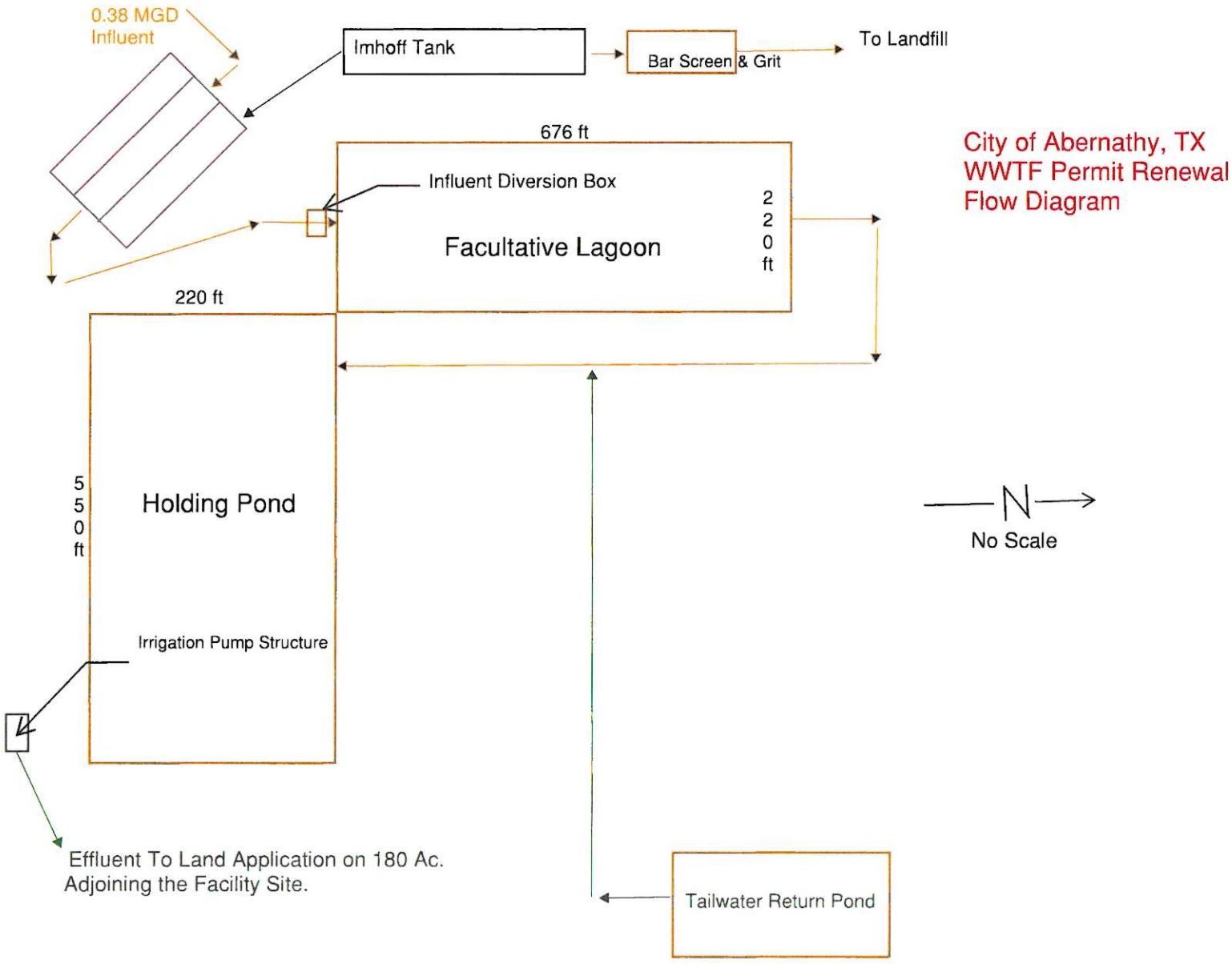
NOTE: Authorization Form should be completed in detail and authorization given by the TCEQ before construction, operation, and/or conversion can begin. Attach additional pages as necessary.

Class V Injection Well Designations

5A07 Heat Pump/AC return (IW used for groundwater to heat and/or cool buildings)
5A19 Industrial Cooling Water Return Flow (IW used to cool industrial process equipment)
5B22 Salt Water Intrusion Barrier (IW used to inject fluids to prevent the intrusion of salt water into an aquifer)
5D02 Storm Water Drainage (IW designed for the disposal of rain water)
5D04 Industrial Stormwater Drainage Wells (IW designed for the disposal of rain water associated with industrial facilities)
5F01 Agricultural Drainage (IW that receive agricultural runoff)
5R21 Aquifer Recharge (IW used to inject fluids to recharge an aquifer)
5S23 Subsidence Control Wells (IW used to control land subsidence caused by ground water withdrawal)
5W09 Untreated Sewage
5W10 Large Capacity Cesspools (Cesspools that are designed for 5,000 gpd or greater)
5W11 Large Capacity Septic systems (Septic systems designed for 5,000 gpd or greater)
5W12 WTTP disposal
5W20 Industrial Process Waste Disposal Wells
5W31 Septic System (Well Disposal method)
5W32 Septic System Drainfield Disposal
5X13 Mine Backfill (IW used to control subsidence, dispose of mining byproducts, and/or fill sections of a mine)
5X25 Experimental Wells (Pilot Test) (IW used to test new technologies or tracer dye studies)
5X26 Aquifer Remediation (IW used to clean up, treat, or prevent contamination of a USDW)
5X27 Other Wells
5X28 Motor Vehicle Waste Disposal Wells (IW used to dispose of waste from a motor vehicle site - These are currently banned)
5X29 Abandoned Drinking Water Wells (waste disposal)

ATTACHMENT A

Flow Diagram



City of Abernathy, TX
WWTF Permit Renewal
Flow Diagram

ATTACHMENT B

Site Map

ATTACHMENT C

Effluent Analytical Report

eurofins | Environment Testing

1

ANALYTICAL REPORT

PREPARED FOR

Attn: Katy Allen
Oller Engineering
6812 Wayne Ave, Suite A
Lubbock, Texas 79424

Generated 11/27/2023 12:29:56 PM

JOB DESCRIPTION

Abernathy Permit

JOB NUMBER

820-10761-1

Eurofins Lubbock
6701 Aberdeen Ave.
Suite 8
Lubbock TX 79424

See page two for job notes and contact information.

myEOL

Eurofins Lubbock

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

Holly Taylor

Generated
11/27/2023 12:29:56 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Table of Contents

Definitions/Glossary

Client: Oller Engineering
Project/Site: Abernathy Permit

Job ID: 820-10761-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Oller Engineering
Project/Site: Abernathy Permit

Job ID: 820-10761-1

Job ID: 820-10761-1

Laboratory: Eurofins Lubbock

Narrative

Job Narrative
820-10761-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 11/2/2023 4:10 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.3°C

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
Method 29B_SAR_Calc: The following sample was diluted to bring the concentration of target analytes within the calibration range: Abernathy Permit (820-10761-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
Method SM5210B_Calc: The following sample was analyzed outside of analytical holding time due to analyst error: Abernathy Permit (820-10761-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Biology
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Oller Engineering
Project/Site: Abernathy Permit

Job ID: 820-10761-1

Client Sample ID: Abernathy Permit

Date Collected: 11/02/23 15:00
Date Received: 11/02/23 16:10

Lab Sample ID: 820-10761-1
Matrix: Water

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	119		0.500	0.250	mg/L			11/04/23 10:32	1
Nitrate as N	4.44		0.100	0.0391	mg/L			11/04/23 10:32	1
Fluoride	2.56		0.500	0.100	mg/L			11/04/23 10:32	1
Nitrite as N	1.41		0.100	0.0293	mg/L			11/04/23 10:32	1
Sulfate	60.0		0.500	0.200	mg/L			11/04/23 10:32	1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.0744		0.0200	0.00301	mg/L		11/07/23 12:30	11/07/23 19:45	1
Antimony	<0.00105	U	0.00200	0.00105	mg/L		11/07/23 12:30	11/07/23 19:45	1
Arsenic	0.00436		0.00400	0.000341	mg/L		11/07/23 12:30	11/07/23 19:45	1
Barium	0.0708		0.00400	0.000289	mg/L		11/07/23 12:30	11/07/23 19:45	1
Beryllium	<0.000148	U	0.00200	0.000148	mg/L		11/07/23 12:30	11/07/23 19:45	1
Boron	0.773		0.0100	0.00252	mg/L		11/07/23 12:30	11/07/23 19:45	1
Cadmium	<0.000258	U	0.00200	0.000258	mg/L		11/07/23 12:30	11/07/23 19:45	1
Chromium	0.000751	J	0.00400	0.000325	mg/L		11/07/23 12:30	11/07/23 19:45	1
Copper	0.00319	J	0.00400	0.000690	mg/L		11/07/23 12:30	11/07/23 19:45	1
Lead	0.000462	J	0.00200	0.000140	mg/L		11/07/23 12:30	11/07/23 19:45	1
Nickel	0.00293		0.00200	0.000486	mg/L		11/07/23 12:30	11/07/23 19:45	1
Selenium	0.00164	J	0.00200	0.000685	mg/L		11/07/23 12:30	11/07/23 19:45	1
Silver	<0.000118	U	0.00200	0.000118	mg/L		11/07/23 12:30	11/07/23 19:45	1
Thallium	<0.000215	U	0.00200	0.000215	mg/L		11/07/23 12:30	11/07/23 19:45	1
Zinc	0.0404		0.00400	0.000885	mg/L		11/07/23 12:30	11/07/23 19:45	1

Method: EPA 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0000525	U	0.000200	0.0000525	mg/L		11/07/23 20:08	11/08/23 13:44	1

Method: LA 29B SAR - Sodium Adsorption Ratio - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	134		2.50	2.50	mg/L			11/14/23 11:51	5
Calcium	51.5		1.00	1.00	mg/L			11/14/23 11:51	5
Magnesium	41.5		2.00	2.00	mg/L			11/14/23 11:51	5
Potassium	24.7		2.50	2.50	mg/L			11/14/23 11:51	5
Sodium Adsorption Ratio	3.37		0.100	0.100	NONE			11/14/23 18:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (1664B)	<1.85	U	5.88	1.85	mg/L			11/09/23 13:46	1
Ammonia (EPA 350.1)	<0.0510	U	0.100	0.0510	mg/L			11/08/23 10:54	1
Nitrogen, Kjeldahl (EPA 351.2)	10.2		1.18	0.523	mg/L		11/08/23 19:52	11/09/23 14:29	5.882
Total Phosphorus as P (EPA 365.1)	6.29		0.500	0.240	mg/L		11/08/23 16:40	11/09/23 11:46	25
Chemical Oxygen Demand (Hach 8000)	142		40.0	6.72	mg/L			11/07/23 16:27	2
Specific Conductance (SM 2510B)	1380		10.0	10.0	umho/cm @ 25C			11/06/23 10:58	1
Total Suspended Solids (SM 2540D)	80.7		26.7	26.7	mg/L			11/09/23 09:37	1
Chlorine, Total Residual (SM 4500 Cl G)	0.686	HF	0.500	0.500	mg/L			11/08/23 10:56	10
pH (SM 4500 H+ B)	7.7	HF			SU			11/08/23 14:21	1

Client Sample Results

Client: Oller Engineering
Project/Site: Abernathy Permit

Job ID: 820-10761-1

Client Sample ID: Abernathy Permit

Date Collected: 11/02/23 15:00
Date Received: 11/02/23 16:10

Lab Sample ID: 820-10761-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Temperature (SM 4500 H+ B)	13.5	HF			Degrees C			11/08/23 14:21	1
Biochemical Oxygen Demand (SM 5210B)	35.9	H	12.0	12.0	mg/L		11/03/23 14:31	11/17/23 22:13	1
Total Organic Carbon (SM 5310C)	9.76		1.00	0.500	mg/L			11/04/23 00:14	1
Carbonaceous Biochemical Oxygen Demand (SM5210B CBOD)	16.9		6.00	6.00	mg/L		11/03/23 14:31	11/03/23 15:32	1
Nitrogen, Total (EPA Total Nitrogen)	16.1		0.200	0.0614	mg/L			11/03/23 15:58	1

Method: SM 9223B - Coliforms, Total, and E.Coli (Colilert - Quanti Tray)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	>2400		1.0	1.0	MPN/100mL			11/02/23 17:02	1
Escherichia coli	1600		1.0	1.0	MPN/100mL			11/02/23 17:02	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-129375/26
Matrix: Water
Analysis Batch: 129375

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.250	U	0.500	0.250	mg/L			11/03/23 15:28	1
Fluoride	<0.100	U	0.500	0.100	mg/L			11/03/23 15:28	1
Sulfate	<0.200	U	0.500	0.200	mg/L			11/03/23 15:28	1

Lab Sample ID: MB 860-129375/85
Matrix: Water
Analysis Batch: 129375

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.250	U	0.500	0.250	mg/L			11/04/23 02:53	1
Fluoride	<0.100	U	0.500	0.100	mg/L			11/04/23 02:53	1
Sulfate	<0.200	U	0.500	0.200	mg/L			11/04/23 02:53	1

Lab Sample ID: LCS 860-129375/86
Matrix: Water
Analysis Batch: 129375

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.869		mg/L		99	90 - 110
Fluoride	10.0	10.18		mg/L		102	90 - 110
Sulfate	10.0	9.656		mg/L		97	90 - 110

Lab Sample ID: LCSD 860-129375/87
Matrix: Water
Analysis Batch: 129375

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	9.760		mg/L		98	90 - 110	1	20
Fluoride	10.0	10.17		mg/L		102	90 - 110	0	20
Sulfate	10.0	9.659		mg/L		97	90 - 110	0	20

Lab Sample ID: LLCS 860-129375/7
Matrix: Water
Analysis Batch: 129375

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.500	0.3081	J	mg/L		62	50 - 150
Fluoride	0.500	0.2948	J	mg/L		59	50 - 150
Sulfate	0.500	0.4185	J	mg/L		84	50 - 150

Lab Sample ID: MB 860-129376/26
Matrix: Water
Analysis Batch: 129376

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.0391	U	0.100	0.0391	mg/L			11/03/23 15:28	1
Nitrite as N	<0.0293	U	0.100	0.0293	mg/L			11/03/23 15:28	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 860-129376/85
Matrix: Water
Analysis Batch: 129376

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.0391	U	0.100	0.0391	mg/L			11/04/23 02:53	1
Nitrite as N	<0.0293	U	0.100	0.0293	mg/L			11/04/23 02:53	1

Lab Sample ID: LCS 860-129376/86
Matrix: Water
Analysis Batch: 129376

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	10.0	9.996		mg/L		100	80 - 120
Nitrite as N	10.0	9.889		mg/L		99	80 - 120

Lab Sample ID: LCSD 860-129376/87
Matrix: Water
Analysis Batch: 129376

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	10.0	9.971		mg/L		100	80 - 120	0	20
Nitrite as N	10.0	9.861		mg/L		99	80 - 120	0	20

Lab Sample ID: LLCS 860-129376/6
Matrix: Water
Analysis Batch: 129376

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.100	0.1382		mg/L		138	50 - 150
Nitrite as N	0.100	0.1335		mg/L		133	50 - 150

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 860-129868/1-A
Matrix: Water
Analysis Batch: 129975

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 129868

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.00301	U	0.0200	0.00301	mg/L		11/07/23 12:30	11/07/23 18:36	1
Antimony	<0.00105	U	0.00200	0.00105	mg/L		11/07/23 12:30	11/07/23 18:36	1
Arsenic	<0.000341	U	0.00400	0.000341	mg/L		11/07/23 12:30	11/07/23 18:36	1
Barium	<0.000289	U	0.00400	0.000289	mg/L		11/07/23 12:30	11/07/23 18:36	1
Beryllium	<0.000148	U	0.00200	0.000148	mg/L		11/07/23 12:30	11/07/23 18:36	1
Boron	<0.00252	U	0.0100	0.00252	mg/L		11/07/23 12:30	11/07/23 18:36	1
Cadmium	<0.000258	U	0.00200	0.000258	mg/L		11/07/23 12:30	11/07/23 18:36	1
Chromium	<0.000325	U	0.00400	0.000325	mg/L		11/07/23 12:30	11/07/23 18:36	1
Copper	<0.000690	U	0.00400	0.000690	mg/L		11/07/23 12:30	11/07/23 18:36	1
Lead	<0.000140	U	0.00200	0.000140	mg/L		11/07/23 12:30	11/07/23 18:36	1
Nickel	<0.000486	U	0.00200	0.000486	mg/L		11/07/23 12:30	11/07/23 18:36	1
Selenium	<0.000685	U	0.00200	0.000685	mg/L		11/07/23 12:30	11/07/23 18:36	1
Silver	<0.000118	U	0.00200	0.000118	mg/L		11/07/23 12:30	11/07/23 18:36	1
Thallium	<0.000215	U	0.00200	0.000215	mg/L		11/07/23 12:30	11/07/23 18:36	1
Zinc	<0.000885	U	0.00400	0.000885	mg/L		11/07/23 12:30	11/07/23 18:36	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 860-129868/2-A
Matrix: Water
Analysis Batch: 129975

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 129868

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.500	0.4700		mg/L		94	85 - 115
Antimony	0.100	0.08988		mg/L		90	85 - 115
Arsenic	0.100	0.09406		mg/L		94	85 - 115
Barium	0.100	0.09393		mg/L		94	85 - 115
Beryllium	0.100	0.09098		mg/L		91	85 - 115
Boron	0.100	0.08676		mg/L		87	85 - 115
Cadmium	0.100	0.09333		mg/L		93	85 - 115
Chromium	0.100	0.09463		mg/L		95	85 - 115
Copper	0.100	0.09032		mg/L		90	85 - 115
Lead	0.100	0.09294		mg/L		93	85 - 115
Nickel	0.100	0.09375		mg/L		94	85 - 115
Selenium	0.100	0.09324		mg/L		93	85 - 115
Silver	0.0500	0.05127		mg/L		103	85 - 115
Thallium	0.100	0.09496		mg/L		95	85 - 115
Zinc	0.100	0.09348		mg/L		93	85 - 115

Lab Sample ID: LCSD 860-129868/3-A
Matrix: Water
Analysis Batch: 129975

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 129868

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	0.500	0.4707		mg/L		94	85 - 115	0	20
Antimony	0.100	0.09200		mg/L		92	85 - 115	2	20
Arsenic	0.100	0.09417		mg/L		94	85 - 115	0	20
Barium	0.100	0.09450		mg/L		95	85 - 115	1	20
Beryllium	0.100	0.09080		mg/L		91	85 - 115	0	20
Boron	0.100	0.08822		mg/L		88	85 - 115	2	20
Cadmium	0.100	0.09334		mg/L		93	85 - 115	0	20
Chromium	0.100	0.09335		mg/L		93	85 - 115	1	20
Copper	0.100	0.09074		mg/L		91	85 - 115	0	20
Lead	0.100	0.09308		mg/L		93	85 - 115	0	20
Nickel	0.100	0.09339		mg/L		93	85 - 115	0	20
Selenium	0.100	0.09233		mg/L		92	85 - 115	1	20
Silver	0.0500	0.05115		mg/L		102	85 - 115	0	20
Thallium	0.100	0.09450		mg/L		95	85 - 115	0	20
Zinc	0.100	0.09338		mg/L		93	85 - 115	0	20

Lab Sample ID: LLCS 860-129868/4-A
Matrix: Water
Analysis Batch: 129975

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 129868

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.0200	0.01986	J	mg/L		99	50 - 150
Antimony	0.00200	0.002017		mg/L		101	50 - 150
Arsenic	0.00400	0.004074		mg/L		102	50 - 150
Barium	0.00400	0.003883	J	mg/L		97	50 - 150
Beryllium	0.00200	0.001969	J	mg/L		98	50 - 150
Boron	0.0100	0.009042	J	mg/L		90	50 - 150
Cadmium	0.00200	0.002031		mg/L		102	50 - 150

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LLCS 860-129868/4-A
Matrix: Water
Analysis Batch: 129975

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 129868

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	0.00400	0.003812	J	mg/L		95	50 - 150
Copper	0.00400	0.004084		mg/L		102	50 - 150
Lead	0.00200	0.002002		mg/L		100	50 - 150
Nickel	0.00200	0.002031		mg/L		102	50 - 150
Selenium	0.00200	0.002525		mg/L		126	50 - 150
Silver	0.00200	0.001702	J	mg/L		85	50 - 150
Thallium	0.00200	0.001981	J	mg/L		99	50 - 150
Zinc	0.00400	0.004057		mg/L		101	50 - 150

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 860-129976/10-A
Matrix: Water
Analysis Batch: 130136

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 129976

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0000525	U	0.000200	0.0000525	mg/L		11/07/23 20:08	11/08/23 13:02	1

Lab Sample ID: LCS 860-129976/11-A
Matrix: Water
Analysis Batch: 130136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 129976

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00200	0.002023		mg/L		101	85 - 115

Lab Sample ID: LCSD 860-129976/12-A
Matrix: Water
Analysis Batch: 130136

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 129976

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.00200	0.002024		mg/L		101	85 - 115	0	20

Lab Sample ID: LLCS 860-129976/13-A
Matrix: Water
Analysis Batch: 130136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 129976

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.000200	0.0002580		mg/L		129	50 - 150

Method: 29B SAR - Sodium Adsorption Ratio

Lab Sample ID: MB 860-130857/1-A
Matrix: Water
Analysis Batch: 131057

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.500	U	0.500	0.500	mg/L			11/14/23 11:47	1
Calcium	<0.200	U	0.200	0.200	mg/L			11/14/23 11:47	1
Magnesium	<0.400	U	0.400	0.400	mg/L			11/14/23 11:47	1
Potassium	<0.500	U	0.500	0.500	mg/L			11/14/23 11:47	1

Method: 1664B - HEM and SGT-HEM

Lab Sample ID: MB 860-130317/1
Matrix: Water
Analysis Batch: 130317

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	<1.57	U	5.00	1.57	mg/L			11/09/23 13:46	1

Lab Sample ID: LCS 860-130317/2
Matrix: Water
Analysis Batch: 130317

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HEM	40.0	34.40		mg/L		86	78 - 114

Lab Sample ID: LCSD 860-130317/3
Matrix: Water
Analysis Batch: 130317

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HEM	40.0	37.10		mg/L		93	78 - 114	8	18

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 860-130107/17
Matrix: Water
Analysis Batch: 130107

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.0510	U	0.100	0.0510	mg/L			11/08/23 10:17	1

Lab Sample ID: LCS 860-130107/18
Matrix: Water
Analysis Batch: 130107

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	1.00	0.9710		mg/L		97	90 - 110

Lab Sample ID: LCSD 860-130107/19
Matrix: Water
Analysis Batch: 130107

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia	1.00	0.9430		mg/L		94	90 - 110	3	20

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 860-130176/29-A
Matrix: Water
Analysis Batch: 130449

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 130176

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	<3.56	U	8.00	3.56	mg/L		11/08/23 19:52	11/09/23 14:04	1

Method: 351.2 - Nitrogen, Total Kjeldahl (Continued)

Lab Sample ID: MB 860-130176/4-A
Matrix: Water
Analysis Batch: 130449

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 130176

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	<0.0890	U	0.200	0.0890	mg/L		11/08/23 19:52	11/09/23 13:52	1

Lab Sample ID: LCS 860-130176/30-A
Matrix: Water
Analysis Batch: 130449

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 130176

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	80.0	81.53		mg/L		102	90 - 110

Lab Sample ID: LCSD 860-130176/31-A
Matrix: Water
Analysis Batch: 130449

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 130176

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrogen, Kjeldahl	80.0	81.54		mg/L		102	90 - 110	0	20

Lab Sample ID: LLCS 860-130176/5-A
Matrix: Water
Analysis Batch: 130449

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 130176

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	0.200	0.1989	J	mg/L		99	50 - 150

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 860-130157/4-A
Matrix: Water
Analysis Batch: 130454

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 130157

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	<0.00959	U	0.0200	0.00959	mg/L		11/08/23 16:40	11/09/23 10:32	1

Lab Sample ID: LCS 860-130157/5-A
Matrix: Water
Analysis Batch: 130454

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 130157

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Phosphorus as P	0.250	0.2313		mg/L		93	90 - 110

Lab Sample ID: LCSD 860-130157/6-A
Matrix: Water
Analysis Batch: 130454

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 130157

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Phosphorus as P	0.250	0.2338		mg/L		94	90 - 110	1	20

Method: 8000 - COD

Lab Sample ID: MB 860-130112/3
Matrix: Water
Analysis Batch: 130112

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	<3.36	U	20.0	3.36	mg/L			11/07/23 16:25	1

Lab Sample ID: LCS 860-130112/4
Matrix: Water
Analysis Batch: 130112

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	100	98.00		mg/L		98	90 - 110

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 860-129642/2
Matrix: Water
Analysis Batch: 129642

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<10.0	U	10.0	10.0	umho/cm @ 25C			11/06/23 10:58	1

Lab Sample ID: LCS 860-129642/3
Matrix: Water
Analysis Batch: 129642

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	1410	1490		umho/cm @ 25C		105	85 - 115

Lab Sample ID: LCSD 860-129642/4
Matrix: Water
Analysis Batch: 129642

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Specific Conductance	1410	1499		umho/cm @ 25C		106	85 - 115	1	20

Lab Sample ID: LLCS 860-129642/5
Matrix: Water
Analysis Batch: 129642

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	10.0	11.52		umho/cm @ 25C		115	50 - 150

Lab Sample ID: 820-10761-1 DU
Matrix: Water
Analysis Batch: 129642

Client Sample ID: Abernathy Permit
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	1380		1369		umho/cm @ 25C		0.7	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 860-130251/1
Matrix: Water
Analysis Batch: 130251

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<4.00	U	4.00	4.00	mg/L			11/09/23 09:37	1

Lab Sample ID: LCS 860-130251/2
Matrix: Water
Analysis Batch: 130251

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	106.0		mg/L		106	80 - 120

Lab Sample ID: LCSD 860-130251/3
Matrix: Water
Analysis Batch: 130251

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Suspended Solids	100	106.0		mg/L		106	80 - 120	0	10

Method: SM 4500 Cl G - Chlorine, Residual

Lab Sample ID: MB 860-130077/10
Matrix: Water
Analysis Batch: 130077

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine, Total Residual	<0.0500	U	0.0500	0.0500	mg/L			11/08/23 10:49	1

Lab Sample ID: 860-61029-A-4 LCS
Matrix: Water
Analysis Batch: 130077

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorine, Total Residual	0.250	0.2264		mg/L		91	85 - 115

Lab Sample ID: LCSD 860-130077/12
Matrix: Water
Analysis Batch: 130077

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorine, Total Residual	0.250	0.2169		mg/L		87	85 - 115	2	20

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: SCB 860-132440/2
Matrix: Water
Analysis Batch: 132440

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	0.8820		0.0000020 0	0.0000020 0	mg/L			11/17/23 20:30	1

Method: SM 5210B - BOD, 5-Day (Continued)

Lab Sample ID: USB 860-132440/1
Matrix: Water
Analysis Batch: 132440

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	<0.00000200	U	0.0000020 0	0.0000020 0	mg/L			11/17/23 20:27	1

Lab Sample ID: LCS 860-132440/3
Matrix: Water
Analysis Batch: 132440

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	208.1		mg/L		105	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 860-129639/3
Matrix: Water
Analysis Batch: 129639

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.500	U	1.00	0.500	mg/L			11/03/23 20:58	1

Lab Sample ID: LCS 860-129639/4
Matrix: Water
Analysis Batch: 129639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	5.00	5.363		mg/L		107	90 - 110

Lab Sample ID: LCSD 860-129639/5
Matrix: Water
Analysis Batch: 129639

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	5.00	5.370		mg/L		107	90 - 110	0	15

Method: SM5210B CBOD - Carbonaceous BOD, 5 Day

Lab Sample ID: SCB 860-130120/2
Matrix: Water
Analysis Batch: 130120

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonaceous Biochemical Oxygen Demand	0.8850		0.0000020 0	0.0000020 0	mg/L			11/03/23 15:08	1

Lab Sample ID: USB 860-130120/1
Matrix: Water
Analysis Batch: 130120

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonaceous Biochemical Oxygen Demand	0.07300		0.0000020 0	0.0000020 0	mg/L			11/03/23 15:05	1

Method: SM5210B CBOD - Carbonaceous BOD, 5 Day (Continued)

Lab Sample ID: LCS 860-130120/3
Matrix: Water
Analysis Batch: 130120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbonaceous Biochemical Oxygen Demand	198	175.0		mg/L		88	85 - 115

QC Association Summary

Client: Oller Engineering
Project/Site: Abernathy Permit

Job ID: 820-10761-1

HPLC/IC

Analysis Batch: 129375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	300.0	
MB 860-129375/26	Method Blank	Total/NA	Water	300.0	
MB 860-129375/85	Method Blank	Total/NA	Water	300.0	
LCS 860-129375/86	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-129375/87	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-129375/7	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 129376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	300.0	
MB 860-129376/26	Method Blank	Total/NA	Water	300.0	
MB 860-129376/85	Method Blank	Total/NA	Water	300.0	
LCS 860-129376/86	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-129376/87	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-129376/6	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 129868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total Recoverable	Water	200.8	
MB 860-129868/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 860-129868/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 860-129868/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	
LLCS 860-129868/4-A	Lab Control Sample	Total Recoverable	Water	200.8	

Analysis Batch: 129975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total Recoverable	Water	200.8	129868
MB 860-129868/1-A	Method Blank	Total Recoverable	Water	200.8	129868
LCS 860-129868/2-A	Lab Control Sample	Total Recoverable	Water	200.8	129868
LCSD 860-129868/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	129868
LLCS 860-129868/4-A	Lab Control Sample	Total Recoverable	Water	200.8	129868

Prep Batch: 129976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	245.1	
MB 860-129976/10-A	Method Blank	Total/NA	Water	245.1	
LCS 860-129976/11-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 860-129976/12-A	Lab Control Sample Dup	Total/NA	Water	245.1	
LLCS 860-129976/13-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 130136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	245.1	129976
MB 860-129976/10-A	Method Blank	Total/NA	Water	245.1	129976
LCS 860-129976/11-A	Lab Control Sample	Total/NA	Water	245.1	129976
LCSD 860-129976/12-A	Lab Control Sample Dup	Total/NA	Water	245.1	129976
LLCS 860-129976/13-A	Lab Control Sample	Total/NA	Water	245.1	129976

QC Association Summary

Client: Oller Engineering
Project/Site: Abernathy Permit

Job ID: 820-10761-1

Metals

Filtration Batch: 130857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Dissolved	Water	Filtration	
MB 860-130857/1-A	Method Blank	Dissolved	Water	Filtration	

Analysis Batch: 131057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Dissolved	Water	29B SAR	130857
MB 860-130857/1-A	Method Blank	Dissolved	Water	29B SAR	130857

Analysis Batch: 131058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Dissolved	Water	29B SAR	130857

General Chemistry

Analysis Batch: 128642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	Total Nitrogen	

Prep Batch: 129460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	BOD Prep	

Analysis Batch: 129639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	SM 5310C	
MB 860-129639/3	Method Blank	Total/NA	Water	SM 5310C	
LCS 860-129639/4	Lab Control Sample	Total/NA	Water	SM 5310C	
LCSD 860-129639/5	Lab Control Sample Dup	Total/NA	Water	SM 5310C	

Analysis Batch: 129642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	SM 2510B	
MB 860-129642/2	Method Blank	Total/NA	Water	SM 2510B	
LCS 860-129642/3	Lab Control Sample	Total/NA	Water	SM 2510B	
LCSD 860-129642/4	Lab Control Sample Dup	Total/NA	Water	SM 2510B	
LLCS 860-129642/5	Lab Control Sample	Total/NA	Water	SM 2510B	
820-10761-1 DU	Abernathy Permit	Total/NA	Water	SM 2510B	

Analysis Batch: 130077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	SM 4500 Cl G	
MB 860-130077/10	Method Blank	Total/NA	Water	SM 4500 Cl G	
860-61029-A-4 LCS	Lab Control Sample	Total/NA	Water	SM 4500 Cl G	
LCSD 860-130077/12	Lab Control Sample Dup	Total/NA	Water	SM 4500 Cl G	

Analysis Batch: 130107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	350.1	
MB 860-130107/17	Method Blank	Total/NA	Water	350.1	
LCS 860-130107/18	Lab Control Sample	Total/NA	Water	350.1	
LCSD 860-130107/19	Lab Control Sample Dup	Total/NA	Water	350.1	

QC Association Summary

Client: Oller Engineering
Project/Site: Abernathy Permit

Job ID: 820-10761-1

General Chemistry

Analysis Batch: 130112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	8000	
MB 860-130112/3	Method Blank	Total/NA	Water	8000	
LCS 860-130112/4	Lab Control Sample	Total/NA	Water	8000	

Analysis Batch: 130120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	SM5210B CBOD	129460
SCB 860-130120/2	Method Blank	Total/NA	Water	SM5210B CBOD	
USB 860-130120/1	Method Blank	Total/NA	Water	SM5210B CBOD	
LCS 860-130120/3	Lab Control Sample	Total/NA	Water	SM5210B CBOD	

Analysis Batch: 130129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	SM 4500 H+ B	

Prep Batch: 130157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	365.2/365.3/365	
MB 860-130157/4-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 860-130157/5-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	
LCSD 860-130157/6-A	Lab Control Sample Dup	Total/NA	Water	365.2/365.3/365	

Prep Batch: 130176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	351.2	
MB 860-130176/29-A	Method Blank	Total/NA	Water	351.2	
MB 860-130176/4-A	Method Blank	Total/NA	Water	351.2	
LCS 860-130176/30-A	Lab Control Sample	Total/NA	Water	351.2	
LCSD 860-130176/31-A	Lab Control Sample Dup	Total/NA	Water	351.2	
LLCS 860-130176/5-A	Lab Control Sample	Total/NA	Water	351.2	

Analysis Batch: 130251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	SM 2540D	
MB 860-130251/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 860-130251/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 860-130251/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 130317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	1664B	
MB 860-130317/1	Method Blank	Total/NA	Water	1664B	
LCS 860-130317/2	Lab Control Sample	Total/NA	Water	1664B	
LCSD 860-130317/3	Lab Control Sample Dup	Total/NA	Water	1664B	

Analysis Batch: 130449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	351.2	130176
MB 860-130176/29-A	Method Blank	Total/NA	Water	351.2	130176
MB 860-130176/4-A	Method Blank	Total/NA	Water	351.2	130176
LCS 860-130176/30-A	Lab Control Sample	Total/NA	Water	351.2	130176

QC Association Summary

Client: Oller Engineering
Project/Site: Abernathy Permit

Job ID: 820-10761-1

General Chemistry (Continued)

Analysis Batch: 130449 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 860-130176/31-A	Lab Control Sample Dup	Total/NA	Water	351.2	130176
LLCS 860-130176/5-A	Lab Control Sample	Total/NA	Water	351.2	130176

Analysis Batch: 130454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	365.1	130157
MB 860-130157/4-A	Method Blank	Total/NA	Water	365.1	130157
LCS 860-130157/5-A	Lab Control Sample	Total/NA	Water	365.1	130157
LCSD 860-130157/6-A	Lab Control Sample Dup	Total/NA	Water	365.1	130157

Analysis Batch: 132440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	SM 5210B	129460
SCB 860-132440/2	Method Blank	Total/NA	Water	SM 5210B	
USB 860-132440/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 860-132440/3	Lab Control Sample	Total/NA	Water	SM 5210B	

Biology

Analysis Batch: 2141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-10761-1	Abernathy Permit	Total/NA	Water	9223B	

Lab Chronicle

Client: Oller Engineering
Project/Site: Abernathy Permit

Job ID: 820-10761-1

Client Sample ID: Abernathy Permit

Date Collected: 11/02/23 15:00
Date Received: 11/02/23 16:10

Lab Sample ID: 820-10761-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			129375	11/04/23 10:32	WP	EET HOU
Total/NA	Analysis	300.0		1			129376	11/04/23 10:32	WP	EET HOU
Total Recoverable	Prep	200.8			50 mL	50 mL	129868	11/07/23 12:30	MD	EET HOU
Total Recoverable	Analysis	200.8		1			129975	11/07/23 19:45	SHZ	EET HOU
Total/NA	Prep	245.1			50 mL	50 mL	129976	11/07/23 20:08	AGR	EET HOU
Total/NA	Analysis	245.1		1			130136	11/08/23 13:44	SHZ	EET HOU
Dissolved	Filtration	Filtration			50 mL	50 mL	130857	11/13/23 18:54	PB	EET HOU
Dissolved	Analysis	29B SAR		5			131057	11/14/23 11:51	DP	EET HOU
Dissolved	Filtration	Filtration			50 mL	50 mL	130857	11/13/23 18:54	PB	EET HOU
Dissolved	Analysis	29B SAR		1			131058	11/14/23 18:09	DP	EET HOU
Total/NA	Analysis	1664B		1	850 mL	1000 mL	130317	11/09/23 13:46	TB	EET HOU
Total/NA	Analysis	350.1		1	10 mL	10 mL	130107	11/08/23 10:54	ADL	EET HOU
Total/NA	Prep	351.2			20 mL	20 mL	130176	11/08/23 19:52	CL	EET HOU
Total/NA	Analysis	351.2		5.882			130449	11/09/23 14:29	LD	EET HOU
Total/NA	Prep	365.2/365.3/365			10 mL	10 mL	130157	11/08/23 16:40	CL	EET HOU
Total/NA	Analysis	365.1		25			130454	11/09/23 11:46	LD	EET HOU
Total/NA	Analysis	8000		2	2 mL	2 mL	130112	11/07/23 16:27	HN	EET HOU
Total/NA	Analysis	SM 2510B		1			129642	11/06/23 10:58	KEG	EET HOU
Total/NA	Analysis	SM 2540D		1	150 mL	1000 mL	130251	11/09/23 09:37	SA	EET HOU
Total/NA	Analysis	SM 4500 Cl G		10	10 mL	10 mL	130077	11/08/23 10:56	SCI	EET HOU
Total/NA	Analysis	SM 4500 H+ B		1			130129	11/08/23 14:21	KEG	EET HOU
Total/NA	Prep	BOD Prep					129460	11/03/23 14:31	ALL	EET HOU
Total/NA	Analysis	SM 5210B		1	50 mL	300 mL	132440	11/17/23 22:13	HN	EET HOU
Total/NA	Analysis	SM 5310C		1	40 mL	40 mL	129639	11/04/23 00:14	YG	EET HOU
Total/NA	Prep	BOD Prep					129460	11/03/23 14:31	ALL	EET HOU
Total/NA	Analysis	SM5210B CBOD		1	100 mL	300 mL	130120	11/03/23 15:32	HN	EET HOU
Total/NA	Analysis	Total Nitrogen		1			128642	11/03/23 15:58	AA	EET HOU
Total/NA	Analysis	9223B		1	100 mL	100 mL	2141	11/02/23 17:02	CT	EET LUB

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

EET LUB = Eurofins Lubbock, 6701 Aberdeen Ave., Suite 8, Lubbock, TX 79424, TEL (806)794-1296

Accreditation/Certification Summary

Client: Oller Engineering
Project/Site: Abernathy Permit

Job ID: 820-10761-1

Laboratory: Eurofins Lubbock

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704219-23-30	03-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9223B		Water	Coliform, Total

Laboratory: Eurofins Houston

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-23-53	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
29B SAR		Water	Calcium
29B SAR		Water	Magnesium
29B SAR		Water	Potassium
29B SAR		Water	Sodium
29B SAR		Water	Sodium Adsorption Ratio
SM 4500 H+ B		Water	Temperature
Total Nitrogen		Water	Nitrogen, Total

Method Summary

Client: Oller Engineering
Project/Site: Abernathy Permit

Job ID: 820-10761-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET HOU
200.8	Metals (ICP/MS)	EPA	EET HOU
245.1	Mercury (CVAA)	EPA	EET HOU
29B SAR	Sodium Adsorption Ratio	LA	EET HOU
1664B	HEM and SGT-HEM	1664B	EET HOU
350.1	Nitrogen, Ammonia	EPA	EET HOU
351.2	Nitrogen, Total Kjeldahl	EPA	EET HOU
365.1	Phosphorus, Total	EPA	EET HOU
8000	COD	Hach	EET HOU
SM 2510B	Conductivity, Specific Conductance	SM	EET HOU
SM 2540D	Solids, Total Suspended (TSS)	SM	EET HOU
SM 4500 Cl G	Chlorine, Residual	SM	EET HOU
SM 4500 H+ B	pH	SM	EET HOU
SM 5210B	BOD, 5-Day	SM	EET HOU
SM 5310C	TOC	SM	EET HOU
SM5210B CBOD	Carbonaceous BOD, 5 Day	SM	EET HOU
Total Nitrogen	Nitrogen, Total	EPA	EET HOU
9223B	Coliforms, Total, and E.Coli (Colilert - Quanti Tray)	SM	EET LUB
200.8	Preparation, Total Recoverable Metals	EPA	EET HOU
245.1	Preparation, Mercury	EPA	EET HOU
351.2	Nitrogen, Total Kjeldahl	EPA	EET HOU
365.2/365.3/365	Phosphorus, Total	EPA	EET HOU
BOD Prep	Preparation, BOD	SM	EET HOU
Filtration	Sample Filtration	None	EET HOU

Protocol References:

1664B = EPA-821-98-002
EPA = US Environmental Protection Agency
Hach = Hach Company
LA = Statewide Order No. 29-B, State Of Louisianna
None = None
SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200
EET LUB = Eurofins Lubbock, 6701 Aberdeen Ave., Suite 8, Lubbock, TX 79424, TEL (806)794-1296

Sample Summary

Client: Oller Engineering
Project/Site: Abernathy Permit

Job ID: 820-10761-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
820-10761-1	Abernathy Permit	Water	11/02/23 15:00	11/02/23 16:10

Loc: 820
10761

rofins Environment Testing Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

820-10761 Chain of Custody

www.xenco.com Page _____

Project Manager:	Katy Allen	Bill to: (if different)	
Company Name:	Oller Engineering Inc	Company Name:	
Address:	2611 S Loop 289 #17	Address:	
City, State ZIP:	Lubbock, TX 79423	City, State ZIP:	
Phone:	(806) 793-6226	Email:	kaitlyn.allen@oei-eng.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Abernathy Permit
Project Number:	
Project Location:	Abernathy, TX
Sampler's Name:	Katy Allen
PO #:	

Turn Around: ☒ Routine ☐ Rush
Due Date:
TAT starts the day received by the lab, if received by 4:30pm

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:		1K-4
Cooler Custody Seals:	Yes No N/A	Correction Factor:		-0.1
Sample Custody Seals:	Yes No N/A	Temperature Reading:		1.4
Total Containers:	10	Corrected Temperature:		1.3

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2SO_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Parameters: BOD, Anions	COD, COD	TSS, TSS	TN, Phosphorus	FOG, Chlorine	PH, EC	SAR	E.Coli	Metals	TOC
Abernathy Permit		11/2/23	13:00													

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Paul Gonzalez		11/2/23 3:30pm	2		
3			4		
5			6		11/2/23 16:10

Revised Date: 08/25/2020 Rev. 2020.2

11/27/2023

Eurofins Lubbock
6701 Aberdeen Ave. Suite 8
Lubbock, TX 79424
Phone: 806-794-1296

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Taylor Holly	Carrier Tracking No(s):	COC No: 820-8338.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Holly.Taylor@et.eurofinsus.com	State of Origin: Texas	Page: Page 1 of 2
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 820-10761-1
Address: 4145 Greenbriar Dr	Due Date Requested: 11/9/2023			
City: Stafford	TAT Requested (days):			
State, Zip: TX, 77477				
Phone: 281-240-4200(Tel)	PO #:			
Email:	WO #:			
Project Name: Abernathy Permit	Project #: 82000800			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify)
Other:

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFMS/ (MOD) Custom List	300_ORGFM_28D/ (MOD) Custom List	HACH8000_NP	350.1/ Ammonia	2540D	Nitrogen,Total	365.1/365_Prep Total Phosphorus as P	1664B_NP/ HEM Only	4500_CL_G	2510B/ Specific Conductance	SM4500_H+/ pH and Temperature	29B_SAR_Calc/Filtration_ME	200.8/200.8_P_TR (MOD) Custom List	Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
Abernathy Permit (820-10761-1)	11/2/23	15:00 Central		Water			X	X	X	X	X	X	X	X	X	X	X	X	X	6	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I II III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: Jeremiah Baker	Date/Time: ~~11/3/2023 9:40~~	Company EX

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

HW369
1.3
13

Login Sample Receipt Checklist

Client: Oller Engineering

Job Number: 820-10761-1

Login Number: 10761
List Number: 1
Creator: Lee, Randell

List Source: Eurofins Lubbock

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Oller Engineering

Job Number: 820-10761-1

Login Number: 10761
List Number: 2
Creator: Baker, Jeremiah

List Source: Eurofins Houston
List Creation: 11/03/23 11:12 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received extra samples not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 05, 2023

Ms. Linda Riviello
Eurofins Lubbock
6701 Aberdeen Avenue, Suite 9
Lubbock, TX 79424-1501

Subject: Texas NELAP accreditation name change

Dear Ms. Riviello:

Based on the correction (name change) request submitted on August 30, 2023, I am enclosing an updated NELAP accreditation certificate and Fields of Accreditation listing. They replace the previous ones issued on April 01, 2023.

Please review the enclosures for accuracy and completeness. Your laboratory's accreditation is valid until the expiration date on the certificate and scope, contingent on continued compliance with the standards for accreditation and requirements of the state of Texas.

Please contact me at frank.jamison@tceq.texas.gov if I can provide any additional information or assistance.

Sincerely,

Frank Jamison
Data and Records Specialist

Enclosures

Texas Commission on Environmental Quality

NELAP-Recognized Laboratory Accreditation is hereby awarded to

Eurofins Lubbock

6701 Aberdeen Avenue
Lubbock, TX 79424-1501

in accordance with Texas Water Code Chapter 5, Subchapter R, Title 30 Texas Administrative Code Chapter 25, and the National Environmental Laboratory Accreditation Program.

The laboratory's scope of accreditation includes the fields of accreditation that accompany this certificate. Continued accreditation depends upon successful ongoing participation in the program. The Texas Commission on Environmental Quality urges customers to verify the laboratory's current location(s) and accreditation status for particular methods and analyses (www.tceq.texas.gov/goto/lab). Accreditation does not imply that a product, process, system or person is approved by the Texas Commission on Environmental Quality.

Erin E. Chancellor

Executive Director Texas Commission on Environmental Quality

Certificate Number: T104704219-23-30
Effective Date: 9/5/2023
Expiration Date: 3/31/2024

Texas Commission on Environmental Quality

NELAP - Recognized Laboratory Fields of Accreditation

Certificate: T104704219-23-30
Expiration Date: 3/31/2024
Issue Date: 9/5/2023

Eurofins Lubbock

6701 Aberdeen Avenue
Lubbock, TX 79424-1501

These fields of accreditation supercede all previous fields. The Texas Commission on Environmental Quality urges customers to verify the laboratory's current accreditation status for particular methods and analyses.

Matrix: ***Drinking Water***

Method SM 9223-IDEXX Laboratories
Colilert®-18 Quanti-Tray Test

Analyte	AB	Analyte ID	Method ID
Escherichia coli (enumeration)	TX	2525	20211603

Method SM 9223-IDEXX Laboratories
Colisure® Test

Analyte	AB	Analyte ID	Method ID
Total coliforms and E. coli (P/A)	TX	2502	20231805

Texas Commission on Environmental Quality

NELAP - Recognized Laboratory Fields of Accreditation

Certificate: T104704219-23-30
Expiration Date: 3/31/2024
Issue Date: 9/5/2023

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These fields of accreditation supercede all previous fields. The Texas Commission on Environmental Quality urges customers to verify the laboratory's current accreditation status for particular methods and analyses.

Matrix: ***Non-Potable Water***

Method IDEXX Laboratories Colilert®-18

Analyte	AB	Analyte ID	Method ID
Escherichia coli (enumeration)	TX	2525	20212800

ATTACHMENT D

Land Application Site

&

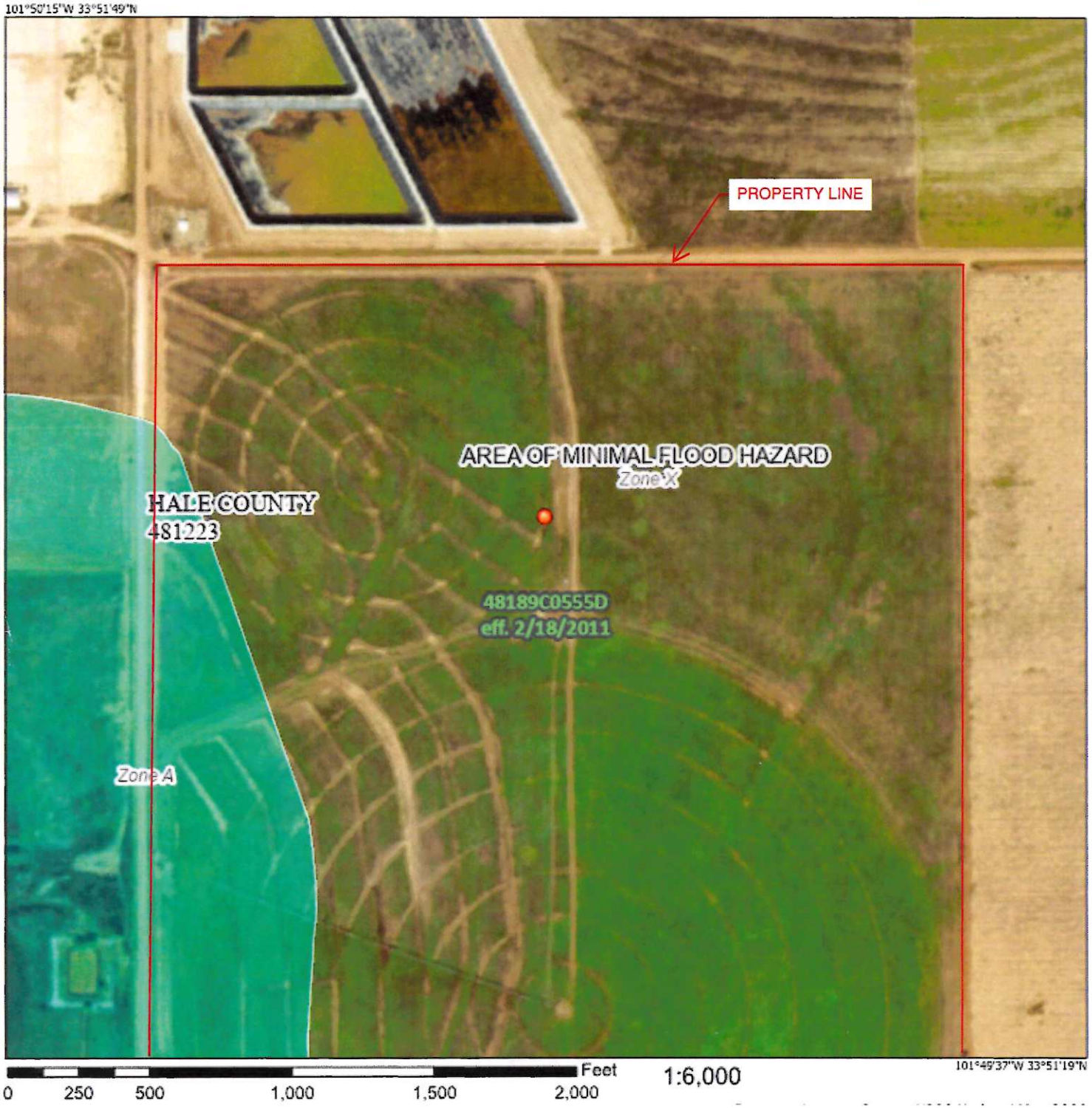
Storage and Evaporation Lagoons/Ponds

ATTACHMENT E

FEMA Flood Maps of Irrigated Areas

National Flood Hazard Layer FIRMette

FEMA



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYO

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE,
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard,
- of 1% annual chance flood with aver
- depth less than one foot or with drai
- areas of less than one square mile
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due t Levee. See Notes. Zone X
- Area with Flood Risk due to Levee Zo

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard Zone
- Effective LOMRs
- Area of Undetermined Flood Hazard

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Char
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approxi point selected by the user and does not rep an authoritative property location.

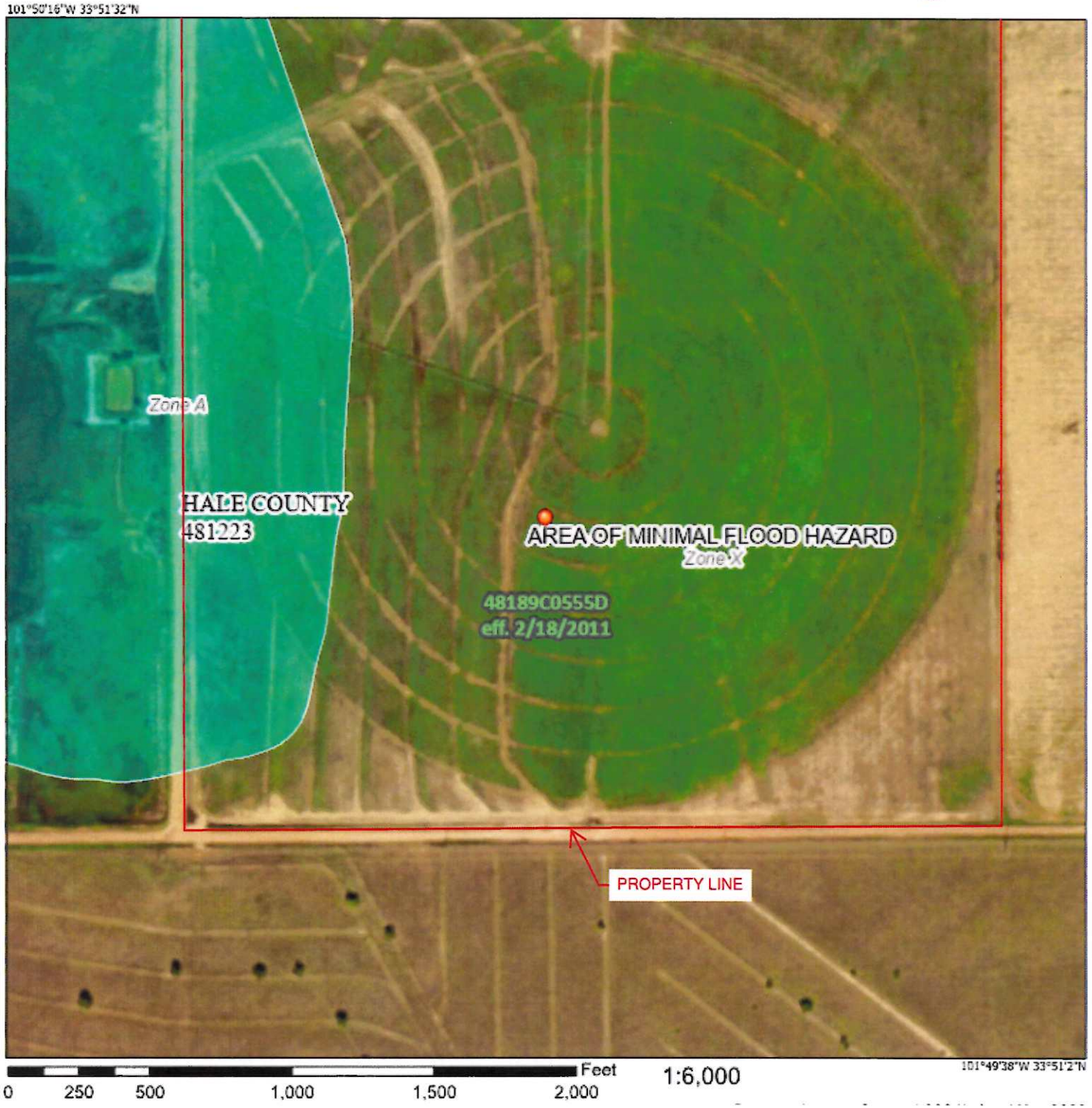
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/28/2024 at 3:07 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following ma elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMette

FEMA



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYO

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE,
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, of 1% annual chance flood with aver depth less than one foot or with drai areas of less than one square mile
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due t Levee. See Notes. Zone X
- Area with Flood Risk due to Levee Zo

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard Zone
- Effective LOMRs
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MAP PANELS
- Digital Data Available
- No Digital Data Available
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This map image is void if the one or more of the following ma elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

ATTACHMENT F

Annual Cropping Plan

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Mike Cypert
City of Abernathy
PO BOX 310
Abernathy, Texas 79311

Generated 2/7/2023 2:58:09 PM

JOB DESCRIPTION

Soil Samples

JOB NUMBER

820-7194-1

Eurofins Lubbock
6701 Aberdeen Ave.
Suite 8
Lubbock TX 79424

See page two for job notes and contact information.

my EOL

Eurofins Lubbock

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

Generated
2/7/2023 2:58:09 PM

Authorized for release by
John Builes, Project Manager
John.Builes@et.eurofinsus.com
(561)558-4549

Eurofins Lubbock

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD,and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Coliform MCLs

· Based on the EPA primary drinking water standard MCL for total coliforms, a water supply is considered bacteriologically "SAFE" if no coliform bacteria are detected. To be considered "SAFE" your report should indicate "<1 cfu/100mL" or "NEG" for the coliform test. If you report indicates a positive result "POS" or a value greater than or equal to one, then your supply is "UNSAFE FOR DRINKING" contact your local health department.

Warranties, Terms, and Conditions

· Analyses for Field Parameters are performed by Eurofins Philadelphia field staff. Locations and certifications are identified on the Chain of Custody as follows:

ERF = field staff performs tests under NJ State certification #02015
VL = field staff performs tests under NJ State certification #06005
WG = field staff performs tests under NJ State certification #PA001
H = field staff performs tests under NJ NELAP certification #PA093, PA NELAP certification # 46-05499

· Test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.

· The report shall not be reproduced, except in full, without the written consent of the laboratory

· All samples are collected as "grab" samples unless otherwise identified.

· Reported results related only to the samples as tested. Eurofins Philadelphia is not responsible for sample integrity unless sampling has been performed by a member of our staff.

· Eurofins Philadelphia is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance.

· Eurofins' online data portal "TotalAccess" will provide you with real-time access to collection dates and testing results. Please contact Client Services for further information.

· The following personnel or their deputies have approved the results of the tests performed by Eurofins Philadelphia : Nicki Smith (Environmental Chemistry) and Jacqueline Gartner (Water Microbiology).

Table of Contents

Definitions/Glossary

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Qualifiers

Metals

Qualifier	Qualifier Description
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Job ID: 820-7194-1

Laboratory: Eurofins Lubbock

Narrative

Job Narrative
820-7194-1

Receipt
The samples were received on 1/23/2023 1:35 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 13.5°C

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
Method 351.2: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 860-88641 and 860-88642 and analytical batch 860-89085 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria.

Method 353.2: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 860-88625 and 860-88626 and analytical batch 860-88633 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Client Sample ID: A-1

Lab Sample ID: 820-7194-1

Date Collected: 01/18/23 10:30
Date Received: 01/23/23 13:35

Matrix: Solid

Method: LA 29B SAR - Sodium Adsorption Ratio - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Na	76.6		0.500		mg/L		01/30/23 13:41	01/30/23 21:53	1
Ca	49.6		0.200		mg/L		01/30/23 13:41	01/30/23 21:53	1
Mg	20.0		0.400		mg/L		01/30/23 13:41	01/30/23 21:53	1
Sodium Adsorption Ratio	2.32		0.100		NONE		01/30/23 13:41	01/31/23 10:33	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1780		98.5		mg/Kg		01/28/23 13:31	01/31/23 14:22	50
Magnesium	608		1.97		mg/Kg		01/28/23 13:31	01/31/23 14:08	1
Phosphorus	116		19.7		mg/Kg		01/28/23 13:31	01/31/23 14:22	50
Potassium	671		4.93		mg/Kg		01/28/23 13:31	01/31/23 14:08	1
Sodium	223		4.93		mg/Kg		01/28/23 13:31	01/31/23 14:08	1
Sulfur	21.1		0.985		mg/Kg		01/28/23 13:31	01/31/23 14:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (LA 29B_EC)	1020		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Electrical Conductivity (LA 29B_EC)	1020		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Nitrogen, Kjeldahl (EPA 351.2)	1520		145		mg/Kg		02/02/23 20:05	02/06/23 18:06	20
Nitrate Nitrite as N (EPA 353.2)	19.4	F1 ^2	1.00		mg/Kg		02/02/23 14:31	02/02/23 16:53	1
Nitrite as N (EPA 353.2)	<1.00	U	1.00		mg/Kg		02/02/23 14:31	02/02/23 19:57	1
pH (SW846 9045D)	8.1	HF			SU			02/07/23 13:43	1
Temperature (SW846 9045D)	20.7	HF			Deg C			02/07/23 13:43	1
Corrosivity (SW846 9045D)	8.1	HF			SU			02/07/23 13:43	1
Nitrate as N (SM Nitrate by calc)	19.4		1.00		mg/Kg			02/02/23 17:11	1
Nitrogen, Total (EPA Total Nitrogen)	1540		0.200		mg/Kg			02/02/23 17:13	1

Client Sample ID: A-2

Lab Sample ID: 820-7194-2

Date Collected: 01/18/23 10:45
Date Received: 01/23/23 13:35

Matrix: Solid

Method: LA 29B SAR - Sodium Adsorption Ratio - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Na	61.3		0.500		mg/L		01/30/23 13:41	01/30/23 21:55	1
Ca	25.6		0.200		mg/L		01/30/23 13:41	01/30/23 21:55	1
Mg	8.02		0.400		mg/L		01/30/23 13:41	01/30/23 21:55	1
Sodium Adsorption Ratio	2.71		0.100		NONE		01/30/23 13:41	01/31/23 10:33	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1550		98.0		mg/Kg		01/28/23 13:31	01/31/23 14:25	50
Magnesium	461		1.96		mg/Kg		01/28/23 13:31	01/31/23 14:11	1
Phosphorus	17.7	^1+	0.392		mg/Kg		01/28/23 13:31	01/31/23 14:11	1
Potassium	394		4.90		mg/Kg		01/28/23 13:31	01/31/23 14:11	1
Sodium	215		4.90		mg/Kg		01/28/23 13:31	01/31/23 14:11	1
Sulfur	13.4		0.980		mg/Kg		01/28/23 13:31	01/31/23 14:11	1

Client Sample ID: A-2

Lab Sample ID: 820-7194-2

Date Collected: 01/18/23 10:45
Matrix: Solid
Date Received: 01/23/23 13:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (LA 29B_EC)	613		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Electrical Conductivity (LA 29B_EC)	613		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Nitrogen, Kjeldahl (EPA 351.2)	515		145		mg/Kg		02/02/23 20:05	02/06/23 18:10	20
Nitrate Nitrite as N (EPA 353.2)	10.2	^2	1.00		mg/Kg		02/02/23 14:31	02/02/23 16:58	1
Nitrite as N (EPA 353.2)	<1.00	U	1.00		mg/Kg		02/02/23 14:31	02/02/23 20:00	1
pH (SW846 9045D)	8.6	HF			SU			02/07/23 13:43	1
Temperature (SW846 9045D)	20.6	HF			Deg. C			02/07/23 13:43	1
Corrosivity (SW846 9045D)	8.6	HF			SU			02/07/23 13:43	1
Nitrate as N (SM Nitrate by calc)	10.2		1.00		mg/Kg			02/02/23 17:11	1
Nitrogen, Total (EPA Total Nitrogen)	525		0.200		mg/Kg			02/02/23 17:13	1

Client Sample ID: A-3

Lab Sample ID: 820-7194-3

Date Collected: 01/18/23 11:00
Matrix: Solid
Date Received: 01/23/23 13:35

Method: LA 29B SAR - Sodium Adsorption Ratio - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Na	81.6		0.500		mg/L		01/30/23 13:41	01/30/23 21:58	1
Ca	26.6		0.200		mg/L		01/30/23 13:41	01/30/23 21:58	1
Mg	6.89		0.400		mg/L		01/30/23 13:41	01/30/23 21:58	1
Sodium Adsorption Ratio	3.65		0.100		NONE		01/30/23 13:41	01/31/23 10:33	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1950		97.6		mg/Kg		01/28/23 13:31	01/31/23 14:28	50
Magnesium	531		1.95		mg/Kg		01/28/23 13:31	01/31/23 14:14	1
Phosphorus	10.6	^1+	0.390		mg/Kg		01/28/23 13:31	01/31/23 14:14	1
Potassium	464		4.88		mg/Kg		01/28/23 13:31	01/31/23 14:14	1
Sodium	300		4.88		mg/Kg		01/28/23 13:31	01/31/23 14:14	1
Sulfur	19.8		0.976		mg/Kg		01/28/23 13:31	01/31/23 14:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (LA 29B_EC)	701		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Electrical Conductivity (LA 29B_EC)	701		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Nitrogen, Kjeldahl (EPA 351.2)	537		145		mg/Kg		02/02/23 20:05	02/06/23 18:12	20
Nitrate Nitrite as N (EPA 353.2)	12.8	^2	1.00		mg/Kg		02/02/23 14:31	02/02/23 17:00	1
Nitrite as N (EPA 353.2)	<1.00	U	1.00		mg/Kg		02/02/23 14:31	02/02/23 20:01	1
pH (SW846 9045D)	8.7	HF			SU			02/07/23 13:43	1
Temperature (SW846 9045D)	20.6	HF			Deg. C			02/07/23 13:43	1
Corrosivity (SW846 9045D)	8.7	HF			SU			02/07/23 13:43	1
Nitrate as N (SM Nitrate by calc)	12.8		1.00		mg/Kg			02/02/23 17:11	1
Nitrogen, Total (EPA Total Nitrogen)	550		0.200		mg/Kg			02/02/23 17:13	1

Client Sample Results

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Client Sample ID: B-1

Lab Sample ID: 820-7194-4

Date Collected: 01/18/23 11:10
Matrix: Solid
Date Received: 01/23/23 13:35

Method: LA 29B SAR - Sodium Adsorption Ratio - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Na	74.0		0.500		mg/L		01/30/23 13:41	01/30/23 22:01	1
Ca	47.3		0.200		mg/L		01/30/23 13:41	01/30/23 22:01	1
Mg	19.7		0.400		mg/L		01/30/23 13:41	01/30/23 22:01	1
Sodium Adsorption Ratio	2.28		0.100		NONE		01/30/23 13:41	01/31/23 10:33	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1830		99.0		mg/Kg		01/28/23 13:31	01/31/23 14:31	50
Magnesium	648		1.98		mg/Kg		01/28/23 13:31	01/31/23 14:17	1
Phosphorus	165		19.8		mg/Kg		01/28/23 13:31	01/31/23 14:31	50
Potassium	749		4.95		mg/Kg		01/28/23 13:31	01/31/23 14:17	1
Sodium	226		4.95		mg/Kg		01/28/23 13:31	01/31/23 14:17	1
Sulfur	27.5		0.990		mg/Kg		01/28/23 13:31	01/31/23 14:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (LA 29B_EC)	1170		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Electrical Conductivity (LA 29B_EC)	1170		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Nitrogen, Kjeldahl (EPA 351.2)	1160		167		mg/Kg		02/02/23 20:05	02/06/23 18:13	20
Nitrate Nitrite as N (EPA 353.2)	30.8	^2	1.00		mg/Kg		02/02/23 14:31	02/02/23 17:02	1
Nitrite as N (EPA 353.2)	<1.00	U	1.00		mg/Kg		02/02/23 14:31	02/02/23 20:01	1
pH (SW846 9045D)	8.4	HF			SU			02/07/23 13:43	1
Temperature (SW846 9045D)	20.7	HF			Deg. C			02/07/23 13:43	1
Corrosivity (SW846 9045D)	8.4	HF			SU			02/07/23 13:43	1
Nitrate as N (SM Nitrate by calc)	30.8		1.00		mg/Kg			02/02/23 17:11	1
Nitrogen, Total (EPA Total Nitrogen)	1190		0.200		mg/Kg			02/02/23 17:13	1

Client Sample ID: B-2

Lab Sample ID: 820-7194-5

Date Collected: 01/18/23 11:15
Matrix: Solid
Date Received: 01/23/23 13:35

Method: LA 29B SAR - Sodium Adsorption Ratio - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Na	108		0.500		mg/L		01/30/23 13:41	01/30/23 22:23	1
Ca	18.0		0.200		mg/L		01/30/23 13:41	01/30/23 22:23	1
Mg	8.70		0.400		mg/L		01/30/23 13:41	01/30/23 22:23	1
Sodium Adsorption Ratio	5.23		0.100		NONE		01/30/23 13:41	01/31/23 10:33	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1250		99.0		mg/Kg		01/28/23 13:31	01/31/23 14:53	50
Magnesium	396		1.98		mg/Kg		01/28/23 13:31	01/31/23 14:39	1
Phosphorus	88.1		19.8		mg/Kg		01/28/23 13:31	01/31/23 14:53	50
Potassium	440		4.95		mg/Kg		01/28/23 13:31	01/31/23 14:39	1
Sodium	211		4.95		mg/Kg		01/28/23 13:31	01/31/23 14:39	1
Sulfur	16.6		0.990		mg/Kg		01/28/23 13:31	01/31/23 14:39	1

Client Sample ID: B-2

Lab Sample ID: 820-7194-5

Date Collected: 01/18/23 11:15
Date Received: 01/23/23 13:35

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (LA 29B_EC)	580		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Electrical Conductivity (LA 29B_EC)	580		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Nitrogen, Kjeldahl (EPA 351.2)	489		163		mg/Kg		02/02/23 20:05	02/06/23 18:15	20
Nitrate Nitrite as N (EPA 353.2)	17.3	^2	1.00		mg/Kg		02/02/23 14:31	02/02/23 17:03	1
Nitrite as N (EPA 353.2)	<1.00	U	1.00		mg/Kg		02/02/23 14:31	02/02/23 20:02	1
pH (SW846 9045D)	8.8	HF			SU			02/07/23 13:43	1
Temperature (SW846 9045D)	20.7	HF			Deg. C			02/07/23 13:43	1
Corrosivity (SW846 9045D)	8.8	HF			SU			02/07/23 13:43	1
Nitrate as N (SM Nitrate by calc)	17.3		1.00		mg/Kg			02/02/23 17:11	1
Nitrogen, Total (EPA Total Nitrogen)	506		0.200		mg/Kg			02/02/23 17:13	1

Client Sample ID: B-3

Lab Sample ID: 820-7194-6

Date Collected: 01/18/23 11:30
Date Received: 01/23/23 13:35

Matrix: Solid

Method: LA 29B SAR - Sodium Adsorption Ratio - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Na	174		0.500		mg/L		01/30/23 13:41	01/30/23 22:26	1
Ca	52.8		0.200		mg/L		01/30/23 13:41	01/30/23 22:26	1
Mg	14.8		0.400		mg/L		01/30/23 13:41	01/30/23 22:26	1
Sodium Adsorption Ratio	5.45		0.100		NONE		01/30/23 13:41	01/31/23 10:33	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1780		97.6		mg/Kg		01/28/23 13:31	01/31/23 14:56	50
Magnesium	494		1.95		mg/Kg		01/28/23 13:31	01/31/23 14:42	1
Phosphorus	30.4	^1+	0.390		mg/Kg		01/28/23 13:31	01/31/23 14:42	1
Potassium	351		4.88		mg/Kg		01/28/23 13:31	01/31/23 14:42	1
Sodium	396		4.88		mg/Kg		01/28/23 13:31	01/31/23 14:42	1
Sulfur	41.2		0.976		mg/Kg		01/28/23 13:31	01/31/23 14:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (LA 29B_EC)	1260		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Electrical Conductivity (LA 29B_EC)	1260		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Nitrogen, Kjeldahl (EPA 351.2)	358		151		mg/Kg		02/02/23 20:05	02/06/23 18:19	20
Nitrate Nitrite as N (EPA 353.2)	28.0	^2	0.998		mg/Kg		02/02/23 14:31	02/02/23 17:08	1
Nitrite as N (EPA 353.2)	<0.998	U	0.998		mg/Kg		02/02/23 14:31	02/02/23 20:05	1
pH (SW846 9045D)	8.3	HF			SU			02/07/23 13:43	1
Temperature (SW846 9045D)	20.5	HF			Deg. C			02/07/23 13:43	1
Corrosivity (SW846 9045D)	8.3	HF			SU			02/07/23 13:43	1
Nitrate as N (SM Nitrate by calc)	28.0		1.00		mg/Kg			02/02/23 17:11	1
Nitrogen, Total (EPA Total Nitrogen)	386		0.200		mg/Kg			02/02/23 17:13	1

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Client Sample ID: C-1

Lab Sample ID: 820-7194-7

Date Collected: 01/18/23 01:00
Date Received: 01/23/23 13:35

Matrix: Solid

Method: LA 29B SAR - Sodium Adsorption Ratio - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Na	74.1		0.500		mg/L		01/30/23 13:41	01/30/23 22:29	1
Ca	39.8		0.200		mg/L		01/30/23 13:41	01/30/23 22:29	1
Mg	15.4		0.400		mg/L		01/30/23 13:41	01/30/23 22:29	1
Sodium Adsorption Ratio	2.53		0.100		NONE		01/30/23 13:41	01/31/23 10:33	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	2840		98.0		mg/Kg		01/28/23 13:31	01/31/23 14:58	50
Magnesium	661		1.96		mg/Kg		01/28/23 13:31	01/31/23 14:44	1
Phosphorus	114		19.6		mg/Kg		01/28/23 13:31	01/31/23 14:58	50
Potassium	704		4.90		mg/Kg		01/28/23 13:31	01/31/23 14:44	1
Sodium	215		4.90		mg/Kg		01/28/23 13:31	01/31/23 14:44	1
Sulfur	22.7		0.980		mg/Kg		01/28/23 13:31	01/31/23 14:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (LA 29B_EC)	925		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Electrical Conductivity (LA 29B_EC)	925		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Nitrogen, Kjeldahl (EPA 351.2)	930		145		mg/Kg		02/02/23 20:05	02/06/23 18:20	20
Nitrate Nitrite as N (EPA 353.2)	25.9	^2	1.01		mg/Kg		02/02/23 14:31	02/02/23 17:10	1
Nitrite as N (EPA 353.2)	<1.01	U	1.01		mg/Kg		02/02/23 14:31	02/02/23 20:06	1
pH (SW846 9045D)	8.5	HF			SU			02/07/23 13:43	1
Temperature (SW846 9045D)	20.6	HF			Deg. C			02/07/23 13:43	1
Corrosivity (SW846 9045D)	8.5	HF			SU			02/07/23 13:43	1
Nitrate as N (SM Nitrate by calc)	25.9		1.00		mg/Kg			02/02/23 17:11	1
Nitrogen, Total (EPA Total Nitrogen)	956		0.200		mg/Kg			02/02/23 17:13	1

Client Sample ID: C-2

Lab Sample ID: 820-7194-8

Date Collected: 01/18/23 01:20
Date Received: 01/23/23 13:35

Matrix: Solid

Method: LA 29B SAR - Sodium Adsorption Ratio - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Na	92.7		0.500		mg/L		01/30/23 13:41	01/30/23 22:32	1
Ca	25.6		0.200		mg/L		01/30/23 13:41	01/30/23 22:32	1
Mg	8.20		0.400		mg/L		01/30/23 13:41	01/30/23 22:32	1
Sodium Adsorption Ratio	4.08		0.100		NONE		01/30/23 13:41	01/31/23 10:33	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1980		97.6		mg/Kg		01/28/23 13:31	01/31/23 15:01	50
Magnesium	463		1.95		mg/Kg		01/28/23 13:31	01/31/23 14:47	1
Phosphorus	11.9	^1+	0.390		mg/Kg		01/28/23 13:31	01/31/23 14:47	1
Potassium	394		4.88		mg/Kg		01/28/23 13:31	01/31/23 14:47	1
Sodium	276		4.88		mg/Kg		01/28/23 13:31	01/31/23 14:47	1
Sulfur	16.7		0.976		mg/Kg		01/28/23 13:31	01/31/23 14:47	1

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Client Sample ID: C-2

Lab Sample ID: 820-7194-8

Date Collected: 01/18/23 01:20
Date Received: 01/23/23 13:35

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (LA 29B_EC)	660		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Electrical Conductivity (LA 29B_EC)	660		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Nitrogen, Kjeldahl (EPA 351.2)	471		160		mg/Kg		02/02/23 20:05	02/06/23 18:22	20
Nitrate Nitrite as N (EPA 353.2)	14.6	^2	1.00		mg/Kg		02/02/23 14:31	02/02/23 17:12	1
Nitrite as N (EPA 353.2)	<1.00	U	1.00		mg/Kg		02/02/23 14:31	02/02/23 20:07	1
pH (SW846 9045D)	8.9	HF			SU			02/07/23 13:43	1
Temperature (SW846 9045D)	20.6	HF			Deg. C			02/07/23 13:43	1
Corrosivity (SW846 9045D)	8.9	HF			SU			02/07/23 13:43	1
Nitrate as N (SM Nitrate by calc)	14.6		1.00		mg/Kg			02/02/23 17:11	1
Nitrogen, Total (EPA Total Nitrogen)	486		0.200		mg/Kg			02/02/23 17:13	1

Client Sample ID: C-3

Lab Sample ID: 820-7194-9

Date Collected: 01/18/23 11:35
Date Received: 01/23/23 13:35

Matrix: Solid

Method: LA 29B SAR - Sodium Adsorption Ratio - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Na	220		25.0		mg/L		01/30/23 13:41	01/30/23 22:49	50
Ca	85.0		10.0		mg/L		01/30/23 13:41	01/30/23 22:49	50
Mg	27.3		0.400		mg/L		01/30/23 13:41	01/30/23 22:35	1
Sodium Adsorption Ratio	5.30		0.100		NONE		01/30/23 13:41	01/31/23 10:33	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	2970		99.5		mg/Kg		01/28/23 13:31	01/31/23 15:04	50
Magnesium	602		1.99		mg/Kg		01/28/23 13:31	01/31/23 14:50	1
Phosphorus	11.2	^1+	0.398		mg/Kg		01/28/23 13:31	01/31/23 14:50	1
Potassium	272		4.98		mg/Kg		01/28/23 13:31	01/31/23 14:50	1
Sodium	478		4.98		mg/Kg		01/28/23 13:31	01/31/23 14:50	1
Sulfur	52.7		0.995		mg/Kg		01/28/23 13:31	01/31/23 14:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (LA 29B_EC)	1730		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Electrical Conductivity (LA 29B_EC)	1730		10.0		umho/cm		02/03/23 13:16	02/03/23 13:20	1
Nitrogen, Kjeldahl (EPA 351.2)	584		145		mg/Kg		02/02/23 20:05	02/06/23 18:23	20
Nitrate Nitrite as N (EPA 353.2)	67.2	^2	0.996		mg/Kg		02/02/23 14:31	02/02/23 17:13	1
Nitrite as N (EPA 353.2)	<0.996	U	0.996		mg/Kg		02/02/23 14:31	02/02/23 20:08	1
pH (SW846 9045D)	8.2	HF			SU			02/07/23 13:43	1
Temperature (SW846 9045D)	20.6	HF			Deg. C			02/07/23 13:43	1
Corrosivity (SW846 9045D)	8.2	HF			SU			02/07/23 13:43	1
Nitrate as N (SM Nitrate by calc)	67.2		1.00		mg/Kg			02/02/23 17:11	1
Nitrogen, Total (EPA Total Nitrogen)	651		0.200		mg/Kg			02/02/23 17:13	1

Method: 29B SAR - Sodium Adsorption Ratio

Lab Sample ID: MB 860-87973/1-A
Matrix: Solid
Analysis Batch: 88088

Client Sample ID: Method Blank
Prep Type: Soluble
Prep Batch: 87973

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Na	<0.500	U	0.500		mg/L		01/30/23 13:41	01/30/23 20:45	1
Ca	<0.200	U	0.200		mg/L		01/30/23 13:41	01/30/23 20:45	1
Mg	<0.400	U	0.400		mg/L		01/30/23 13:41	01/30/23 20:45	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 860-87834/1-A
Matrix: Solid
Analysis Batch: 88292

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 87834

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<2.00	U	2.00		mg/Kg		01/28/23 13:31	01/31/23 13:01	1
Magnesium	<2.00	U	2.00		mg/Kg		01/28/23 13:31	01/31/23 13:01	1
Phosphorus	<0.400	U	0.400		mg/Kg		01/28/23 13:31	01/31/23 13:01	1
Potassium	<5.00	U	5.00		mg/Kg		01/28/23 13:31	01/31/23 13:01	1
Sodium	<5.00	U	5.00		mg/Kg		01/28/23 13:31	01/31/23 13:01	1
Sulfur	<1.00	U	1.00		mg/Kg		01/28/23 13:31	01/31/23 13:01	1

Method: 29B_EC - Conductivity, Electrical

Lab Sample ID: 820-7194-1 DU
Matrix: Solid
Analysis Batch: 88761

Client Sample ID: A-1
Prep Type: Total/NA
Prep Batch: 88759

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	1020		1020		umho/cm		0.3	20
Electrical Conductivity	1020		1020		umho/cm		0.3	20

Lab Sample ID: MB 860-88761/2
Matrix: Solid
Analysis Batch: 88761

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<10.0	U	10.0		umho/cm			02/03/23 13:20	1
Electrical Conductivity	<10.0	U	10.0		umho/cm			02/03/23 13:20	1

Lab Sample ID: LCS 860-88761/3
Matrix: Solid
Analysis Batch: 88761

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	1410	1418		umho/cm		100	80 - 120
Electrical Conductivity	1410	1418		umho/cm		100	80 - 120

Lab Sample ID: LCSD 860-88761/4
Matrix: Solid
Analysis Batch: 88761

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Specific Conductance	1410	1420		umho/cm		100	80 - 120	0	20

Method: 29B_EC - Conductivity, Electrical (Continued)

Lab Sample ID: LCSD 860-88761/4
Matrix: Solid
Analysis Batch: 88761

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Electrical Conductivity	1410	1420		umho/cm		100	80 - 120	0	20

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 860-88642/4-A
Matrix: Solid
Analysis Batch: 89085

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 88642

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	<0.200	U	0.200		mg/Kg		02/02/23 20:05	02/06/23 18:02	1

Lab Sample ID: LCS 860-88642/6-A
Matrix: Solid
Analysis Batch: 89085

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 88642

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	2.00	1.978		mg/Kg		99	90 - 110

Lab Sample ID: LCSD 860-88642/7-A
Matrix: Solid
Analysis Batch: 89085

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 88642

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrogen, Kjeldahl	2.00	1.913		mg/Kg		96	90 - 110	3	20

Lab Sample ID: 820-7194-1 MS
Matrix: Solid
Analysis Batch: 89085

Client Sample ID: A-1
Prep Type: Total/NA
Prep Batch: 88642

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	1520		72.7	1527	4	mg/Kg		9	90 - 110

Lab Sample ID: 820-7194-1 MSD
Matrix: Solid
Analysis Batch: 89085

Client Sample ID: A-1
Prep Type: Total/NA
Prep Batch: 88642

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrogen, Kjeldahl	1520		72.7	1601	4	mg/Kg		111	90 - 110	5	20

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: 820-7194-1 MS
Matrix: Solid
Analysis Batch: 88720

Client Sample ID: A-1
Prep Type: Total/NA
Prep Batch: 88626

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrite as N	<1.00	U	5.00	5.177		mg/Kg		97	90 - 110

Method: 353.2 - Nitrogen, Nitrite (Continued)

Lab Sample ID: 820-7194-1 MSD — Client Sample ID: A-1
Matrix: Solid — Prep Type: Total/NA
Analysis Batch: 88720 — Prep Batch: 88626

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrite as N	<1.00	U	5.00	5.162		mg/Kg		96	90 - 110	0	20

Lab Sample ID: MB 860-88720/9 — Client Sample ID: Method Blank
Matrix: Solid — Prep Type: Total/NA
Analysis Batch: 88720

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	<0.100	U	0.100		mg/Kg			02/02/23 19:54	1

Lab Sample ID: LCS 860-88720/10 — Client Sample ID: Lab Control Sample
Matrix: Solid — Prep Type: Total/NA
Analysis Batch: 88720

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrite as N	0.500	0.4945		mg/Kg		99	90 - 110

Lab Sample ID: LCSD 860-88720/11 — Client Sample ID: Lab Control Sample Dup
Matrix: Solid — Prep Type: Total/NA
Analysis Batch: 88720

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrite as N	0.500	0.4948		mg/Kg		99	90 - 110	0	20

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: 820-7194-1 MS — Client Sample ID: A-1
Matrix: Solid — Prep Type: Total/NA
Analysis Batch: 88633 — Prep Batch: 88626

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	19.4	F1 ^2	10.0	25.82	F1	mg/Kg		64	90 - 110

Lab Sample ID: 820-7194-1 MSD — Client Sample ID: A-1
Matrix: Solid — Prep Type: Total/NA
Analysis Batch: 88633 — Prep Batch: 88626

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	19.4	F1 ^2	10.0	27.29	F1	mg/Kg		79	90 - 110	6	20

Lab Sample ID: MB 860-88633/9 — Client Sample ID: Method Blank
Matrix: Solid — Prep Type: Total/NA
Analysis Batch: 88633

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	<0.100	U	0.100		mg/Kg			02/02/23 16:48	1

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: LCS 860-88633/10
Matrix: Solid
Analysis Batch: 88633

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	1.00	0.9336		mg/Kg		93	90 - 110

Lab Sample ID: LCSD 860-88633/11
Matrix: Solid
Analysis Batch: 88633

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	1.00	0.9873		mg/Kg		99	90 - 110	6	20

Method: 9045D - pH

Lab Sample ID: 820-7194-1 DU
Matrix: Solid
Analysis Batch: 89145

Client Sample ID: A-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	8.1	HF	8.2		SU		0.2	20
Temperature	20.7	HF	20.7		Deg. C		0	25
Corrosivity	8.1	HF	8.2		SU		0.2	20

QC Association Summary

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Metals

Prep Batch: 87834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	MEHL Prep	
820-7194-2	A-2	Total/NA	Solid	MEHL Prep	
820-7194-3	A-3	Total/NA	Solid	MEHL Prep	
820-7194-4	B-1	Total/NA	Solid	MEHL Prep	
820-7194-5	B-2	Total/NA	Solid	MEHL Prep	
820-7194-6	B-3	Total/NA	Solid	MEHL Prep	
820-7194-7	C-1	Total/NA	Solid	MEHL Prep	
820-7194-8	C-2	Total/NA	Solid	MEHL Prep	
820-7194-9	C-3	Total/NA	Solid	MEHL Prep	
MB 860-87834/1-A	Method Blank	Total/NA	Solid	MEHL Prep	

Prep Batch: 87973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Soluble	Solid	29B	
820-7194-2	A-2	Soluble	Solid	29B	
820-7194-3	A-3	Soluble	Solid	29B	
820-7194-4	B-1	Soluble	Solid	29B	
820-7194-5	B-2	Soluble	Solid	29B	
820-7194-6	B-3	Soluble	Solid	29B	
820-7194-7	C-1	Soluble	Solid	29B	
820-7194-8	C-2	Soluble	Solid	29B	
820-7194-9	C-3	Soluble	Solid	29B	
MB 860-87973/1-A	Method Blank	Soluble	Solid	29B	

Analysis Batch: 88088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Soluble	Solid	29B SAR	87973
820-7194-2	A-2	Soluble	Solid	29B SAR	87973
820-7194-3	A-3	Soluble	Solid	29B SAR	87973
820-7194-4	B-1	Soluble	Solid	29B SAR	87973
820-7194-5	B-2	Soluble	Solid	29B SAR	87973
820-7194-6	B-3	Soluble	Solid	29B SAR	87973
820-7194-7	C-1	Soluble	Solid	29B SAR	87973
820-7194-8	C-2	Soluble	Solid	29B SAR	87973
820-7194-9	C-3	Soluble	Solid	29B SAR	87973
820-7194-9	C-3	Soluble	Solid	29B SAR	87973
MB 860-87973/1-A	Method Blank	Soluble	Solid	29B SAR	87973

Analysis Batch: 88115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Soluble	Solid	29B SAR	87973
820-7194-2	A-2	Soluble	Solid	29B SAR	87973
820-7194-3	A-3	Soluble	Solid	29B SAR	87973
820-7194-4	B-1	Soluble	Solid	29B SAR	87973
820-7194-5	B-2	Soluble	Solid	29B SAR	87973
820-7194-6	B-3	Soluble	Solid	29B SAR	87973
820-7194-7	C-1	Soluble	Solid	29B SAR	87973
820-7194-8	C-2	Soluble	Solid	29B SAR	87973
820-7194-9	C-3	Soluble	Solid	29B SAR	87973

QC Association Summary

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Metals

Analysis Batch: 88292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	6010C	87834
820-7194-1	A-1	Total/NA	Solid	6010C	87834
820-7194-2	A-2	Total/NA	Solid	6010C	87834
820-7194-2	A-2	Total/NA	Solid	6010C	87834
820-7194-3	A-3	Total/NA	Solid	6010C	87834
820-7194-3	A-3	Total/NA	Solid	6010C	87834
820-7194-4	B-1	Total/NA	Solid	6010C	87834
820-7194-4	B-1	Total/NA	Solid	6010C	87834
820-7194-5	B-2	Total/NA	Solid	6010C	87834
820-7194-5	B-2	Total/NA	Solid	6010C	87834
820-7194-6	B-3	Total/NA	Solid	6010C	87834
820-7194-6	B-3	Total/NA	Solid	6010C	87834
820-7194-7	C-1	Total/NA	Solid	6010C	87834
820-7194-7	C-1	Total/NA	Solid	6010C	87834
820-7194-8	C-2	Total/NA	Solid	6010C	87834
820-7194-8	C-2	Total/NA	Solid	6010C	87834
820-7194-9	C-3	Total/NA	Solid	6010C	87834
820-7194-9	C-3	Total/NA	Solid	6010C	87834
MB 860-87834/1-A	Method Blank	Total/NA	Solid	6010C	87834

General Chemistry

Analysis Batch: 88608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	Nitrate by calc	
820-7194-2	A-2	Total/NA	Solid	Nitrate by calc	
820-7194-3	A-3	Total/NA	Solid	Nitrate by calc	
820-7194-4	B-1	Total/NA	Solid	Nitrate by calc	
820-7194-5	B-2	Total/NA	Solid	Nitrate by calc	
820-7194-6	B-3	Total/NA	Solid	Nitrate by calc	
820-7194-7	C-1	Total/NA	Solid	Nitrate by calc	
820-7194-8	C-2	Total/NA	Solid	Nitrate by calc	
820-7194-9	C-3	Total/NA	Solid	Nitrate by calc	

Analysis Batch: 88611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	Total Nitrogen	
820-7194-2	A-2	Total/NA	Solid	Total Nitrogen	
820-7194-3	A-3	Total/NA	Solid	Total Nitrogen	
820-7194-4	B-1	Total/NA	Solid	Total Nitrogen	
820-7194-5	B-2	Total/NA	Solid	Total Nitrogen	
820-7194-6	B-3	Total/NA	Solid	Total Nitrogen	
820-7194-7	C-1	Total/NA	Solid	Total Nitrogen	
820-7194-8	C-2	Total/NA	Solid	Total Nitrogen	
820-7194-9	C-3	Total/NA	Solid	Total Nitrogen	

Leach Batch: 88625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	Dry and Grind	
820-7194-2	A-2	Total/NA	Solid	Dry and Grind	
820-7194-3	A-3	Total/NA	Solid	Dry and Grind	

General Chemistry (Continued)

Leach Batch: 88625 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-4	B-1	Total/NA	Solid	Dry and Grind	
820-7194-5	B-2	Total/NA	Solid	Dry and Grind	
820-7194-6	B-3	Total/NA	Solid	Dry and Grind	
820-7194-7	C-1	Total/NA	Solid	Dry and Grind	
820-7194-8	C-2	Total/NA	Solid	Dry and Grind	
820-7194-9	C-3	Total/NA	Solid	Dry and Grind	
820-7194-1 MS	A-1	Total/NA	Solid	Dry and Grind	
820-7194-1 MSD	A-1	Total/NA	Solid	Dry and Grind	

Prep Batch: 88626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	KCl Extract	88625
820-7194-2	A-2	Total/NA	Solid	KCl Extract	88625
820-7194-3	A-3	Total/NA	Solid	KCl Extract	88625
820-7194-4	B-1	Total/NA	Solid	KCl Extract	88625
820-7194-5	B-2	Total/NA	Solid	KCl Extract	88625
820-7194-6	B-3	Total/NA	Solid	KCl Extract	88625
820-7194-7	C-1	Total/NA	Solid	KCl Extract	88625
820-7194-8	C-2	Total/NA	Solid	KCl Extract	88625
820-7194-9	C-3	Total/NA	Solid	KCl Extract	88625
820-7194-1 MS	A-1	Total/NA	Solid	KCl Extract	88625
820-7194-1 MSD	A-1	Total/NA	Solid	KCl Extract	88625

Analysis Batch: 88633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	353.2	88626
820-7194-2	A-2	Total/NA	Solid	353.2	88626
820-7194-3	A-3	Total/NA	Solid	353.2	88626
820-7194-4	B-1	Total/NA	Solid	353.2	88626
820-7194-5	B-2	Total/NA	Solid	353.2	88626
820-7194-6	B-3	Total/NA	Solid	353.2	88626
820-7194-7	C-1	Total/NA	Solid	353.2	88626
820-7194-8	C-2	Total/NA	Solid	353.2	88626
820-7194-9	C-3	Total/NA	Solid	353.2	88626
MB 860-88633/9	Method Blank	Total/NA	Solid	353.2	
LCS 860-88633/10	Lab Control Sample	Total/NA	Solid	353.2	
LCSD 860-88633/11	Lab Control Sample Dup	Total/NA	Solid	353.2	
820-7194-1 MS	A-1	Total/NA	Solid	353.2	88626
820-7194-1 MSD	A-1	Total/NA	Solid	353.2	88626

Leach Batch: 88641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	Dry and Grind	
820-7194-2	A-2	Total/NA	Solid	Dry and Grind	
820-7194-3	A-3	Total/NA	Solid	Dry and Grind	
820-7194-4	B-1	Total/NA	Solid	Dry and Grind	
820-7194-5	B-2	Total/NA	Solid	Dry and Grind	
820-7194-6	B-3	Total/NA	Solid	Dry and Grind	
820-7194-7	C-1	Total/NA	Solid	Dry and Grind	
820-7194-8	C-2	Total/NA	Solid	Dry and Grind	
820-7194-9	C-3	Total/NA	Solid	Dry and Grind	

General Chemistry (Continued)

Leach Batch: 88641 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1 MS	A-1	Total/NA	Solid	Dry and Grind	
820-7194-1 MSD	A-1	Total/NA	Solid	Dry and Grind	

Prep Batch: 88642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	351.2	88641
820-7194-2	A-2	Total/NA	Solid	351.2	88641
820-7194-3	A-3	Total/NA	Solid	351.2	88641
820-7194-4	B-1	Total/NA	Solid	351.2	88641
820-7194-5	B-2	Total/NA	Solid	351.2	88641
820-7194-6	B-3	Total/NA	Solid	351.2	88641
820-7194-7	C-1	Total/NA	Solid	351.2	88641
820-7194-8	C-2	Total/NA	Solid	351.2	88641
820-7194-9	C-3	Total/NA	Solid	351.2	88641
MB 860-88642/4-A	Method Blank	Total/NA	Solid	351.2	
LCS 860-88642/6-A	Lab Control Sample	Total/NA	Solid	351.2	
LCSD 860-88642/7-A	Lab Control Sample Dup	Total/NA	Solid	351.2	
820-7194-1 MS	A-1	Total/NA	Solid	351.2	88641
820-7194-1 MSD	A-1	Total/NA	Solid	351.2	88641

Analysis Batch: 88720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	353.2	88626
820-7194-2	A-2	Total/NA	Solid	353.2	88626
820-7194-3	A-3	Total/NA	Solid	353.2	88626
820-7194-4	B-1	Total/NA	Solid	353.2	88626
820-7194-5	B-2	Total/NA	Solid	353.2	88626
820-7194-6	B-3	Total/NA	Solid	353.2	88626
820-7194-7	C-1	Total/NA	Solid	353.2	88626
820-7194-8	C-2	Total/NA	Solid	353.2	88626
820-7194-9	C-3	Total/NA	Solid	353.2	88626
MB 860-88720/9	Method Blank	Total/NA	Solid	353.2	
LCS 860-88720/10	Lab Control Sample	Total/NA	Solid	353.2	
LCSD 860-88720/11	Lab Control Sample Dup	Total/NA	Solid	353.2	
820-7194-1 MS	A-1	Total/NA	Solid	353.2	88626
820-7194-1 MSD	A-1	Total/NA	Solid	353.2	88626

Prep Batch: 88759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	29B	
820-7194-2	A-2	Total/NA	Solid	29B	
820-7194-3	A-3	Total/NA	Solid	29B	
820-7194-4	B-1	Total/NA	Solid	29B	
820-7194-5	B-2	Total/NA	Solid	29B	
820-7194-6	B-3	Total/NA	Solid	29B	
820-7194-7	C-1	Total/NA	Solid	29B	
820-7194-8	C-2	Total/NA	Solid	29B	
820-7194-9	C-3	Total/NA	Solid	29B	
820-7194-1 DU	A-1	Total/NA	Solid	29B	

QC Association Summary

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

General Chemistry

Prep Batch: 88760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	Sat Paste Ext	88759
820-7194-2	A-2	Total/NA	Solid	Sat Paste Ext	88759
820-7194-3	A-3	Total/NA	Solid	Sat Paste Ext	88759
820-7194-4	B-1	Total/NA	Solid	Sat Paste Ext	88759
820-7194-5	B-2	Total/NA	Solid	Sat Paste Ext	88759
820-7194-6	B-3	Total/NA	Solid	Sat Paste Ext	88759
820-7194-7	C-1	Total/NA	Solid	Sat Paste Ext	88759
820-7194-8	C-2	Total/NA	Solid	Sat Paste Ext	88759
820-7194-9	C-3	Total/NA	Solid	Sat Paste Ext	88759
820-7194-1 DU	A-1	Total/NA	Solid	Sat Paste Ext	88759

Analysis Batch: 88761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	29B_EC	88760
820-7194-2	A-2	Total/NA	Solid	29B_EC	88760
820-7194-3	A-3	Total/NA	Solid	29B_EC	88760
820-7194-4	B-1	Total/NA	Solid	29B_EC	88760
820-7194-5	B-2	Total/NA	Solid	29B_EC	88760
820-7194-6	B-3	Total/NA	Solid	29B_EC	88760
820-7194-7	C-1	Total/NA	Solid	29B_EC	88760
820-7194-8	C-2	Total/NA	Solid	29B_EC	88760
820-7194-9	C-3	Total/NA	Solid	29B_EC	88760
MB 860-88761/2	Method Blank	Total/NA	Solid	29B_EC	
LCS 860-88761/3	Lab Control Sample	Total/NA	Solid	29B_EC	
LCSD 860-88761/4	Lab Control Sample Dup	Total/NA	Solid	29B_EC	
820-7194-1 DU	A-1	Total/NA	Solid	29B_EC	88760

Analysis Batch: 89085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	351.2	88642
820-7194-2	A-2	Total/NA	Solid	351.2	88642
820-7194-3	A-3	Total/NA	Solid	351.2	88642
820-7194-4	B-1	Total/NA	Solid	351.2	88642
820-7194-5	B-2	Total/NA	Solid	351.2	88642
820-7194-6	B-3	Total/NA	Solid	351.2	88642
820-7194-7	C-1	Total/NA	Solid	351.2	88642
820-7194-8	C-2	Total/NA	Solid	351.2	88642
820-7194-9	C-3	Total/NA	Solid	351.2	88642
MB 860-88642/4-A	Method Blank	Total/NA	Solid	351.2	88642
LCS 860-88642/6-A	Lab Control Sample	Total/NA	Solid	351.2	88642
LCSD 860-88642/7-A	Lab Control Sample Dup	Total/NA	Solid	351.2	88642
820-7194-1 MS	A-1	Total/NA	Solid	351.2	88642
820-7194-1 MSD	A-1	Total/NA	Solid	351.2	88642

Leach Batch: 89140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	Dry and Grind	
820-7194-2	A-2	Total/NA	Solid	Dry and Grind	
820-7194-3	A-3	Total/NA	Solid	Dry and Grind	
820-7194-4	B-1	Total/NA	Solid	Dry and Grind	
820-7194-5	B-2	Total/NA	Solid	Dry and Grind	

General Chemistry (Continued)

Leach Batch: 89140 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-6	B-3	Total/NA	Solid	Dry and Grind	
820-7194-7	C-1	Total/NA	Solid	Dry and Grind	
820-7194-8	C-2	Total/NA	Solid	Dry and Grind	
820-7194-9	C-3	Total/NA	Solid	Dry and Grind	
820-7194-1 DU	A-1	Total/NA	Solid	Dry and Grind	

Leach Batch: 89142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	DI Leach	89140
820-7194-2	A-2	Total/NA	Solid	DI Leach	89140
820-7194-3	A-3	Total/NA	Solid	DI Leach	89140
820-7194-4	B-1	Total/NA	Solid	DI Leach	89140
820-7194-5	B-2	Total/NA	Solid	DI Leach	89140
820-7194-6	B-3	Total/NA	Solid	DI Leach	89140
820-7194-7	C-1	Total/NA	Solid	DI Leach	89140
820-7194-8	C-2	Total/NA	Solid	DI Leach	89140
820-7194-9	C-3	Total/NA	Solid	DI Leach	89140
820-7194-1 DU	A-1	Total/NA	Solid	DI Leach	89140

Analysis Batch: 89145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-7194-1	A-1	Total/NA	Solid	9045D	89142
820-7194-2	A-2	Total/NA	Solid	9045D	89142
820-7194-3	A-3	Total/NA	Solid	9045D	89142
820-7194-4	B-1	Total/NA	Solid	9045D	89142
820-7194-5	B-2	Total/NA	Solid	9045D	89142
820-7194-6	B-3	Total/NA	Solid	9045D	89142
820-7194-7	C-1	Total/NA	Solid	9045D	89142
820-7194-8	C-2	Total/NA	Solid	9045D	89142
820-7194-9	C-3	Total/NA	Solid	9045D	89142
820-7194-1 DU	A-1	Total/NA	Solid	9045D	89142

Lab Chronicle

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Client Sample ID: A-1

Lab Sample ID: 820-7194-1

Date Collected: 01/18/23 10:30
Matrix: Solid
Date Received: 01/23/23 13:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	29B			100.08 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88088	01/30/23 21:53	JDM	EET HOU
Soluble	Prep	29B			100.08 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88115	01/31/23 10:33	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.03 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		1			88292	01/31/23 14:08	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.03 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		50			88292	01/31/23 14:22	JDM	EET HOU
Total/NA	Prep	29B			100 g	100 mL	88759	02/03/23 13:16	TL	EET HOU
Total/NA	Prep	Sat Paste Ext			30 g	30 mL	88760	02/03/23 13:19	TL	EET HOU
Total/NA	Analysis	29B_EC		1			88761	02/03/23 13:20	TL	EET HOU
Total/NA	Leach	Dry and Grind			1.0 g	1.0 g	88641	02/01/23 14:32	CL	EET HOU
Total/NA	Prep	351.2			.550 g	20 mL	88642	02/02/23 20:05	CL	EET HOU
Total/NA	Analysis	351.2		20			89085	02/06/23 18:06	YVD	EET HOU
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			5 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88633	02/02/23 16:53	YVD	EET HOU
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			5 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88720	02/02/23 19:57	YVD	EET HOU
Total/NA	Leach	Dry and Grind			20 g	20 g	89140	02/06/23 15:00	TL	EET HOU
Total/NA	Leach	DI Leach			20 g	20 mL	89142	02/07/23 13:28	TL	EET HOU
Total/NA	Analysis	9045D		1	20 g	20 mL	89145	02/07/23 13:43	TL	EET HOU
Total/NA	Analysis	Nitrate by calc		1			88608	02/02/23 17:11	AA	EET HOU
Total/NA	Analysis	Total Nitrogen		1			88611	02/02/23 17:13	AA	EET HOU

Client Sample ID: A-2

Lab Sample ID: 820-7194-2

Date Collected: 01/18/23 10:45
Matrix: Solid
Date Received: 01/23/23 13:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	29B			100.16 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88088	01/30/23 21:55	JDM	EET HOU
Soluble	Prep	29B			100.16 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88115	01/31/23 10:33	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.04 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		1			88292	01/31/23 14:11	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.04 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		50			88292	01/31/23 14:25	JDM	EET HOU
Total/NA	Prep	29B			100 g	100 mL	88759	02/03/23 13:16	TL	EET HOU
Total/NA	Prep	Sat Paste Ext			30 g	30 mL	88760	02/03/23 13:19	TL	EET HOU
Total/NA	Analysis	29B_EC		1			88761	02/03/23 13:20	TL	EET HOU
Total/NA	Leach	Dry and Grind			1.0 g	1.0 g	88641	02/01/23 14:32	CL	EET HOU
Total/NA	Prep	351.2			.550 g	20 mL	88642	02/02/23 20:05	CL	EET HOU
Total/NA	Analysis	351.2		20			89085	02/06/23 18:10	YVD	EET HOU

Lab Chronicle

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Client Sample ID: A-2

Date Collected: 01/18/23 10:45
Date Received: 01/23/23 13:35

Lab Sample ID: 820-7194-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			4.98 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88633	02/02/23 16:58	YVD	EET HOU
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			4.98 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88720	02/02/23 20:00	YVD	EET HOU
Total/NA	Leach	Dry and Grind			20 g	20 g	89140	02/06/23 15:00	TL	EET HOU
Total/NA	Leach	DI Leach			20 g	20 mL	89142	02/07/23 13:28	TL	EET HOU
Total/NA	Analysis	9045D		1	20 g	20 mL	89145	02/07/23 13:43	TL	EET HOU
Total/NA	Analysis	Nitrate by calc		1			88608	02/02/23 17:11	AA	EET HOU
Total/NA	Analysis	Total Nitrogen		1			88611	02/02/23 17:13	AA	EET HOU

Client Sample ID: A-3

Date Collected: 01/18/23 11:00
Date Received: 01/23/23 13:35

Lab Sample ID: 820-7194-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	29B			100.08 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88088	01/30/23 21:58	JDM	EET HOU
Soluble	Prep	29B			100.08 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88115	01/31/23 10:33	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.05 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		1			88292	01/31/23 14:14	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.05 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		50			88292	01/31/23 14:28	JDM	EET HOU
Total/NA	Prep	29B			100 g	100 mL	88759	02/03/23 13:16	TL	EET HOU
Total/NA	Prep	Sat Paste Ext			30 g	30 mL	88760	02/03/23 13:19	TL	EET HOU
Total/NA	Analysis	29B_EC		1			88761	02/03/23 13:20	TL	EET HOU
Total/NA	Leach	Dry and Grind			1.0 g	1.0 g	88641	02/01/23 14:32	CL	EET HOU
Total/NA	Prep	351.2			.550 g	20 mL	88642	02/02/23 20:05	CL	EET HOU
Total/NA	Analysis	351.2		20			89085	02/06/23 18:12	YVD	EET HOU
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			4.99 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88633	02/02/23 17:00	YVD	EET HOU
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			4.99 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88720	02/02/23 20:01	YVD	EET HOU
Total/NA	Leach	Dry and Grind			20 g	20 g	89140	02/06/23 15:00	TL	EET HOU
Total/NA	Leach	DI Leach			20 g	20 mL	89142	02/07/23 13:28	TL	EET HOU
Total/NA	Analysis	9045D		1	20 g	20 mL	89145	02/07/23 13:43	TL	EET HOU
Total/NA	Analysis	Nitrate by calc		1			88608	02/02/23 17:11	AA	EET HOU
Total/NA	Analysis	Total Nitrogen		1			88611	02/02/23 17:13	AA	EET HOU

Lab Chronicle

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Client Sample ID: B-1

Lab Sample ID: 820-7194-4

Date Collected: 01/18/23 11:10

Matrix: Solid

Date Received: 01/23/23 13:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	29B			100.08 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88088	01/30/23 22:01	JDM	EET HOU
Soluble	Prep	29B			100.08 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88115	01/31/23 10:33	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.02 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		1			88292	01/31/23 14:17	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.02 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		50			88292	01/31/23 14:31	JDM	EET HOU
Total/NA	Prep	29B			100 g	100 mL	88759	02/03/23 13:16	TL	EET HOU
Total/NA	Prep	Sat Paste Ext			30 g	30 mL	88760	02/03/23 13:19	TL	EET HOU
Total/NA	Analysis	29B_EC		1			88761	02/03/23 13:20	TL	EET HOU
Total/NA	Leach	Dry and Grind			1.0 g	1.0 g	88641	02/01/23 14:32	CL	EET HOU
Total/NA	Prep	351.2			.480 g	20 mL	88642	02/02/23 20:05	CL	EET HOU
Total/NA	Analysis	351.2		20			89085	02/06/23 18:13	YVD	EET HOU
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			4.99 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88633	02/02/23 17:02	YVD	EET HOU
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			4.99 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88720	02/02/23 20:01	YVD	EET HOU
Total/NA	Leach	Dry and Grind			20 g	20 g	89140	02/06/23 15:00	TL	EET HOU
Total/NA	Leach	DI Leach			20 g	20 mL	89142	02/07/23 13:28	TL	EET HOU
Total/NA	Analysis	9045D		1	20 g	20 mL	89145	02/07/23 13:43	TL	EET HOU
Total/NA	Analysis	Nitrate by calc		1			88608	02/02/23 17:11	AA	EET HOU
Total/NA	Analysis	Total Nitrogen		1			88611	02/02/23 17:13	AA	EET HOU

Client Sample ID: B-2

Lab Sample ID: 820-7194-5

Date Collected: 01/18/23 11:15

Matrix: Solid

Date Received: 01/23/23 13:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	29B			100.21 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88088	01/30/23 22:23	JDM	EET HOU
Soluble	Prep	29B			100.21 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88115	01/31/23 10:33	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.02 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		1			88292	01/31/23 14:39	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.02 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		50			88292	01/31/23 14:53	JDM	EET HOU
Total/NA	Prep	29B			100 g	100 mL	88759	02/03/23 13:16	TL	EET HOU
Total/NA	Prep	Sat Paste Ext			30 g	30 mL	88760	02/03/23 13:19	TL	EET HOU
Total/NA	Analysis	29B_EC		1			88761	02/03/23 13:20	TL	EET HOU
Total/NA	Leach	Dry and Grind			1.0 g	1.0 g	88641	02/01/23 14:32	CL	EET HOU
Total/NA	Prep	351.2			.490 g	20 mL	88642	02/02/23 20:05	CL	EET HOU
Total/NA	Analysis	351.2		20			89085	02/06/23 18:15	YVD	EET HOU

Lab Chronicle

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Client Sample ID: B-2

Date Collected: 01/18/23 11:15
Date Received: 01/23/23 13:35

Lab Sample ID: 820-7194-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			4.98 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88633	02/02/23 17:03	YVD	EET HOU
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			4.98 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88720	02/02/23 20:02	YVD	EET HOU
Total/NA	Leach	Dry and Grind			20 g	20 g	89140	02/06/23 15:00	TL	EET HOU
Total/NA	Leach	DI Leach			20 g	20 mL	89142	02/07/23 13:28	TL	EET HOU
Total/NA	Analysis	9045D		1	20 g	20 mL	89145	02/07/23 13:43	TL	EET HOU
Total/NA	Analysis	Nitrate by calc		1			88608	02/02/23 17:11	AA	EET HOU
Total/NA	Analysis	Total Nitrogen		1			88611	02/02/23 17:13	AA	EET HOU

Client Sample ID: B-3

Date Collected: 01/18/23 11:30
Date Received: 01/23/23 13:35

Lab Sample ID: 820-7194-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	29B			100.16 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88088	01/30/23 22:26	JDM	EET HOU
Soluble	Prep	29B			100.16 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88115	01/31/23 10:33	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.05 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		1			88292	01/31/23 14:42	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.05 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		50			88292	01/31/23 14:56	JDM	EET HOU
Total/NA	Prep	29B			100 g	100 mL	88759	02/03/23 13:16	TL	EET HOU
Total/NA	Prep	Sat Paste Ext			30 g	30 mL	88760	02/03/23 13:19	TL	EET HOU
Total/NA	Analysis	29B_EC		1			88761	02/03/23 13:20	TL	EET HOU
Total/NA	Leach	Dry and Grind			1.0 g	1.0 g	88641	02/01/23 14:32	CL	EET HOU
Total/NA	Prep	351.2			530 g	20 mL	88642	02/02/23 20:05	CL	EET HOU
Total/NA	Analysis	351.2		20			89085	02/06/23 18:19	YVD	EET HOU
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			5.01 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88633	02/02/23 17:08	YVD	EET HOU
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			5.01 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88720	02/02/23 20:05	YVD	EET HOU
Total/NA	Leach	Dry and Grind			20 g	20 g	89140	02/06/23 15:00	TL	EET HOU
Total/NA	Leach	DI Leach			20 g	20 mL	89142	02/07/23 13:28	TL	EET HOU
Total/NA	Analysis	9045D		1	20 g	20 mL	89145	02/07/23 13:43	TL	EET HOU
Total/NA	Analysis	Nitrate by calc		1			88608	02/02/23 17:11	AA	EET HOU
Total/NA	Analysis	Total Nitrogen		1			88611	02/02/23 17:13	AA	EET HOU

Lab Chronicle

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Client Sample ID: C-1

Lab Sample ID: 820-7194-7

Date Collected: 01/18/23 01:00

Matrix: Solid

Date Received: 01/23/23 13:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	29B			100.05 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88088	01/30/23 22:29	JDM	EET HOU
Soluble	Prep	29B			100.05 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88115	01/31/23 10:33	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.04 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		1			88292	01/31/23 14:44	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.04 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		50			88292	01/31/23 14:58	JDM	EET HOU
Total/NA	Prep	29B			100 g	100 mL	88759	02/03/23 13:16	TL	EET HOU
Total/NA	Prep	Sat Paste Ext			30 g	30 mL	88760	02/03/23 13:19	TL	EET HOU
Total/NA	Analysis	29B_EC		1			88761	02/03/23 13:20	TL	EET HOU
Total/NA	Leach	Dry and Grind			1.0 g	1.0 g	88641	02/01/23 14:32	CL	EET HOU
Total/NA	Prep	351.2			.550 g	20 mL	88642	02/02/23 20:05	CL	EET HOU
Total/NA	Analysis	351.2		20			89085	02/06/23 18:20	YVD	EET HOU
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			4.97 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88633	02/02/23 17:10	YVD	EET HOU
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			4.97 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88720	02/02/23 20:06	YVD	EET HOU
Total/NA	Leach	Dry and Grind			20 g	20 g	89140	02/06/23 15:00	TL	EET HOU
Total/NA	Leach	DI Leach			20 g	20 mL	89142	02/07/23 13:28	TL	EET HOU
Total/NA	Analysis	9045D		1	20 g	20 mL	89145	02/07/23 13:43	TL	EET HOU
Total/NA	Analysis	Nitrate by calc		1			88608	02/02/23 17:11	AA	EET HOU
Total/NA	Analysis	Total Nitrogen		1			88611	02/02/23 17:13	AA	EET HOU

Client Sample ID: C-2

Lab Sample ID: 820-7194-8

Date Collected: 01/18/23 01:20

Matrix: Solid

Date Received: 01/23/23 13:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	29B			100.08 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88088	01/30/23 22:32	JDM	EET HOU
Soluble	Prep	29B			100.08 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88115	01/31/23 10:33	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.05 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		1			88292	01/31/23 14:47	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.05 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		50			88292	01/31/23 15:01	JDM	EET HOU
Total/NA	Prep	29B			100 g	100 mL	88759	02/03/23 13:16	TL	EET HOU
Total/NA	Prep	Sat Paste Ext			30 g	30 mL	88760	02/03/23 13:19	TL	EET HOU
Total/NA	Analysis	29B_EC		1			88761	02/03/23 13:20	TL	EET HOU
Total/NA	Leach	Dry and Grind			1.0 g	1.0 g	88641	02/01/23 14:32	CL	EET HOU
Total/NA	Prep	351.2			.500 g	20 mL	88642	02/02/23 20:05	CL	EET HOU
Total/NA	Analysis	351.2		20			89085	02/06/23 18:22	YVD	EET HOU

Lab Chronicle

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Client Sample ID: C-2

Lab Sample ID: 820-7194-8

Date Collected: 01/18/23 01:20

Matrix: Solid

Date Received: 01/23/23 13:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			4.99 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88633	02/02/23 17:12	YVD	EET HOU
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			4.99 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88720	02/02/23 20:07	YVD	EET HOU
Total/NA	Leach	Dry and Grind			20 g	20 g	89140	02/06/23 15:00	TL	EET HOU
Total/NA	Leach	DI Leach			20 g	20 mL	89142	02/07/23 13:28	TL	EET HOU
Total/NA	Analysis	9045D		1	20 g	20 mL	89145	02/07/23 13:43	TL	EET HOU
Total/NA	Analysis	Nitrate by calc		1			88608	02/02/23 17:11	AA	EET HOU
Total/NA	Analysis	Total Nitrogen		1			88611	02/02/23 17:13	AA	EET HOU

Client Sample ID: C-3

Lab Sample ID: 820-7194-9

Date Collected: 01/18/23 11:35

Matrix: Solid

Date Received: 01/23/23 13:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	29B			100.08 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88088	01/30/23 22:35	JDM	EET HOU
Soluble	Prep	29B			100.08 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		50			88088	01/30/23 22:49	JDM	EET HOU
Soluble	Prep	29B			100.08 g	100 mL	87973	01/30/23 13:41	PB	EET HOU
Soluble	Analysis	29B SAR		1			88115	01/31/23 10:33	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.01 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		1			88292	01/31/23 14:50	JDM	EET HOU
Total/NA	Prep	MEHL Prep			2.01 g	20 mL	87834	01/28/23 13:31	PB	EET HOU
Total/NA	Analysis	6010C		50			88292	01/31/23 15:04	JDM	EET HOU
Total/NA	Prep	29B			100 g	100 mL	88759	02/03/23 13:16	TL	EET HOU
Total/NA	Prep	Sat Paste Ext			30 g	30 mL	88760	02/03/23 13:19	TL	EET HOU
Total/NA	Analysis	29B_EC		1			88761	02/03/23 13:20	TL	EET HOU
Total/NA	Leach	Dry and Grind			1.0 g	1.0 g	88641	02/01/23 14:32	CL	EET HOU
Total/NA	Prep	351.2			550 g	20 mL	88642	02/02/23 20:05	CL	EET HOU
Total/NA	Analysis	351.2		20			89085	02/06/23 18:23	YVD	EET HOU
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			5.02 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88633	02/02/23 17:13	YVD	EET HOU
Total/NA	Leach	Dry and Grind			30 g	30 g	88625	02/01/23 12:27	YVD	EET HOU
Total/NA	Prep	KCl Extract			5.02 g	50 mL	88626	02/02/23 14:31	YVD	EET HOU
Total/NA	Analysis	353.2		1	10 mL	10 mL	88720	02/02/23 20:08	YVD	EET HOU
Total/NA	Leach	Dry and Grind			20 g	20 g	89140	02/06/23 15:00	TL	EET HOU
Total/NA	Leach	DI Leach			20 g	20 mL	89142	02/07/23 13:28	TL	EET HOU
Total/NA	Analysis	9045D		1	20 g	20 mL	89145	02/07/23 13:43	TL	EET HOU
Total/NA	Analysis	Nitrate by calc		1			88608	02/02/23 17:11	AA	EET HOU
Total/NA	Analysis	Total Nitrogen		1			88611	02/02/23 17:13	AA	EET HOU

Lab Chronicle

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Accreditation/Certification Summary

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Laboratory: Eurofins Houston

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-22-48	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
29B SAR	29B	Solid	Ca
29B SAR	29B	Solid	Mg
29B SAR	29B	Solid	Na
29B SAR	29B	Solid	Sodium Adsorption Ratio
29B_EC	29B	Solid	Electrical Conductivity
29B_EC	29B	Solid	Specific Conductance
351.2	351.2	Solid	Nitrogen, Kjeldahl
6010C	MEHL Prep	Solid	Sulfur
9045D		Solid	Corrosivity
9045D		Solid	Temperature
Nitrate by calc		Solid	Nitrate as N
Total Nitrogen		Solid	Nitrogen, Total

Method Summary

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Method	Method Description	Protocol	Laboratory
29B SAR	Sodium Adsorption Ratio	LA	EET HOU
6010C	Metals (ICP)	SW846	EET HOU
29B_EC	Conductivity, Electrical	LA	EET HOU
351.2	Nitrogen, Total Kjeldahl	EPA	EET HOU
353.2	Nitrogen, Nitrate-Nitrite	EPA	EET HOU
353.2	Nitrogen, Nitrite	EPA	EET HOU
9045D	pH	SW846	EET HOU
Nitrate by calc	Nitrogen, Nitrate-Nitrite	SM	EET HOU
Total Nitrogen	Nitrogen, Total	EPA	EET HOU
29B	Preparation, Dry, Grind and Sieve	LA	EET HOU
29B	Preparation, Sodium Absorption Ratio	LA	EET HOU
351.2	Nitrogen, Total Kjeldahl	EPA	EET HOU
DI Leach	Deionized Water Leaching Procedure	ASTM	EET HOU
Dry and Grind	Preparation, Dry and Grind	None	EET HOU
KCl Extract	Potassium chloride Extraction	EPA	EET HOU
KCL Extraction	Potassium chloride Extraction - Auto Complete	EPA	EET HOU
MEHL Prep	Preparation, MEHL	None	EET HOU
Sat Paste Ext	Saturated Paste Extraction	TAL SOP	EET HOU

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

LA = Statewide Order No. 29-B, State Of Louisianna

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: City of Abernathy
Project/Site: Soil Samples

Job ID: 820-7194-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
820-7194-1	A-1	Solid	01/18/23 10:30	01/23/23 13:35
820-7194-2	A-2	Solid	01/18/23 10:45	01/23/23 13:35
820-7194-3	A-3	Solid	01/18/23 11:00	01/23/23 13:35
820-7194-4	B-1	Solid	01/18/23 11:10	01/23/23 13:35
820-7194-5	B-2	Solid	01/18/23 11:15	01/23/23 13:35
820-7194-6	B-3	Solid	01/18/23 11:30	01/23/23 13:35
820-7194-7	C-1	Solid	01/18/23 01:00	01/23/23 13:35
820-7194-8	C-2	Solid	01/18/23 01:20	01/23/23 13:35
820-7194-9	C-3	Solid	01/18/23 11:35	01/23/23 13:35

Loc: 820
7194

eurofins | Environment Testing Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

820-7194 Chain of Custody

www.xenco.com Page ____ of ____

Project Manager:	Paul Gonzalez	Bill to: (if different)	P.O Box 310
Company Name:	City of Abernathy	Company Name:	City of Abernathy
Address:	811 Ave D	Address:	811 Ave D
City, State ZIP:	Abernathy Texas 79311	City, State ZIP:	Abernathy, Texas 79311
Phone:	806-298-2546	Email:	paul.Gonzalez@cityofAbernathy.org

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Soil samples	Turn Around	
Project Number:		☐ Routine	☐ Rush
Project Location:	Sewer Farm	Due Date:	
Sampler's Name:	Paul Gonzalez	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	Yes (No)
Samples Received Intact:	(Yes) No	Thermometer ID:	IR-4
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	13.6
Total Containers:	9	Corrected Temperature:	13.5

ANALYSIS REQUEST (Pres. Code / Parameters)

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Analysis				
A-1		1/18/23	10:30 AM	[illegible]-6			✓	✓	✓	✓	✓
A-2		1/18/23	10:45 AM	6-[illegible]			✓	✓	✓	✓	✓
[illegible]		1/18/23	11:00 AM	[illegible]-30			✓	✓	✓	✓	✓
[illegible]-1		1/18/23	11:[illegible] AM	0-6			✓	✓	✓	✓	✓
[illegible]		1/18/23	11:15 AM	6-18			✓	✓	✓	✓	✓
[illegible]		1/18/23	11:30 AM	[illegible]			✓	✓	✓	✓	✓
[illegible]		1/18/23	11:00 AM	[illegible]			✓	✓	✓	✓	✓
[illegible]		1/18/23	11:20 AM	[illegible]			✓	✓	✓	✓	✓
[illegible]		1/18/23	11:35 AM	[illegible]			✓	✓	✓	✓	✓

Preservative Codes

None: NO	DI Water: H_2O
Cool: Cool	MeOH: Me
HCL: HC	HNO_3: HN
H_2SO_4: H_2	NaOH: Na
H_3PO_4: HP	
$NaHSO_4$: NABIS	
$Na_2S_2O_3$: $NaSO_3$	
Zn Acetate+NaOH: Zn	
NaOH+Ascorbic Acid: SAPC	

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Paul Gonzalez	[signature]	1/23/23 13:35	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Lubbock
6701 Aberdeen Ave. Suite 8
Lubbock, TX 79424
Phone: 806-794-1296

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Builes, John	Carrier Tracking No(s):	COC No: 820-5871 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: John.Builes@et.eurofinsus.com	State of Origin: Texas	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP Texas		Job #: 820-7194-1
Address: 4145 Greenbriar Dr	Due Date Requested: 2/1/2023			
City: Stafford	TAT Requested (days):			
State, Zip: TX, 77477				
Phone: 281-240-4200(Tel)	PO #:			
Email:	WO #:			
Project Name: Soil Samples	Project #: 82000267			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify), Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Perform MS/MSD (Yes or No)	29B_SAR_Calc/29B_SAR_P	6010C/MEHL_Prep (MOD) Custom List	351.2/Dry_Grind Total Kjeldahl Nitrogen (TKN)	353.2/Dry_Grind	353.2_Nitrite/Dry_Grind	Nitrogen,Total	Nitrate_Calc/KCL_Ext_AC	9045D/Dry_Grind	29B_EC/29B_Prep_Solid	Special Instructions/Note:
A-1 (820-7194-1)	1/18/23	10:30 Central		Solid		X	X	X	X	X	X	X	X	X	2:1 (v/v) water to soil mixture
A-2 (820-7194-2)	1/18/23	10:45 Central		Solid		X	X	X	X	X	X	X	X	X	2:1 (v/v) water to soil mixture
A-3 (820-7194-3)	1/18/23	11 00 Central		Solid		X	X	X	X	X	X	X	X	X	2:1 (v/v) water to soil mixture
B-1 (820-7194-4)	1/18/23	11 10 Central		Solid		X	X	X	X	X	X	X	X	X	2:1 (v/v) water to soil mixture
B-2 (820-7194-5)	1/18/23	11 15 Central		Solid		X	X	X	X	X	X	X	X	X	2:1 (v/v) water to soil mixture
B-3 (820-7194-6)	1/18/23	11:30 Central		Solid		X	X	X	X	X	X	X	X	X	2:1 (v/v) water to soil mixture
C-1 (820-7194-7)	1/18/23	01:00 Central		Solid		X	X	X	X	X	X	X	X	X	2:1 (v/v) water to soil mixture
C-2 (820-7194-8)	1/18/23	01:20 Central		Solid		X	X	X	X	X	X	X	X	X	2:1 (v/v) water to soil mixture
C-3 (820-7194-9)	1/18/23	11.35 Central		Solid		X	X	X	X	X	X	X	X	X	2:1 (v/v) water to soil mixture

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.

Possible Hazard Identification Unconfirmed	**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)** ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I II III, IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: [signature]	Date/Time: 1/23/23 1700	Company	Received by: FedEx	Date/Time:	Company
Relinquished by: FedEX	Date/Time:	Company	Received by: [signature]	Date/Time: 1/24/23 10.06	Company: FEX
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks	Temp: IR ID:HOU-344 C/F +1.2 2 8 Corrected Temp: 4.0

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: City of Abernathy

Job Number: 820-7194-1

Login Number: 7194
List Number: 1
Creator: Ruggles, Ashley

List Source: Eurofins Lubbock

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: City of Abernathy

Job Number: 820-7194-1

Login Number: 7194
List Number: 2
Creator: Pena, Jesiel

List Source: Eurofins Houston
List Creation: 01/24/23 02:09 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Land application will include slow rate irrigation, distributed by a center pivot irrigation device, over a field of wheat. The wheat will be planted in November. The fields will be mechanically harvested with a maximum vegetative (stems mature and flower) height of between 6-inches and 2.5-feet. Supplemental irrigation is expected to be needed initially of 100-125 gpm from a local irrigation well owned by the landowner. Fertility recommendations for the wheat to be used at this site are 15 lbs/acre of Nitrogen for initial seeding. Once the crop has been established (after the first year), the Nitrogen requirements are met by a naturally occurring environment. However, Nitrogen loading from the wastewater effluent will help to supplement the nutrient needed by wheat and will only improve the crop's vitality over time.

Wheat is a relatively salt tolerant crop, and this site is not expected to develop salinity problems. A Soil Analysis completed before discharge begins serves to monitor any salinity changes over time. The existing soil/vegetation is being removed and the soil is being plowed/reworked to prepare for planting. The application land is not open to the public.

Plant Species
Cool: Wheat
Warm: Wheat

Acreage
180-Acres (Wheat 100%)
4
Crop Growing Season
January – December

Harvesting Method
Mechanical; estimated 4-6 harvests per year. Depending on the first year's seedling health, harvesting will occur approximately every 30 to 45 days after the first harvest, that will wait until the crop reaches a height of 2.5 feet.

Minimum/Maximum Harvesting Height
2- Inches/ 36- Inches

Crop Yield Goals
8-tons/acre

Soils Map
See Attachment O

Nitrogen Requirements
500 lbs/acre/year

Additional Fertilizer Requirements
N/A

Supplemental Watering Requirements
100-125 gpm during watering event; primarily due to pressure requirements for center pivot irrigation technique and dependent on first year crop yields

Salt Tolerance
8 mmhos/cm

TCEQ REQUIREMENTS

Submit an annual cropping plan that includes but is not limited to the following items:

a. *A soils map depicting the location of the crops proposed or currently being grown. These locations should be identified by field and crop on the soils map.*

b. *All types of crops and acreage irrigated for each crop, including warm and cool season crops.*

c. *Crop yield goals or estimates.*

d. *Growing seasons for each crop including months the field is left fallow (no crops).*

e. *Nutrient requirements for each crop, including additional fertilizer requirements for each crop, proposed additional fertilizer applications for each crop, and methods of fertilizer application for each crop, based on annual soil sampling and analysis.*

f. *Provide the minimum and maximum harvest height for the crop (e.g., mowing height of grasses).*

g. *Supplemental watering requirements for each crop.*

h. *Salt tolerances of each crop.*

i. *Describe the harvesting method and the proposed number of harvests for each crop.*

j. *If the proposed crop is existing native vegetation that will not be harvested, include a justification that the non-removal of crops will not lead to a buildup in nutrients. If the proposed system is drip irrigation with a proposal to use the existing forested vegetation as a crop, then provide a vegetation survey by a certified arborist describing at a minimum: (1) the number of mature ashe juniper (Juniperus ashei) and oaks (Quercus viginiana) trees per acre, (2) the number of other trees per acre, (3) percent of overstory canopy cover, (4) the extent of open spaces, and (5) areas with forbs and grasses expressed as percent of the land of each application site. A mature tree is one with a minimum height of 14 feet.*

a. Irrigation

Provide the information requested for the area under irrigation. Describe the application method and equipment, (e.g., row irrigation, spray irrigation using a center pivot sprinkler system). Estimate the irrigation efficiency.

Irrigation must be limited to prevent excessive nitrogen application. The annual liquid loading must not exceed that which would introduce more nitrogen than is annually required by the crop plus 20%

volatilization. Values for crop nitrogen requirements must be justified in the design report. The application rate must be calculated by the formula L = N/2.7C, where L is the annual liquid loading in acre-feet, C is the effluent nitrogen concentration in mg/L, and N is the annual crop requirement of nitrogen plus 20% volatilization in pounds per acre per year. The nitrogen loading rate will not be the limiting factor for most land disposal permits.

Provide a separate engineering report of water balance and storage volume calculations according to 30 TAC § 309.20. *Provide a nitrogen balance for the crop system.*

a. Cropping Plan Soils Map

The existing fields that are used for crop production are as follows:

1. Facility site approximately 60 acres
2. Land Adjoining approximately 120 acres.

These are shown on the associated map.

b. The predominate crop is Wheat with Native grasses opposite the growing period for wheat.

c. Crop Yield is estimated at 20-40 bushels per irrigated acre. This is based on a September to October planting time and planted at a rate of approximately 60 pounds per acre. Wheat is a cool season crop and therefore will grow best through the winter months and mid spring the heat will retard the wheat growth. Grasses such as Bermuda, Bahiagrass & Ryegrass are then grown through the summer months. At times Tall Fescue is used due to its drought tolerance.

d. The growing period for Wheat is October to approximately mid-May. Grasses from May to Early October.

e. The nutrient requirements for wheat are:
Nitrogen, Phosphates, magnesium, potassium and zinc. Additional fertilizers is sometimes required, NPK application 80:40;40 NPK kg/ha. This is typically applied as a blanket over the soil and tilled in prior to planting.

Grasses – Tall Fescue can utilize the nitrogen from the effluent and is supplemented when the grass begins to yellow. Bahiagrass, Bermuda & Ryegrass mix requires high nitrogen again gained from the effluent and potassium to stimulate the Ryegrass.

f. Average height for wheat harvest is approximately 18-20 inches depending the head pods per stem. Grasses cutting height is 10 18 inches depending on the grass mixture used.

g. Water can be achieved by monitoring the drought conditions and wilting point of the crop. More frequent watering events provides the required water requirements for both crops. I full cycle of the center pivot will distribute approximately 1-inch of water per run cycle. One application per week based on heat and at times 2-3 applications per week may be required.

h. Salt tolerance of each crop is wheat is moderately salt tolerant and the typical grasses of the region are likewise moderately to high salt tolerant.

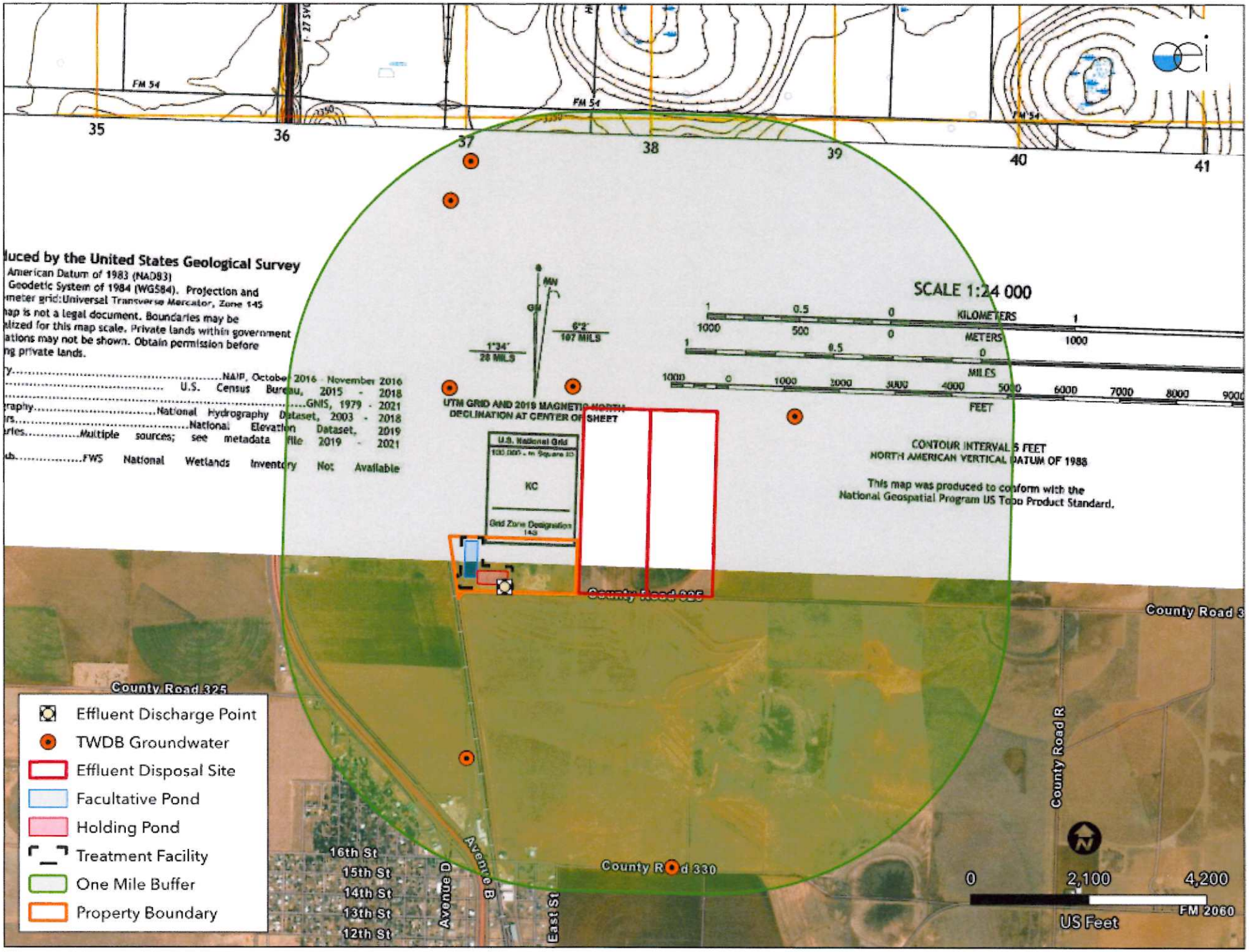
i. Harvesting method for wheat is by combining to capture the wheat head/grain and is done at the end of the growing season as temperatures start to warm to summer levels. This is done once per year typically. Grasses can have as many as 4-6 cuttings for bailing again dependent on the temperatures and drought conditions.

j. The proposed crops are harvested and have an annual rotation to help reduce any buildup of nutrients in the soil.

ATTACHMENT G

Wells and Map Information

US Topo
oei
235000mE
36
37
38
39
40
41
I- 27 SVC RD
I-27 ACC
CO RD 325
M-LINE RD
CO RD R
Abernathy Cem
16TH ST
15TH ST
14TH ST
13TH ST
12TH ST
11TH ST
10TH ST
AVE F
AVENUE E
AVE D
AVE C
AVE G
AVE J
JEROME ST
3350
Effluent Discharge Point
TWDB Groundwater
Effluent Disposal Site
Facultative Pond
Holding Pond
Treatment Facility
One Mile Buffer
Property Boundary
0
2,100
4,200
US Feet


FM 54
35
36
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41
luced by the United States Geological Survey
American Datum of 1983 (NAD83)
Geodetic System of 1984 (WGS84). Projection and
meter grid: Universal Transverse Mercator, Zone 14S
map is not a legal document. Boundaries may be
ilized for this map scale. Private lands within government
ations may not be shown. Obtain permission before
ng private lands.
y.....NAIP, October 2016 - November 2016
..... U.S. Census Bureau, 2015 - 2018
.....GNIS, 1979 - 2021
raphy.....National Hydrography Dataset, 2003 - 2018
rs.....National Elevation Dataset, 2019
rties.....Multiple sources; see metadata file 2019 - 2021
ub.....FWS National Wetlands Inventory Not Available
MN
GN
6°2'
107 MILS
1°34'
28 MILS
UTM GRID AND 2019 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET
U.S. National Grid
KC
Grid Zone Designation
14S
SCALE 1:24 000
KILOMETERS
METERS
MILES
FEET
CONTOUR INTERVAL 5 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988
This map was produced to conform with the
National Geospatial Program US Topo Product Standard.
County Road 325
County Road 330
County Road R
16th St
15th St
14th St
13th St
12th St
Avenue D
Avenue B
East St
Effluent Discharge Point
TWDB Groundwater
Effluent Disposal Site
Facultative Pond
Holding Pond
Treatment Facility
One Mile Buffer
Property Boundary
0
2,100
4,200
US Feet
FM 2060

State Well Number	Owner	Water Use	Elevation (ft)	Well Depth (ft)	Water Level Observation Type	Water Quality Available	Aquifer Code Name	Latitude (DD)	Longitude (DD)	County	Well Type
2310110 - Scanned Documents	Jerry Oswalt	Irrigation	3352	218	None	Y	121OGFA - Ogallala Formation, Fredericksburg Group and Antlers Sand	33.844167	-101.842222	Hale	Withdrawal of Water
2310205 - Scanned Documents	W.W.SHERRILL	Unused	3351	393	Miscellaneous Measurements	N	121OGLL - Ogallala Formation	33.861389	-101.823611	Hale	Withdrawal of Water
2310104 - Scanned Documents			3357		None	N	121OGFA - Ogallala Formation, Fredericksburg Group and Antlers Sand	33.862223	-101.843889	Hale	Withdrawal of Water
2310103 - Scanned Documents			3355		None	N	121OGFA - Ogallala Formation, Fredericksburg Group and Antlers Sand	33.871389	-101.844167	Hale	Withdrawal of Water
2310105 - Scanned Documents			3352		None	N	121OGFA - Ogallala Formation, Fredericksburg Group and Antlers Sand	33.862501	-101.836667	Hale	Withdrawal of Water
2310204 - Scanned Documents	MRS N.C. HIX	Irrigation	3348	225	Miscellaneous Measurements	N	218FGAS - Fredericksburg Group and Antlers Sand	33.839167	-101.83	Hale	Withdrawal of Water
2310107 - Scanned Documents	Bill Stanes	Industrial	3350	267	Miscellaneous Measurements	Y	121OGFA - Ogallala Formation, Fredericksburg Group and Antlers Sand	33.873333	-101.843056	Hale	Withdrawal of Water

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-103

groundwater

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	2310103	**Well Type**	Withdrawal of Water
County	Hale	**Well Use**	
River Basin	Brazos	**Water Level Observation**	None
Groundwater Management Area	2	**Water Quality Available**	No
Regional Water Planning Area	O - Llano Estacado	**Pump**	
Groundwater Conservation District	High Plains UWCD #1	**Pump Depth** (feet below land surface)	
Latitude (decimal degrees)	33.871389	**Power Type**	
Latitude (degrees minutes seconds)	33° 52' 17" N	**Annular Seal Method**	
Longitude (decimal degrees)	-101.844167	**Surface Completion**	
Longitude (degrees minutes seconds)	101° 50' 39" W	**Owner**	
Coordinate Source	+/- 5 Seconds	**Driller**	
Aquifer Code	121OGFA - Ogallala Formation, Fredericksburg Group and Antlers Sand	**Other Data Available**	
Aquifer	Ogallala/Edwards-Trinity (High Plains)	**Well Report Tracking Number**	
Aquifer Pick Method		**Plugging Report Tracking Number**	
Land Surface Elevation (feet above sea level)	3355	**U.S. Geological Survey Site Number**	
Land Surface Elevation Method	Interpolated From Topo Map	**Texas Commission on Environmental Quality Source Id**	
Well Depth (feet below land surface)		**Groundwater Conservation District Well Number**	
Well Depth Source		**Owner Well Number**	
Drilling Start Date		**Other Well Number**	
Drilling End Date		**Previous State Well Number**	
Drilling Method		**Reporting Agency**	Groundwater Conservation District
Borehole Completion		**Created Date**	12/22/2004
		Last Update Date	12/22/2004

Remarks

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-103

groundwater division

Water Quality Analysis - No Data Available

GW 1

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer _____ Field No. _____ State Well No. 28-10-103

Owner's Well No. _____ County HALE

1. Location: ___ 1/4, ___ 1/4 Sec. _____, Block _____ Survey _____

2. Owner: So. Western Pub. Ser Co. Address: _____

Tenant: _____ Address: _____

Driller: R.L. McDonald Address: _____

3. Elevation of _____ is _____ ft. above msl, determined by _____

4. Drilled: _____ 19 60; Dug, Cable Tool, Rotary, _____

5. Depth: Rept. 190 ft. Meas. _____ ft.

6. Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed _____

7. Pump: Mfgr. _____ Type _____

No. Stages _____, Bowls Diam. ___ in., Setting _____ ft.

Column Diam. _____ in., Length Tailpipe _____ ft.

8. Motor: Fuel _____ Make & Model _____ HP. _____

9. Yield: Flow _____ gpm, Pump _____ 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
24/16			

11. Water Level: 116.8 ft. rept. meas. 7- 19 55 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,

Formation Samples, Pumping Test, _____

15. Record by: _____ Date _____ 19 ___

Source of Data _____

16. Remarks: TWell JJ-66 TDWR Bul 6010

WELL SCREEN

Screen Openings _____

Diam. (in.)	Type	Setting, ft. from	to

(Sketch)

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-104

groundwater

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	2310104	**Well Type**	Withdrawal of Water
County	Hale	**Well Use**	
River Basin	Brazos	**Water Level Observation**	None
Groundwater Management Area	2	**Water Quality Available**	No
Regional Water Planning Area	O - Llano Estacado	**Pump**	
Groundwater Conservation District	High Plains UWCD #1	**Pump Depth** (feet below land surface)	
Latitude (decimal degrees)	33.862223	**Power Type**	
Latitude (degrees minutes seconds)	33° 51' 44" N	**Annular Seal Method**	
Longitude (decimal degrees)	-101.843889	**Surface Completion**	
Longitude (degrees minutes seconds)	101° 50' 38" W	**Owner**	
Coordinate Source	+/- 5 Seconds	**Driller**	
Aquifer Code	121OGFA - Ogallala Formation, Fredericksburg Group and Antlers Sand	**Other Data Available**	
Aquifer	Ogallala/Edwards-Trinity (High Plains)	**Well Report Tracking Number**	
Aquifer Pick Method		**Plugging Report Tracking Number**	
Land Surface Elevation (feet above sea level)	3357	**U.S. Geological Survey Site Number**	
Land Surface Elevation Method	Interpolated From Topo Map	**Texas Commission on Environmental Quality Source Id**	
Well Depth (feet below land surface)		**Groundwater Conservation District Well Number**	
Well Depth Source		**Owner Well Number**	
Drilling Start Date		**Other Well Number**	
Drilling End Date		**Previous State Well Number**	
Drilling Method		**Reporting Agency**	Groundwater Conservation District
Borehole Completion		**Created Date**	12/22/2004
		Last Update Date	12/22/2004

Remarks

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-104

groundwater division

Water Quality Analysis - No Data Available

GW 1

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer________________ Field No.________________ State Well No. 23-10-104
Owner's Well No. ____________ County HALE

1. Location: ___1/4, ___1/4 Sec.____, Block________ Survey________________________________
2. Owner: So. Western Pub. Ser. Co. Address:________________
   Tenant: So Address:________________
   Driller: W. A. Peoples Address:________________
3. Elevation of ________________ is ______ ft. above msl, determined by________________
4. Drilled: ____________ 19 46; Dug, Cable Tool, Rotary,__________
5. Depth: Rept. 185 ft. Meas.________ft.
6. Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed __________
7. Pump: Mfgr.________________ Type__________
   No. Stages_____, Bowls Diam.____in., Setting_______ft.
   Column Diam.________in., Length Tailpipe_________ft.
8. Motor: Fuel____________ Make & Model______________ HP.____
9. Yield: Flow____gpm, Pump______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

11. Water Level: 114 ft. rept./meas. 7 - 19 55 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,
    Formation Samples, Pumping Test,________________
15. Record by:________________ Date________ 19__
    Source of Data________________
16. Remarks: Well JJ-69 FBWE Bull6010

WELL SCREEN

Screen Openings________

Diam. (in.)	Type	Setting, ft. From	to

(Sketch)

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-105

groundwater division

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	2310105	**Well Type**	Withdrawal of Water
County	Hale	**Well Use**	
River Basin	Brazos	**Water Level Observation**	None
Groundwater Management Area	2	**Water Quality Available**	No
Regional Water Planning Area	O - Llano Estacado	**Pump**	
Groundwater Conservation District	High Plains UWCD #1	**Pump Depth** (feet below land surface)	
Latitude (decimal degrees)	33.862501	**Power Type**	
Latitude (degrees minutes seconds)	33° 51' 45" N	**Annular Seal Method**	
Longitude (decimal degrees)	-101.836667	**Surface Completion**	
Longitude (degrees minutes seconds)	101° 50' 12" W	**Owner**	
Coordinate Source	+/- 5 Seconds	**Driller**	
Aquifer Code	121OGFA - Ogallala Formation, Fredericksburg Group and Antlers Sand	**Other Data Available**	
Aquifer	Ogallala/Edwards-Trinity (High Plains)	**Well Report Tracking Number**	
Aquifer Pick Method		**Plugging Report Tracking Number**	
Land Surface Elevation (feet above sea level)	3352	**U.S. Geological Survey Site Number**	
Land Surface Elevation Method	Interpolated From Topo Map	**Texas Commission on Environmental Quality Source Id**	
Well Depth (feet below land surface)		**Groundwater Conservation District Well Number**	
Well Depth Source		**Owner Well Number**	
Drilling Start Date		**Other Well Number**	
Drilling End Date		**Previous State Well Number**	
Drilling Method		**Reporting Agency**	Groundwater Conservation District
Borehole Completion		**Created Date**	12/30/2004
		Last Update Date	12/30/2004

Remarks

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-105

groundwater division

Water Quality Analysis - No Data Available

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-107

groundwater division

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	2310107	**Well Type**	Withdrawal of Water
County	Hale	**Well Use**	Industrial
River Basin	Brazos	**Water Level Observation**	Miscellaneous Measurements
Groundwater Management Area	2	**Water Quality Available**	Yes
Regional Water Planning Area	O - Llano Estacado	**Pump**	Turbine
Groundwater Conservation District	High Plains UWCD #1	**Pump Depth** (feet below land surface)	
Latitude (decimal degrees)	33.873333	**Power Type**	Electric Motor
Latitude (degrees minutes seconds)	33° 52' 24" N	**Annular Seal Method**	
Longitude (decimal degrees)	-101.843056	**Surface Completion**	
Longitude (degrees minutes seconds)	101° 50' 35" W	**Owner**	Bill Stanes
Coordinate Source	+/- 5 Seconds	**Driller**	D. L. McDonald
Aquifer Code	121OGFA - Ogallala Formation, Fredericksburg Group and Antlers Sand	**Other Data Available**	
Aquifer	Ogallala/Edwards-Trinity (High Plains)	**Well Report Tracking Number**	
Aquifer Pick Method		**Plugging Report Tracking Number**	
Land Surface Elevation (feet above sea level)	3350	**U.S. Geological Survey Site Number**	
Land Surface Elevation Method	Interpolated From Topo Map	**Texas Commission on Environmental Quality Source Id**	
Well Depth (feet below land surface)	267	**Groundwater Conservation District Well Number**	
Well Depth Source	Another Government Agency	**Owner Well Number**	
Drilling Start Date		**Other Well Number**	
Drilling End Date	0/0/1930	**Previous State Well Number**	
Drilling Method		**Reporting Agency**	Groundwater Conservation District
Borehole Completion		**Created Date**	
		Last Update Date	

Remarks

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

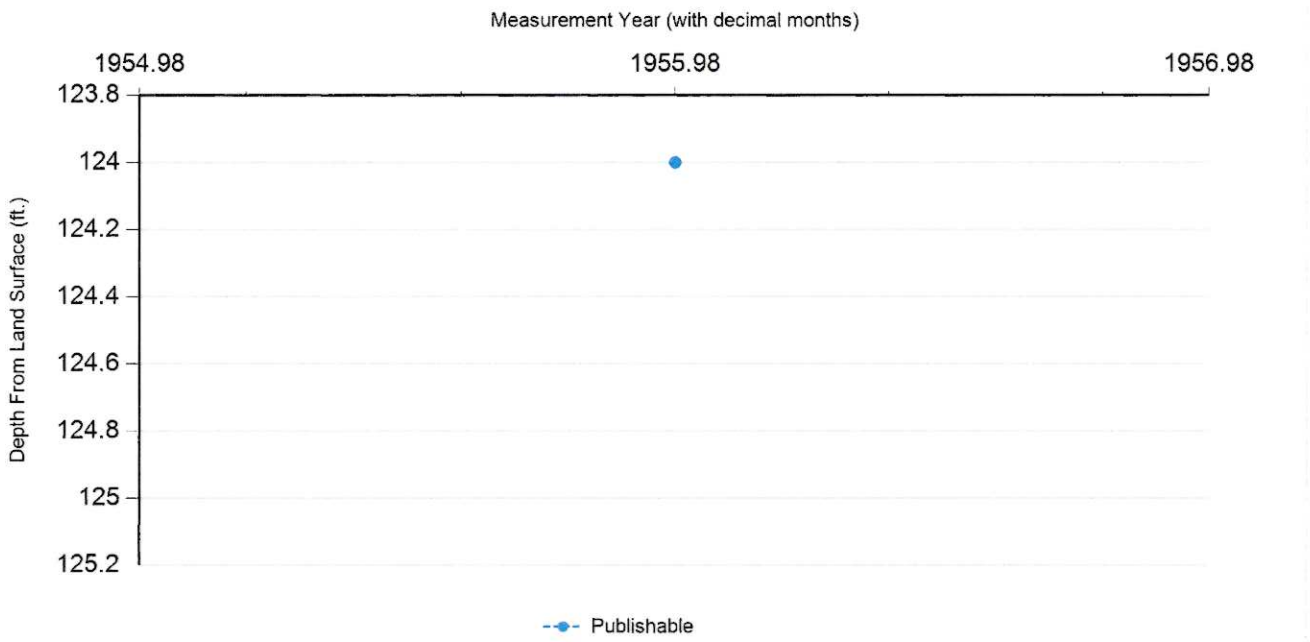
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	11/0/1955		124		3226	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis

Sample Date: 10/17/1960 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** U.S. Geological Survey

Sampled Aquifer: Ogallala Formation, Fredericksburg Group and Antlers Sand

Analyzed Lab: U.S. Geological Survey Lab **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		298.28	mg/L as CACO 3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		364	mg/L	
00910	CALCIUM (MG/L)		96	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		142	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		1.8	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		543	mg/L as CACO 3	
00920	MAGNESIUM (MG/L)		74	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		3.5	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7	SU	
00937	POTASSIUM, TOTAL (MG/L AS K)		15	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		47	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.97		
00932	SODIUM, CALCULATED, PERCENT		17	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		52	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1240	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		162	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		18	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		772	mg/L	

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-107

groundwater division

Water Quality Analysis

Sample Date: 7/19/1983 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Ogallala Formation, Fredericksburg Group and Antlers Sand

Analyzed Lab: Texas Department of Health **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		221	mg/L as CACO 3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		269.7	mg/L	
00910	CALCIUM (MG/L)		88	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		204	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		1.8	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		458	mg/L as CACO 3	
00920	MAGNESIUM (MG/L)		58	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		8.11	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		8	SU	
00937	POTASSIUM, TOTAL (MG/L AS K)		15	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		44	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.67		
00932	SODIUM, CALCULATED, PERCENT		13	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		33	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1276	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		43	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		21	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		627	mg/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

TEXAS DEPARTMENT OF WATER RESOURCES

WELL SCHEDULE

Aquifer(s) To-K Project No. ~~850~~ 849 JJ-65 State Well No. 23-10-107

Field No./Owner's Well No. [redacted] County Hale

1. Location: ¼, ¼, Section, Block, Survey, Longitude 101 48 25, Latitude 33-52-22

2. Owner: Ball Starnes-Starnes Erection Co. Address: Rt 1 Box 61C Abernathy, Tx 79311
   Tenant (other): (was Southwestern Public Service) Address:
   Driller: D.L. McDonald Address:

3. Land Surface Elevation: 3350 ft. above msl determined by

4. Drilled: 19 30 ; Dug, Cable Tool, Rotary, Air,

5. Depth: Rept. 267 ft. Meas. ft.

6. Borehole Completion: Open Hole, Straight Wall; Underreamed, Gravel Packed

7. Pump: Mfr. Type Turb
   No. Stages, Bowls Diam. in., Setting 130 ft.
   Column Diam. 8 in., Length Tailpipe ft.

8. Motor: Mfr. Fuel Elec HP. 40

9. Yield: Flow gpm, Pump gpm, Meas., Rept., Est. Date

10. Performance Test: Date Length of Test Made by
    Static Level ft. Pumping Level ft. Drawdown ft.
    Production gpm Specific Capacity gpm/ft.

3.21

11. Quality: (Remarks on taste, odor, color, etc.)

    ✓ Analyses
    Date 7-19-83 Laboratory TDH TDS Sp Cond
    Date 10-17-60 Laboratory TDS Sp Cond

12. Other data available as circled: Pumping test, Power & Yield Test, Drillers Logs, Formation Samples, Geophysical Log(s) (type)

13. Water Level(s): 95 ft. rept. meas. 8 1937 above/below which is ft. above/below Land Surface
    124 ft. rept. meas. Nov. 1955 above/below which is ft. above/below Land Surface

14. Use: Dom., Stock, Public Supply, (Ind.) Irr., Observation, Other (Test Hole, Oil Test, etc.) Sampled

15. Recorded by: Ben R. Williams Source of data: MW-105, B-6010 Date: 7-19-83

16. Remarks: Well was Pumping on arrival. UTM - insulation is packed
    Saturated thickness includes over 87 feet of Cretaceous
    Base @ 3085

17. Location or Sketch:

Insulation is packed around could not find opening to measure.

Base of To @ 180'
3350
180
3170

101 48 22

52 22

W/L Obs. Well ___ W/Q Obs. Well ___
State Well No. 23-10-107

TDWR-6008

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TDWR ONLY
Organization No. 410 Lab No. ____
Work No. 6192

CHEMICAL WATER ANALYSIS REPORT

Send report to:

Data Collection and Evaluation Section
Texas Department of Water Resources
P.O. Box 13087
Austin, Texas 78711

County 095 Hale
State Well No. 23-10-107
Well No. ____
Date Collected 07-19-83

Owner Bill Starnes ___ Send copy to owner Sample No. ____ By R. Williams
Address Rt. 1 Box 61C Abernathy, Texas 79311 Well Location ____
Date Drilled 1930 Depth 267' ft. WBF Ogallala-Cre (136) (230) Source (type of well) Subm.
Producing intervals — Water level — ft. Sample depth ____ ft.
Sampled after pumping Pumping hrs. Yield ____ GPM meas. est. Temperature 069 °F ____ °C
Point of collection Discharge hose in pump house Appearance [X] clear [ ] turbid [ ] colored [ ] other
Use Ind.(5) Remarks ____

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS KEY PUNCHED SEP 16 1983

Laboratory No. [redacted] Date Received AUG 16 1983 Date Reported ____

WATER ANALYSIS KEY PUNCHED

State Well No. - -
Date: 090883
Sample No: EW3-2946

	MG/L	ME/L		MG/L	ME/L
Silica: 00955:	44		Carbonate: 00445:	0	0
Calcium: 00910:	88	4.42	Bicarbonate: 00440:	270	4.42
Magnesium: 00920:	58	4.76	Sulfate: 00945:	43	.9
Sodium: 00929:	33	1.43	Chloride: 00940:	204	5.75
T. Cations		11	Fluoride: 00951:	1.8	.09
Potassium: 00937:	15	.38	Nitrate: 71850:	8.11	.13
Manganese: 01055:		%Na ____	T. Anions		11.29
			pH: 00403:	8	
Boron: 01022:		SAR ____			
			180 deg TDS: 70300:	664	
Total Iron: 01045:		RSC ____	P. Alk.: 00415:	0	
Other ____			T. Alk.: 00410:	221	
(Specific Cond.: 00095:		1043	T. Hardness: 00900:	459	

Diluted Conductance (micromhos/cm3)
11 x116 =1276
__ items will be analyzed if checked.

Ammonia-N: 00610:
Nitrite-N: 00615:
Nitrate-N: 00620:
OrganicNitrogen: 00605:

Specific Conductance (micromhos/cm³) 00095 ____ Total Hardness as CaCO3 00900 ____

Diluted Conductance (micromhos/cm³): ____ x ____ = ____

" ☐ " items will be analyzed if checked.

[1] Nitrogen Cycle

Ammonia - N	00610
Nitrite - N	00615
Nitrate - N	00620
Organic Nitrogen	00605

[1] The bicarbonate reported in this analysis can be converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure used in the computation of dissolved solids.
[2] Nitrogen cycle requires separate sample.
[3] Total Iron and Manganese require separate sample.

Analyst ____ Checked By ____

TDWR-0148 (Rev. 6-20-83)

GW 1

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer _____ Field No. _____ State Well No. 23-10-107

Owner's Well No. _____ County HALE

1. Location: _____ 1/4, _____ 1/4 Sec. _____, Block _____ Survey _____

2. Owner Southwestern Public Service Co. Address: _____

Tenant: _____ Address: _____

Driller: D. L. McDONALD Address: _____

3. Elevation of _____ is _____ ft. above msl, determined by _____

4. Drilled: _____ 19 30; Dug, Cable Tool, Rotary, _____

5. Depth: Rept. 267 ft. Meas. _____ ft.

6. Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed _____

7. Pump: Mfgr. _____ Type _____

No. Stages _____, Bowls Diam. _____ in., Setting _____ ft.

Column Diam. _____ in., Length Tailpipe _____ ft.

8. Motor: Fuel _____ Make & Model _____ HP. _____

9. Yield: Flow _____ gpm, Pump _____ 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
12/14			

11. Water Level: 95 ft. rept. meas. Dug 1937 above/below _____ which is _____ ft. above/below surface.

124 ft. rept. meas. Nov 1955 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, MW-105 #850

15. Record by: _____ Date _____ 19__

Source of Data _____

16. Remarks: Well JJ-65 TBWE Bul 6010

WELL SCREEN

Screen Openings _____

Diam. (in.)	Type	Setting, ft. from	to

(Sketch)

USGS-WRD
Form GW

Well No. JJ-65 KY 2314407 — Plant well no.2

ANALYTICAL STATEMENT

County: HALE
Lab no. 70276

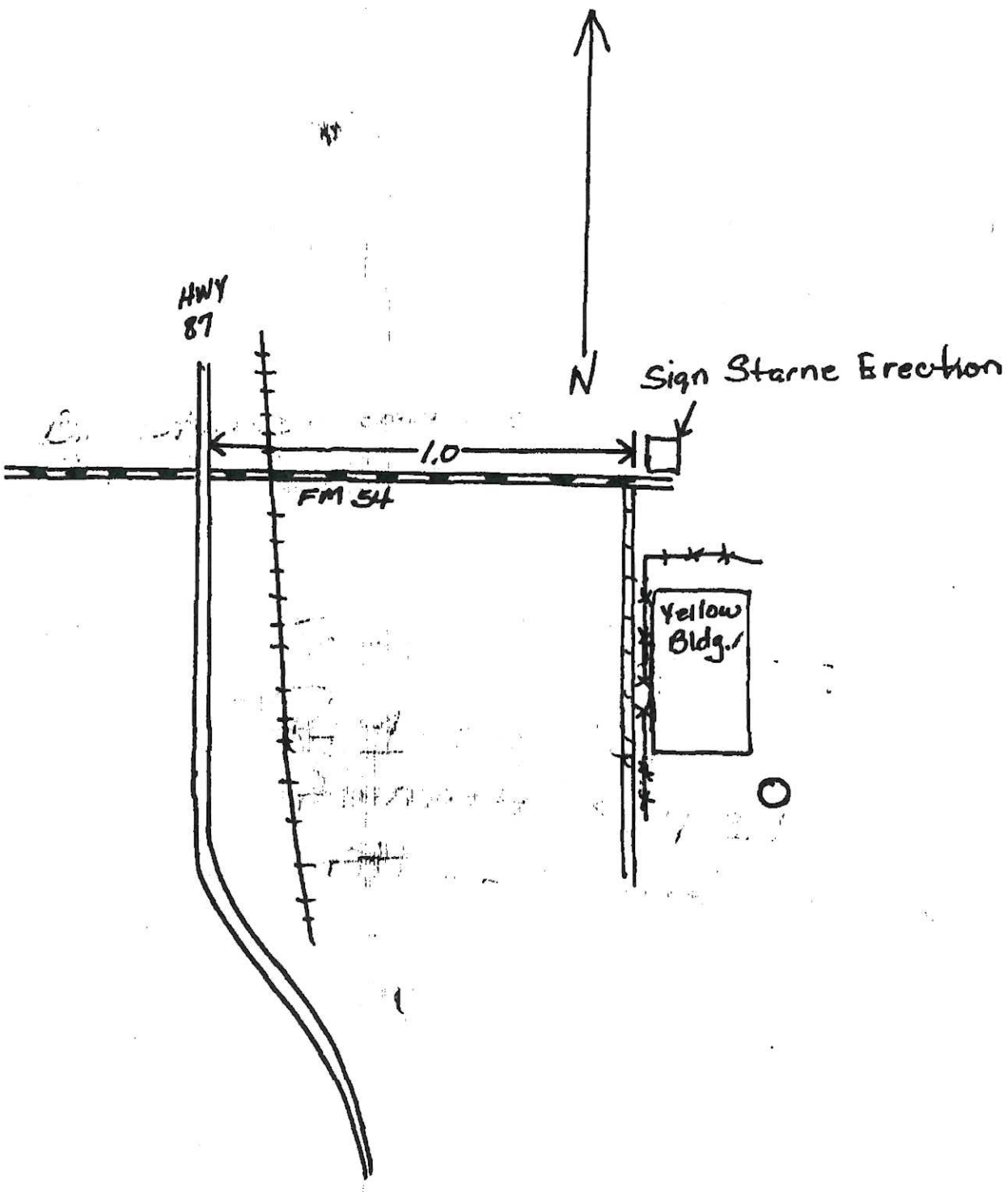
Location: Tuco Plant, 3 mi. N of Abernathy
Source (type of well): Drilled
Owner: Southwestern Public Service Co. Tuco Plant Abernathy, Tex.
Date drld: 1930 Depth: 267 ft
WBF: Ogallala
Producing intervals: 130+ to --
Water level: St. 130blw L.S.D.
Sampled after pumping: 10 min.
Yield: 100 GPM pump est.
Pt of coll: at well
Appearance: clear
Temp (°F): 65 Use: Ind.
Collector: Paul Rettman
Chemist: D.K. Leifeste
Date completed: Nov. 2, 1960
Checked by: WJ
Date transmitted: NOV 1? 1960

Date of collection: Oct. 17, 1960
Ignition Loss:
Dissolved Solids:
Calculated (sum): 772
Residue at 180°C: 780
Tons per acre foot: 1.06
Hardness as $CaCO_3$: 544
N.C. hardness: 246
% Na: 17 SAR: 1.0 RSC:
Specific conductance (micromhos at 25°C): 1240
pH: 7.0 Color:

Copy to:
Tuco Station,
Abernathy, Texas
Electric plant-
Boiler use

	epm	ppm
SiO_2		47
Fe		
Fe (total)		
Ca	4.79	96
Mg	6.09	74
Na	2.26	52
K	.38	15
	13.52	
Na + K		
HCO_3	5.97	364
CO_3	.00	0
SO_4	3.37	162
Cl	4.00	142
F	.09	1.8
NO_3	.06	3.5
	13.49	

+0.1 % Error



23-10-107

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-110

groundwater Division

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	2310110	**Well Type**	Withdrawal of Water
County	Hale	**Well Use**	Irrigation
River Basin	Brazos	**Water Level Observation**	None
Groundwater Management Area	2	**Water Quality Available**	Yes
Regional Water Planning Area	O - Llano Estacado	**Pump**	Turbine
Groundwater Conservation District	High Plains UWCD #1	**Pump Depth** (feet below land surface)	
Latitude (decimal degrees)	33.844167	**Power Type**	Electric Motor
Latitude (degrees minutes seconds)	33° 50' 39" N	**Annular Seal Method**	
Longitude (decimal degrees)	-101.842222	**Surface Completion**	
Longitude (degrees minutes seconds)	101° 50' 32" W	**Owner**	Jerry Oswalt
Coordinate Source	+/- 1 Second	**Driller**	Taylor Brothers
Aquifer Code	121OGFA - Ogallala Formation, Fredericksburg Group and Antlers Sand	**Other Data Available**	
Aquifer	Ogallala/Edwards-Trinity (High Plains)	**Well Report Tracking Number**	
Aquifer Pick Method		**Plugging Report Tracking Number**	
Land Surface Elevation (feet above sea level)	3352	**U.S. Geological Survey Site Number**	
Land Surface Elevation Method	Interpolated From Topo Map	**Texas Commission on Environmental Quality Source Id**	
Well Depth (feet below land surface)	218	**Groundwater Conservation District Well Number**	
Well Depth Source	Person Other than Owner	**Owner Well Number**	
Drilling Start Date		**Other Well Number**	
Drilling End Date	0/0/1955	**Previous State Well Number**	
Drilling Method		**Reporting Agency**	Groundwater Conservation District
Borehole Completion		**Created Date**	
		Last Update Date	

Remarks

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis

Sample Date: 7/19/1983 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Ogallala Formation, Fredericksburg Group and Antlers Sand

Analyzed Lab: Texas Department of Health **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		265	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		323.39	mg/L	
00910	CALCIUM (MG/L)		68	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		96	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		1.9	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		342	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		42	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		17.72	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		8.2	SU	
00937	POTASSIUM, TOTAL (MG/L AS K)		11	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		39	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		1.06		
00932	SODIUM, CALCULATED, PERCENT		22	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		45	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		992	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		37	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		20	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		516	mg/L	

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-110

groundwater division

Water Quality Analysis

Sample Date: 3/6/1985 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Other or Identity Unknown

Sampled Aquifer: Ogallala Formation, Fredericksburg Group and Antlers Sand

Analyzed Lab: Texas Department of Health **Reliability:** Reliability unknown or not available

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
01002	ARSENIC, TOTAL (UG/L AS AS)	<	10	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		160	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.6	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		2100	ug/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

TEXAS DEPARTMENT OF WATER RESOURCES

WELL SCHEDULE

110

Aquifer(s) TO-K Project No. 6198 State Well No. 23-10-~~16~~

Field No./Owner's Well No. JJ-98 County HALE

1. Location: ¼, ¼, Section, Block, Survey, Longitude 101-50-08, Latitude 33-50-38

Jerry Oswalt

2. Owner: ~~C.A. Phillips~~ Address: Abernathy, Texas

Tenant (other): Address:

Driller: Taylor Bros. Address:

3. Land Surface Elevation: 3352 ft. above msl determined by

4. Drilled: 19 53; Dug, Cable Tool, Rotary, Air,

5. Depth: Rept. 218 ft. Meas. ft.

6. Borehole Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed

7. Pump: Mfr. Type Turb

No. Stages, Bowls Diam. in., Setting ft.

Column Diam. 6 in., Length Tailpipe ft.

8. Motor: Mfr. Fuel Elec. HP.

9. Yield: Flow gpm, Pump gpm, Meas., Rept., Est. Date

10. Performance Test: Date Length of Test Made by

Static Level ft. Pumping Level ft. Drawdown ft.

Production gpm Specific Capacity gpm/ft.

11. Quality: (Remarks on taste, odor, color, etc.)

Analyses

✓ Date 7-19-83 Laboratory TDS Sp Cond

Date Laboratory TDS Sp Cond

12. Other data available as circled: Pumping test, Power & Yield Test, Drillers Logs, Formation Samples, Geophysical Log(s) 6010 (type) ✓

CASING, BLANK PIPE & WELL SCREEN
Cemented From ft. to ft.

Diam. (In.)	Type	Setting (feet) from	to
16		0	175

13. Water Level(s): ft. rept. meas. 19 above/below which is ft. above/below Land Surface

ft. rept. meas. 19 above/below which is ft. above/below Land Surface

14. Use: Dom., Stock, Public Supply, Ind., Irr., Observation, Other (Test Hole, Oil Test, etc.)

15. Recorded by: PLN-R Williams Source of data: B-6010 ✓ Date: 7-19-83

16. Remarks: Sampled 7-19-83 - Pumping on arrival.
Saturated thickness includes 44 ft. of Cretaceous
Base of TD-K @ 3136

17. Location or Sketch:

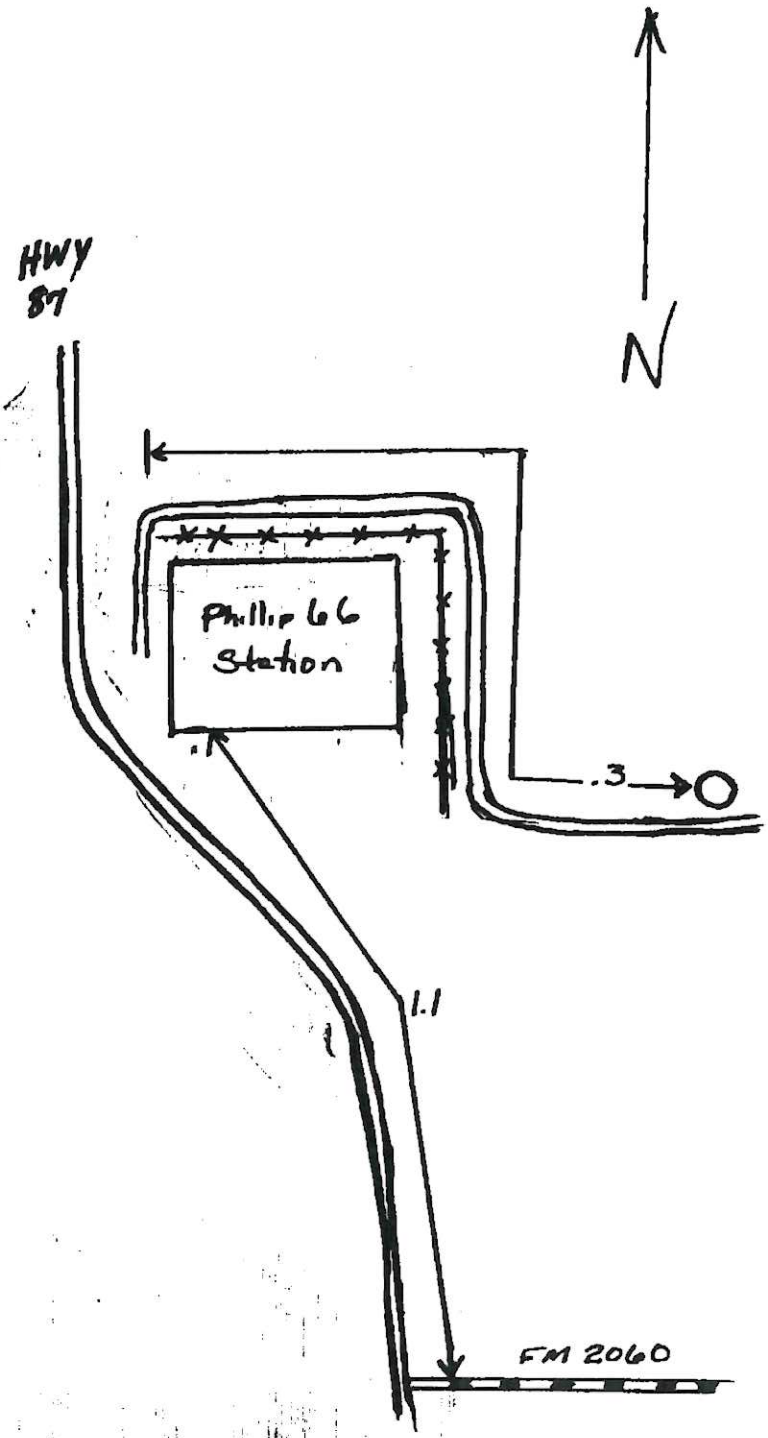
Pumping on arrival 3136
44
3180

W/L Obs. Well W/Q Obs. Well

State Well No. 23-10-~~16~~

110

TDWR-0800



Lubbock

23-10-110

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TDWR ONLY
Organization No. 410 Lab No. [ ]
Work No. 6192

CHEMICAL WATER ANALYSIS REPORT

Send report to:

Data Collection and Evaluation Section
Texas Department of Water Resources
P.O. Box 13087
Austin, Texas 78711

County 095 Hale
State Well No. 23-10-110
Well No. ____
Date Collected 07-19-83

Owner Jerry Oswalt ___ Send copy to owner Sample No. [ ] By R. Williams
Address Abernathy, Texas Well Location ____
Date Drilled 1955 Depth 218' ft. WBF crct=Ogallala
Source (type of well) Turb.
Producing intervals ____ Water level ____ ft. Sample depth [ ] ft.
Sampled after pumping Pumping hrs. Yield ____ GPM meas. est. Temperature 068 °F [ ] °C
Point of collection At Well Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use Irr. (4) Remarks ____

(FOR LABORATORY USE ONLY)
Laboratory No. [redacted]

CHEMICAL ANALYSIS
Date Received AUG 19 1983 KEY PUNCHED Date Reported SEP 16 1983

WATER ANALYSIS
State Well No. - -
Date: 090883 KEY PUNCHED Sample No: EW3-2988

	MG/L	ME/L		MG/L	ME/L
Silica: 00955:	39		Carbonate: 00445:	0	0
Calcium: 00910:	68	3.42	Bicarbonate: 00440:	323	5.3
Magnesium: 00920:	42	3.46	Sulfate: 00945:	37	.77
Sodium: 00929:	45	1.96	Chloride: 00940:	96	2.71
T. Cations		9.12	Fluoride: 00951:	1.9	.1
Potassium: 00937:	11	.28	Nitrate: 71850:	17.72	.29
Manganese: 01055:		%Na ____	T. Anions		9.16
			pH: 00403:	8.2	
Boron: 01022:		SAR ____			
			180 deg TDS: 70300:	484	
Total Iron: 01045:		RSC ____	P. Alk.: 00415:	0	
Other ____			T. Alk.: 00410:	265	
(Specific Cond.: 00095:		831	T. Hardness: 00900:	344	

Diluted Conductance (micromhos/cm3)
8 x124 =992
__ items will be analyzed if checked.

Ammonia-N: 00610:
Nitrite-N: 00615:
Nitrate-N: 00620:
OrganicNitrogen: 00605:

Diluted Conductance (micromhos/cm3): ____ x ____ = [ ]

" ☐ " items will be analyzed if checked.

[1] The bicarbonate reported in this analysis can be converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure used in the computation of dissolved solids.
[2] Nitrogen cycle requires separate sample.
[3] Total Iron and Manganese require separate sample.

[2] Nitrogen Cycle

Ammonia - N	00610
Nitrite - N	00615
Nitrate - N	00620
Organic Nitrogen	00605

Analyst ____ Checked By ____

TDWR-0148 (Rev. 6-20-83)

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TDWR ONLY
Organization No. _____ Lab No. [ ] DOE?
Work No. _____

CHEMICAL WATER ANALYSIS REPORT

Send report to:

Data Collection and Evaluation Section
Texas Department of Water Resources
P.O. Box 13087
Austin, Texas 78711

Sr 2.1
Ba .16
Br .6
As <.01

County 095 HALE
State Well No. 23-10-110
074 Well No. _____
Date Collected 03-06-85

Owner _____ Send copy to owner Sample No. [ ] By NATIV
Address _____ Well Location _____
Date Drilled _____ Depth _____ ft. WBF _____ Source (type of well) _____
Producing intervals _____ Water level _____ ft. Sample depth [ ] ft.
Sampled after pumping _____ hrs. Yield _____ GPM meas. est. Temperature [ ]°F [ ]°C
Point of collection _____ Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use _____ Remarks Copied from BEG OF-WTWI-1985-34 funded by DOE.

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

Laboratory No. _____ Date Received _____ KEY PUNCHED Date Reported _____

		MG/L	ME/L
Silica	00955		
Calcium	00910	87	
Magnesium	00920	61	
Sodium	00929	51	
	Total		
☐ Potassium	00937	12.5	
☐ Manganese	01055		
☐ Boron	01022		
☐ Total Iron	01045	.02	
☐ (other) _____			

%Na _____
SAR _____
RSC _____

Specific Conductance (micromhos/cm³) 00095 _____
Diluted Conductance (micromhos/cm³): _____ x _____ = [ ]

☐ " items will be analyzed if checked.

		MG/L	ME/L
Carbonate	00445	0	
Bicarbonate	00440	295	
Sulfate	00945	44	
Chloride	00940	88	
Fluoride	00951	1.6	
Nitrate	71850	18.00	
pH	00403	8.0	
		Calc	Total
[1] Dissolved Solids (~~residue at 180°C~~)	70300		508
Phenolphthalein Alkalinity as C aCO_3	00415		0
Total Alkalinity as C aCO_3	00410		242
Total Hardness as C aCO_3	00900		469
[2] Nitrogen Cycle			
Ammonia - N	00610		
Nitrite - N	00615		
Nitrate - N	00620		
Organic Nitrogen	00605		

[1] The bicarbonate reported in this analysis can be converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure used in the computation of dissolved solids.
[2] Nitrogen cycle requires separate sample.
[3] Total Iron and Manganese require separate sample.

Analyst _____ Checked By _____

TWDB-0148 (Rev.04-07-86)

Texas Water Development Board

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 23-10-204

groundwater division

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	2310204	**Well Type**	Withdrawal of Water
County	Hale	**Well Use**	Irrigation
River Basin	Brazos	**Water Level Observation**	Miscellaneous Measurements
Groundwater Management Area	2	**Water Quality Available**	No
Regional Water Planning Area	O - Llano Estacado	**Pump**	Turbine
Groundwater Conservation District	High Plains UWCD #1	**Pump Depth** (feet below land surface)	
Latitude (decimal degrees)	33.839167	**Power Type**	Natural-Gas Engine
Latitude (degrees minutes seconds)	33° 50' 21" N	**Annular Seal Method**	
Longitude (decimal degrees)	-101.83	**Surface Completion**	
Longitude (degrees minutes seconds)	101° 49' 48" W	**Owner**	MRS N.C. HIX
Coordinate Source	+/- 1 Second	**Driller**	SMITH BROS & WOLF DRLG CO.
Aquifer Code	218FGAS - Fredericksburg Group and Antlers Sand	**Other Data Available**	Drillers Log
Aquifer	Edwards-Trinity (High Plains)	**Well Report Tracking Number**	
Aquifer Pick Method		**Plugging Report Tracking Number**	
Land Surface Elevation (feet above sea level)	3348	**U.S. Geological Survey Site Number**	
Land Surface Elevation Method	Interpolated From Topo Map	**Texas Commission on Environmental Quality Source Id**	
Well Depth (feet below land surface)	225	**Groundwater Conservation District Well Number**	
Well Depth Source	Driller's Log	**Owner Well Number**	
Drilling Start Date		**Other Well Number**	
Drilling End Date	11/21/1964	**Previous State Well Number**	
Drilling Method	Cable Tool	**Reporting Agency**	Texas Water Development Board
Borehole Completion	Open Hole	**Created Date**	4/12/1988
		Last Update Date	

Remarks BASE OF OGLL AT 168 FT AND BASE OF CRETACEOUS AT 206 FT.

Casing

Diameter (in.)	Casing Type	Casing Material	Schedule	Gauge	Top Depth (ft.)	Bottom Depth (ft.)
16	Blank	Steel			0	171
	Open Hole				171	225

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

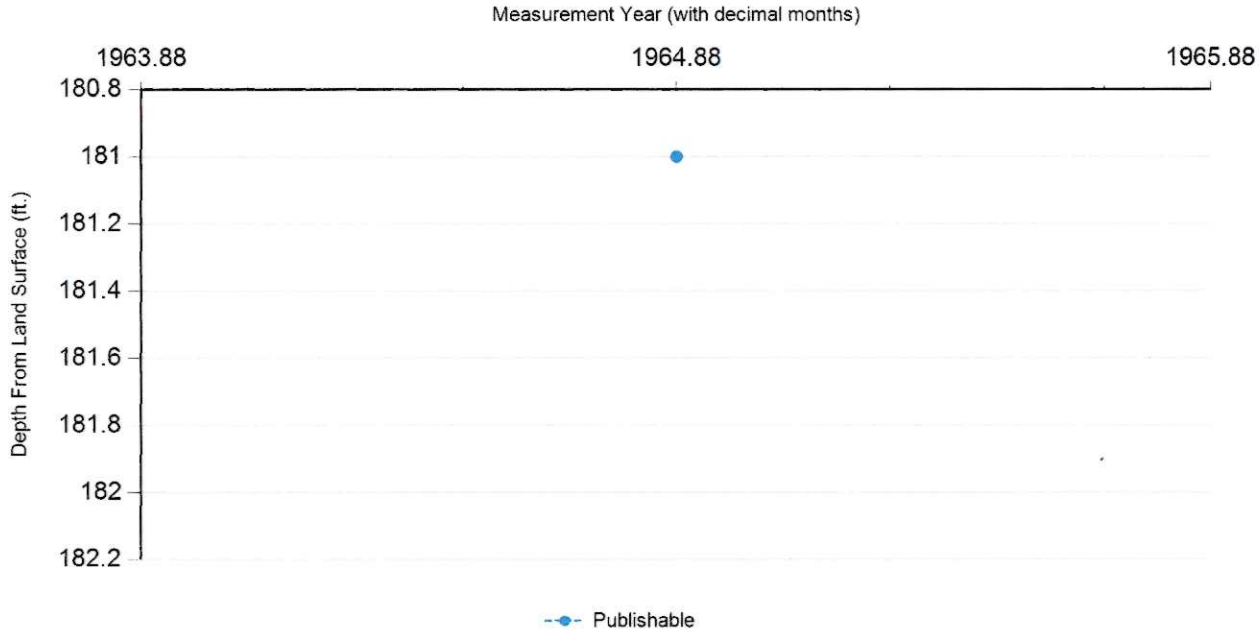
Packers - No Data

Texas Water Development Board

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 23-10-204

groundwater division

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	11/21/1964		181		3167	1	Registered Water Well Driller	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-204

groundwater division

Water Quality Analysis - No Data Available

TEXAS WATER DEVELOPMENT BOARD
WELL SCHEDULE

State Well No. 23 10 204 (10–17) | Previous Well No. ______ (19–26) | County HALE 189 (28–30)

River Basin BRAZOS 12 (32 33) | Zone 1 (36) | Lat. 33 50 21 (37–42) | Long. 101 49 46 (44–50) | Source of Coord. 1 (52)

Owner's Well No. ______ Location SE 1/4, SW 1/4, Section 13, Block C-2, Survey ______

Owner (10–31): [redacted]

Driller (33–52): Smith Bros & Wolf Drlg. Co.

Address Abernathy, TX | Address Abernathy, TX

Tenant ______ | Address ______

Date Drilled 11 21 1964 (10–17) | Depth 225 (19–23) | Source of Depth Datum D (25) | Altitude 3348 (27–30) | Source of Alt. Datum [illegible] (32)

Aquifer Fredericksburg-Antlers [illegible] (34–41) | Well Type W (43) | User ______ (45–53)

Well Construction: Const. Method CABLE TOOL C (56) | Casing Material Old Steel S (57)

Screen Material open O (58) | Completion STRAIGHT WALL open X (61)

Casing or Blank Pipe (C)
Well Screen or Slotted Zone (S)
Open Hole (O)
Cemented from ______ to ______

	Diam. (in.)	Setting (feet) From	To	
10	C 16	0	171	23
26	O	171	225	39

Lift Data: Pump Mfr. Stapleton - Harvest King | Type Turbine T (63) | No. Stages ______

Bowls Diam. ______ in. Setting ______ ft. Column Diam. ______ in. Length Tailpipe ______ ft.

Motor Mfr. ______ Fuel or Power NG N (66) | Horsepower ______ (67–73)

Yield Flow ______ GPM Pump ______ GPM Meas., Rept., Est. ______ Date ______

Performance Test Date ______ Length of Test ______ Production ______ GPM

Static Level ______ ft. Pumping Level ______ ft. Drawdown ______ ft. Sp. Cap. ______ GPM/ft

Quality (Remarks on Taste, Odor, Color, Etc.) ______

Water Use: Primary Use IRRIGATION I (10) | Secondary Use ______ (12) | Tertiary Use ______ (14)

Other Data Available: Water Level M (16) | Water Quality N (18) | Logs D (20–25) | Other Data (27–31)

Water Levels:

Log
Date 11 00 1964 Meas. 181.00 ft. (+) Above / (-) Below Landsurface

Date 04 12 1988 Meas. 185.00 ft. (+) Above / (-) Below Landsurface

Recorded By M. E. HAYES | Date Record Collected or Updated 04 12 1988 (33–40) | Reporting Agency 01 (42 43)

Remarks: Base of OGLL at 168 ft and base of Cretaceous at 206 ft.

Well Schedule In TWDB File X (45)

M.P. = -1.00

Aquifer Fredericksburg-Antlers

Well No. 23-10-204

TWDB-0409 (02-26-88)

WATER WELL LOCATION SKETCH
TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA & PROTECTION

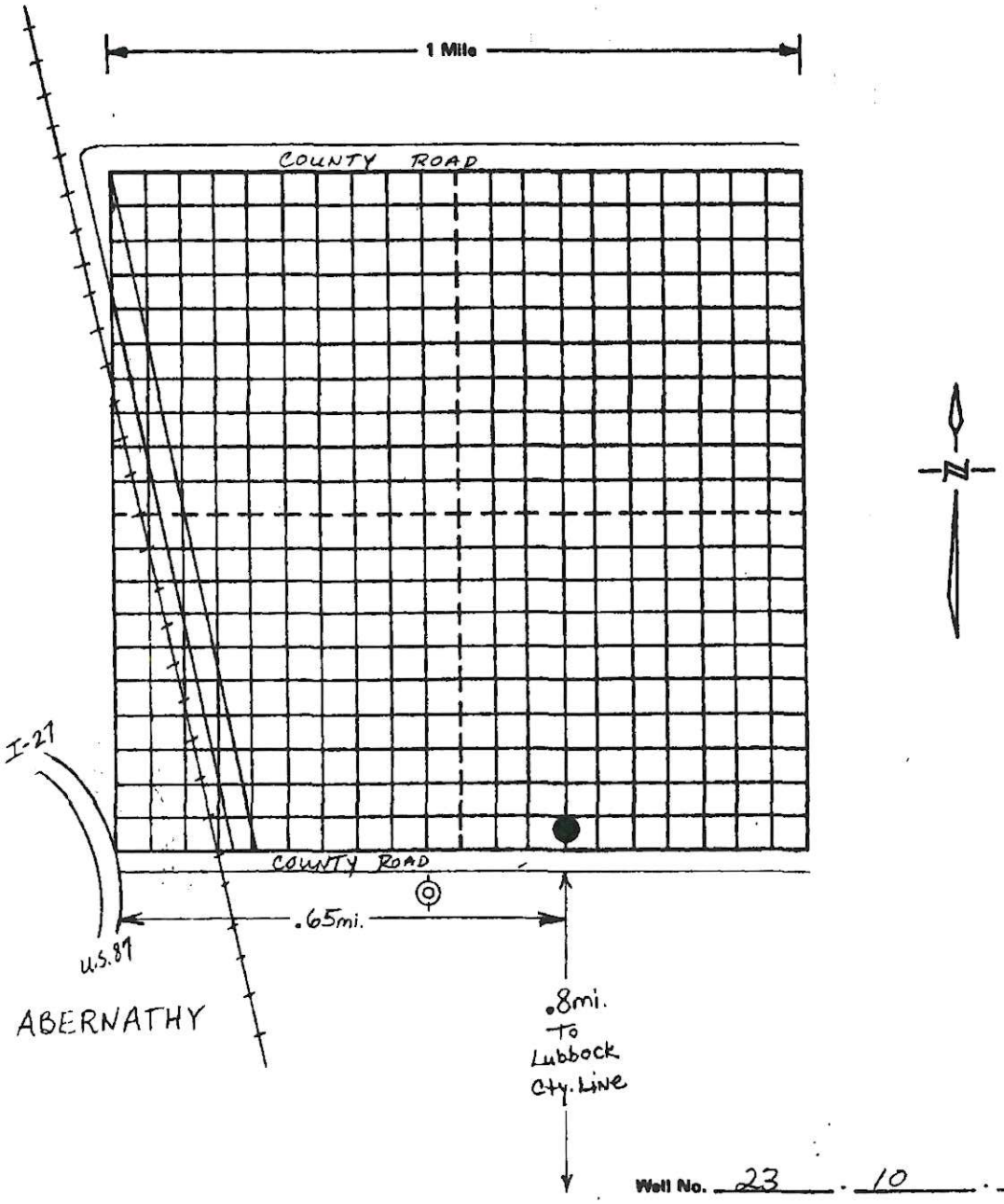
Section 13 in Block C-2

HALE County

2½-minute Quadrangle 2 in

7½-minute Quadrangle 23-10

Sketch by M.E. HAYES Date 4/12/88



Well No. 23 . 10 . 204

TWDBE-WD-4

File original copy with
Texas Water Commission
P. O. Box 2311, Capitol Station
Austin 11, Texas

State of Texas

DRILLERS LOG AND WELL DATA REPORT

For use by TWC only
Well No. 23-10-2a
Located on map
By
Date 65
Map no. 96

1) Well Owner: Mrs. N. C. Hix — Abernathy, Texas
2) Land Owner: Mrs. N. C. Hix — Abernathy, Texas
3) Intended use: Industrial ☐ Municipal ☐ Irrigation ☒ Other ____
4) Location of well: County Hale Labor ____ League ____ Abstract No. ____
SW¼ of Section 57 Block No. C 2 Survey ____

1 miles in East direction from Abernathy, Texas

766 yds. from West line
16 yds. from South line

E — 3348
B — 3123
Sat. thickness undetermined

Sketch map of well location with distances from two section or survey lines, and to landmarks, roads, and creeks.

DRILLERS LOG OF WELL

Method of drilling: Cable tool Diameter of hole 16 in. Date drilled November 21, 1964

All measurements made from 0 ft. above ground level.

From (ft)	To (ft)	Description and color of formation material	From (ft)	To (ft)	Description and color of formation material
0	70	Top soil & sandy clay	168	197	Lime rock — Fred Gp
70	86	Caprock & sand	197	201	Yellow clay
86	98	Sand	201	206	Yellow sand
98	104	Red clay	206	217	Blue clay
104	115	Sand	217	222	Blue sandy clay
115	124	Red clay	222	225	Blue clay
124	165	Sand	225		Red bed
165	168	Red clay			

(Use continuation sheets if necessary)

COMPLETION DATA

COMPLETION

Straight wall ☒
Under reamed ☐
Gravel packed ☐
Open hole ☐
Other ____

CASING

Type: Old ☒ New ☐
Cemented from ____ ft. to ____ ft.

Diameter (inches)	Setting from (ft)	Setting to (ft)
16	0	171

SCREEN

Type ____
Perforated ☐ Slotted ☐

Diameter (inches)	Setting from (ft)	Setting to (ft)

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.

Ralph Wolf — Smith Bros. & Wolf Drlg. Co. Reg. No. 478

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

If well was tested by your company or if you installed the permanent pump please complete the following:

WATER LEVEL AND PUMP DATA

Static water level 181 ft. below GROUND LEVEL

Pumping level

feet	hours	gpm

Pump type ____
Designed pumping rate ____ gpm ☐ gph ☐
Type power unit ____
Horsepower ____
Depth to bowls, cylinder, jet, etc., ____ ft. below pump base.

No Pump Installed as of Feb 15, 1965

Name of contractor testing well or installing permanent pump if other than your company: ____

C-34 (62-4)

23-10-204

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-205

groundwater division

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	2310205	**Well Type**	Withdrawal of Water
County	Hale	**Well Use**	Unused
River Basin	Brazos	**Water Level Observation**	Miscellaneous Measurements
Groundwater Management Area	2	**Water Quality Available**	No
Regional Water Planning Area	O - Llano Estacado	**Pump**	Turbine
Groundwater Conservation District	High Plains UWCD #1	**Pump Depth** (feet below land surface)	
Latitude (decimal degrees)	33.861389	**Power Type**	LP Gas Engine
Latitude (degrees minutes seconds)	33° 51' 41" N	**Annular Seal Method**	
Longitude (decimal degrees)	-101.823611	**Surface Completion**	
Longitude (degrees minutes seconds)	101° 49' 25" W	**Owner**	W.W.SHERRILL
Coordinate Source	+/- 1 Second	**Driller**	BILL WOLF & SONS IRRIGATION SUPPLY
Aquifer Code	121OGLL - Ogallala Formation	**Other Data Available**	Drillers Log
Aquifer	Ogallala	**Well Report Tracking Number**	
Aquifer Pick Method		**Plugging Report Tracking Number**	
Land Surface Elevation (feet above sea level)	3351	**U.S. Geological Survey Site Number**	
Land Surface Elevation Method	Interpolated From Topo Map	**Texas Commission on Environmental Quality Source Id**	
Well Depth (feet below land surface)	393	**Groundwater Conservation District Well Number**	
Well Depth Source	Driller's Log	**Owner Well Number**	
Drilling Start Date		**Other Well Number**	
Drilling End Date	2/19/1966	**Previous State Well Number**	
Drilling Method	Mud (Hydraulic) Rotary	**Reporting Agency**	Texas Water Development Board
Borehole Completion	Gravel Pack w/Perforations	**Created Date**	4/12/1988
		Last Update Date	

Remarks REPORTED YIELD 125 GPM. BASE AT 395 FT.

Casing

Diameter (in.)	Casing Type	Casing Material	Schedule	Gauge	Top Depth (ft.)	Bottom Depth (ft.)
12	Blank	Steel			0	323
12	Screen	Steel			323	393

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

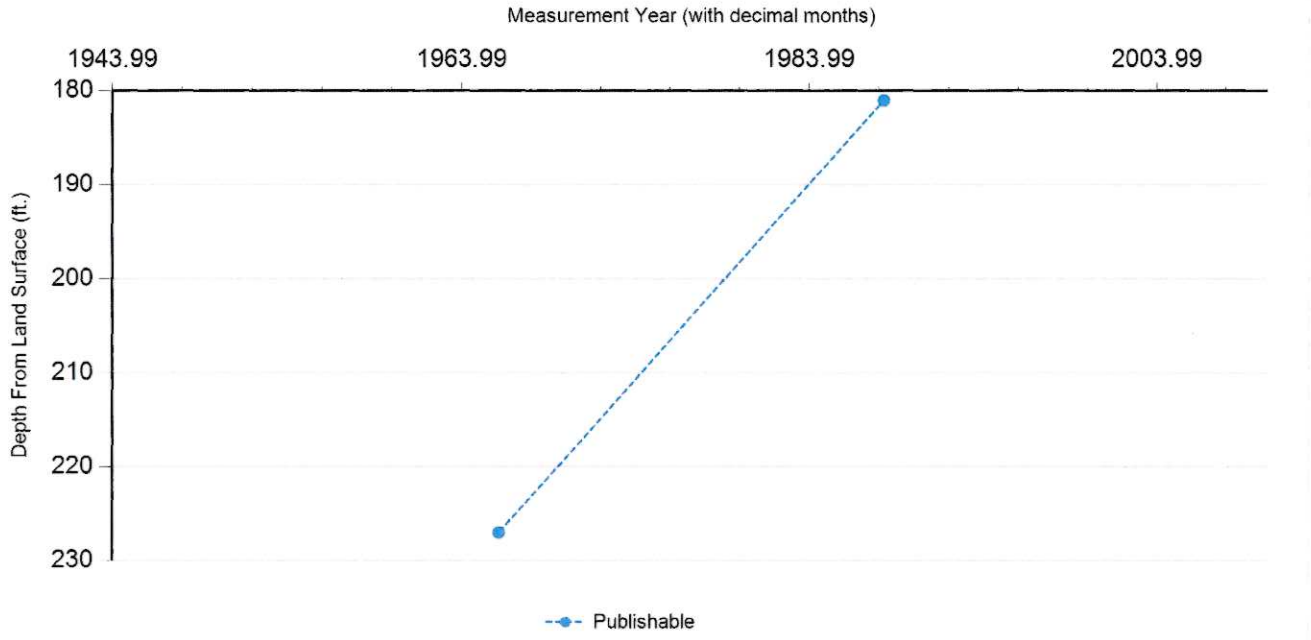
Packers - No Data

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-205

groundwater division

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	2/19/1966		227		3124	1	Registered Water Well Driller	Unknown		
P	4/12/1988		181.05	(45.95)	3169.95	1	Texas Water Development Board	Steel Tape		

Code Descriptions

Status Code	Status Description
P	Publishable

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-205

groundwater division

Water Quality Analysis - No Data Available

TEXAS WATER DEVELOPMENT BOARD
WELL SCHEDULE

State Well No. 23 10 205 (10–17) Previous Well No. ________ (19–26) County Hale 189 (28–30)

River Basin Brazos 12 (32 33) Zone 1 (35) Lat. 33 51 41 (37–42) Long. 101 47 23 (44–50) Source of Coord. 1 (52)

Owner's Well No. ________ Location NE 1/4, NE 1/4, Section 11, Block C-2, Survey ________

Owner [redacted] (10–31)

Driller Bill McGill & Sons Irrigation Supply [illegible] (33–52)

Address 4608 14th, Lubbock, TX

Address Abernathy, TX

Tenant ________ Address ________

Date Drilled 02 19 1966 (10–17) Depth 393 (19–23) Source of Depth Datum D (25) Altitude 3351 (27–30) Source of Alt. Datum M (32)

Aquifer Ogallala 121[illegible]LL (34–41) Well Type W (43) User ________ (45–53)

Well Construction Const. Method Rotary H (55) Casing Material New steel S (57)

Screen Material Steel (Torch cut) 1/16" S (59) Completion Gravel Packed/Perf F (61)

Casing or Blank Pipe (C)
Well Screen or Slotted Zone (S)
Open Hole (O)
Cemented from ______ to ______

Diam. (in.)		Setting (feet) From	To
C	12	0	323
S	12	323	393

Lift Data Pump Mfr. Amarillo-Alhambra Type Turbine T (63) No. Stages ______

Bowls Diam. ______ in. Setting 380 ft. Column Diam. ______ in. Length Tailpipe ______ ft.

Motor Mfr. NONE Fuel or Power Butane L (65) Horsepower 30.00 (67–73)

Yield Flow ______ GPM Pump 125 GPM Meas., (Rept.) Est. ______ Date 2/19/66

Performance Test Date ______ Length of Test ______ Production ______ GPM

Static Level ______ ft. Pumping Level ______ ft. Drawdown ______ ft. Sp. Cap. ______ GPM/ft.

Quality (Remarks on Taste, Odor, Color, Etc.) ______

Water Use Primary Use unused U (10) Secondary Use ______ I (12) Tertiary Use ______ (14)

Other Data Available Water Level M (16) Water Quality N (18) Logs D (20–25) Other Data (27–31)

Water Levels
Date 02 19 1966 Meas. 227.00 ft. (+) Above (−) Below Landsurface
Date 04 12 1988 Meas. 181.05 ft. (+) Above (−) Below Landsurface

Recorded By M.E. HAYES Date Record Collected or Updated 04 12 1988 (33–40) Reporting Agency 01 (42 43)

Remarks: REPORTED YIELD 125 GPM. BASE AT 395 FT.

Well Schedule In TWDB File Y (45)

Aquifer OGALLALA

Well No. 23-10-205

TWDB-0409 (02-26-88)

WATER WELL LOCATION SKETCH
TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA & PROTECTION

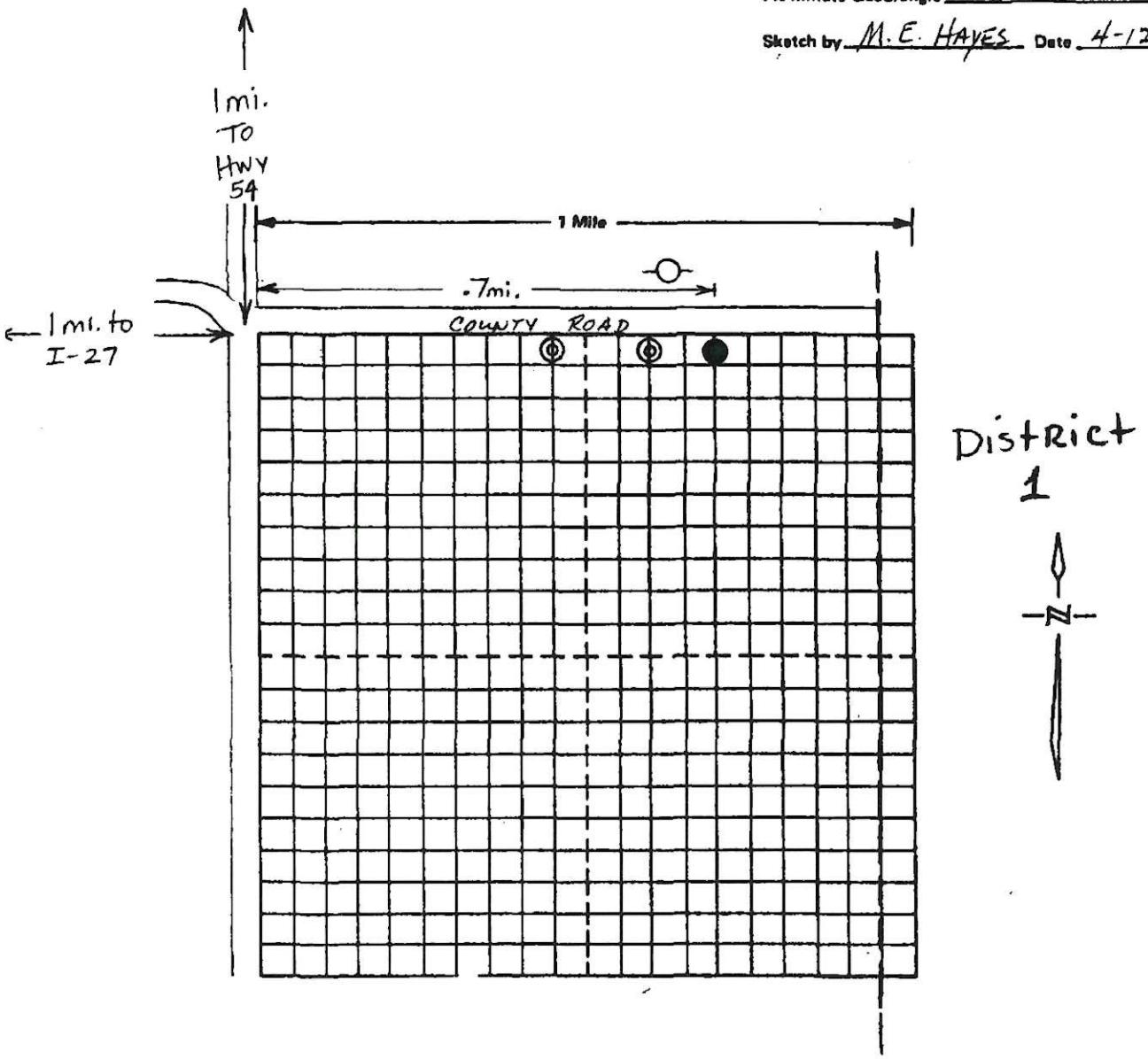
Section 11 in Block C-2

Hale County

2½-minute Quadrangle 2 in

7½-minute Quadrangle 23-10

Sketch by M. E. Hayes Date 4-12-88



Well No. 23 . 10 . 205

TWDBF.WD-4

GW 7

Send original copy by certified mail to the Texas Water Development Board P. O. Box 12386 Austin, Texas 78711	State of Texas WATER WELL REPORT	For TWDB use only Well No. 23-10-2B Located on map yes Received: 66 Form GW 8 ____ Form GW 9 ____

1) OWNER:

Person having well drilled W. W. Sherrill (Name) Address 4608 14th (Street or RFD) Lubbock (City) Texas (State)

Landowner W. W. Sherrill (Name) Address 4608 14th (Street or RFD) Lubbock (City) Texas (State)

2) LOCATION OF WELL:

County Hale Labor ____ League ____ Abstract No. ____

NW¼ NE¼ SW¼ SE¼ of Section 11 Block No. C-2 Survey ____

(Circle as many as are known)

miles in 2½ SE (NE, SW, etc.) direction from Abernathy, Texas (Town) NE¼

10 yards from North Section line
34 yards from East Section line

NORTH

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 22 in. Depth drilled 395 ft. Depth of completed well 395 ft. Date drilled 2/19/66

All measurements made from 0 ft. above ground level.

From (ft.)	To (ft.)	Description and color of formation material	From (ft.)	To (ft.)	Description and color of formation material
0	73	Surface	240	268	Sand Stone & clay layers
73	81	Caprock	268	346	Sand & clay layers
81	103	Red sandy clay	346	395	Sand & gravel
103	112	Brown clay & sand layers		395	Red bed
112	123	Brown clay & sand layers & broken rock			
123	130	Sand			
130	156	Clay			
156	240	Sand & clay layers			(Use reverse side if necessary)

7) COMPLETION (Check): Straight wall ☐ Gravel packed ☒ Other ☐ Under reamed ☐ Open hole ☐

8) WATER LEVEL: Static level 227 ft. below land surface Date 2-19-66

Artesian pressure ____ lbs. per square inch Date ____

9) CASING: Type: Old ☐ New ☒ Steel ☒ Plastic ☐ Other ☐

Cemented from ____ ft. to ____ ft.

10) SCREEN: Type TORCH CUT

Perforated ☐ Slotted ☐

Diameter (inches)	Setting From (ft.)	Setting To (ft.)	Gage
12¾	+1	393	.203

Diameter (inches)	Setting From (ft.)	Setting To (ft.)	Slot size
12¾"	323	393	3/16"

11) WELL TESTS:

Was a pump test made? ☒ Yes ☐ No If yes by whom? Bill Wolf + Sons Inc.

Yield: 125 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 California Western Pumps.

Type Turbine H.P. 30

Designed pumping rate 150 gpm ☒ gph ☐

Type power unit BUTANE

Depth to bowls, cylinder, jet, etc., 380 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 Box 490 (Street or RFD) Abernathy (City) Texas (State)

(Signed) C. W. Wolf (Water Well Driller) Bill Wolf & Sons Irrigation Supply (Company Name)

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

23-10-205

ATTACHMENT H

Water Quality Technical Report

Section 7. Groundwater Quality

Technical Report (30TAC §309.20(a)(4)(A and B)

This report fully assesses the impact of the wastewater application operation on the uses of local groundwater resources. The location of the site is within Groundwater Management Area 2 and is within the High Plains Unground Water Conservation District No. 1. The Aquifer is stated as being from the Ogallala/Edwards-Trinity (High Plains) and has an Aquifer Code considered Ogallala Formation, Fredericksburg Group and Antlers Sand.

In the area surrounding the effluent land application site, within ½-mile radius, there are no current groundwater wells. There are currently two (2) groundwater wells (Well #2310104 and #2310105) located north of the application site and one (1) groundwater well (Well #2310110) located south of the site. All these wells are located outside a 1-mile radius of the application site. Currently, the well located south and down-gradient from the application site has water quality analysis taken in 1983, attached herein. The quality of groundwater is shown to be sufficient in meeting the current TCEQ Primary Drinking Water Maximum Contaminant Levels (MCL's) except for Nitrate and Arsenic. The analysis shows 17.2 mg/L and 10 mg/L for Nitrate and Arsenic, respectively. It is important to note that this well (#2310110) is tagged as an irrigation well whereas the wells located north of the application site do now state the well's use.

From the driller's logs, it appears that on average, the depth to groundwater is approximately 114 to 150-feet below the surface elevation. Additionally, from the information that exists, it appears that Well #2310110 (drilling in 1955) has a total depth of 218-feet and has a 16-inch casing. Well #2310205 (drilled in 1966) has a total depth of 393-feet with a 12-inch steel casing.

Further analysis of the area surrounding the ponds and application site appears to have no immediate impact from the wastewater application operation. This permit has been in effect since 1987 and this application is for a renewal with no changes to current operations. The holding pond has a clay liner, constructed per TNRCC requirements, given the time of the original permit submittal. There are no known documents for testing of the liner, however, given the time and analysis of surrounding well, there are no known effects from the wastewater operations.

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-104

groundwater

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	2310104
County	Hale
River Basin	Brazos
Groundwater Management Area	2
Regional Water Planning Area	O - Llano Estacado
Groundwater Conservation District	High Plains UWCD #1
Latitude (decimal degrees)	33.862223
Latitude (degrees minutes seconds)	33° 51' 44" N
Longitude (decimal degrees)	-101.843889
Longitude (degrees minutes seconds)	101° 50' 38" W
Coordinate Source	+/- 5 Seconds
Aquifer Code	121OGFA - Ogallala Formation, Fredericksburg Group and Antlers Sand
Aquifer	Ogallala/Edwards-Trinity (High Plains)
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	3357
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	
Well Depth Source	
Drilling Start Date	
Drilling End Date	
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	
Water Level Observation	None
Water Quality Available	No
Pump	
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	
Surface Completion	
Owner	
Driller	
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Groundwater Conservation District
Created Date	12/22/2004
Last Update Date	12/22/2004

Remarks

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-104

groundwater

Water Quality Analysis - No Data Available

GW 1

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer________________ Field No.________________ State Well No. 23-10-104

Owner's Well No. ____________ County HALE

1. Location: ___1/4, ___1/4 Sec.____, Block________ Survey________________________

2. Owner: So. Western Pub. Ser. Co. Address:______________

Tenant: So Address:______________

Driller: W. A. Peoples Address:______________

3. Elevation of ________________ is ______ ft. above msl, determined by ______________

4. Drilled: ______________ 19 46; Dug, Cable Tool, Rotary, __________

5. Depth: Rept. 185 ft. Meas.________ft.

6. Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed __________

7. Pump: Mfgr.______________________ Type______________

No. Stages_____, Bowls Diam.____in., Setting________ft.

Column Diam.________in., Length Tailpipe__________ft.

8. Motor: Fuel______________ Make & Model______________ HP._____

9. Yield: Flow_____gpm, Pump_____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

11. Water Level: 114 ft. rept. 7 - 1955 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__________

WELL SCREEN			
Screen Openings ______			
Diam. (in.)	Type	Setting, ft. from	to

14. Other data available as circled: Driller's Log, Radioactivity Log, Electric Log,

Formation Samples, Pumping Test, ______________

15. Record by: ______________ Date__________ 19___

Source of Data ______________

16. Remarks: Well JJ-69 TBWE Bull 6010

(Sketch)

Texas Water Development Board

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 23-10-105

groundwater

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	2310105
County	Hale
River Basin	Brazos
Groundwater Management Area	2
Regional Water Planning Area	O - Llano Estacado
Groundwater Conservation District	High Plains UWCD #1
Latitude (decimal degrees)	33.862501
Latitude (degrees minutes seconds)	33° 51' 45" N
Longitude (decimal degrees)	-101.836667
Longitude (degrees minutes seconds)	101° 50' 12" W
Coordinate Source	+/- 5 Seconds
Aquifer Code	121OGFA - Ogallala Formation, Fredericksburg Group and Antlers Sand
Aquifer	Ogallala/Edwards-Trinity (High Plains)
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	3352
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	
Well Depth Source	
Drilling Start Date	
Drilling End Date	
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	
Water Level Observation	None
Water Quality Available	No
Pump	
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	
Surface Completion	
Owner	
Driller	
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Groundwater Conservation District
Created Date	12/30/2004
Last Update Date	12/30/2004

Remarks

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-105

groundwater

Water Quality Analysis - No Data Available

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-110

groundwater division

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	2310110
County	Hale
River Basin	Brazos
Groundwater Management Area	2
Regional Water Planning Area	O - Llano Estacado
Groundwater Conservation District	High Plains UWCD #1
Latitude (decimal degrees)	33.844167
Latitude (degrees minutes seconds)	33° 50' 39" N
Longitude (decimal degrees)	-101.842222
Longitude (degrees minutes seconds)	101° 50' 32" W
Coordinate Source	+/- 1 Second
Aquifer Code	121OGFA - Ogallala Formation, Fredericksburg Group and Antlers Sand
Aquifer	Ogallala/Edwards-Trinity (High Plains)
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	3352
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	218
Well Depth Source	Person Other than Owner
Drilling Start Date	
Drilling End Date	0/0/1955
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Irrigation
Water Level Observation	None
Water Quality Available	Yes
Pump	Turbine
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	Jerry Oswalt
Driller	Taylor Brothers
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Groundwater Conservation District
Created Date	
Last Update Date	

Remarks	

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements

No Data Available

Water Quality Analysis

Sample Date: 7/19/1983 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Ogallala Formation, Fredericksburg Group and Antlers Sand

Analyzed Lab: Texas Department of Health **Reliability:** Collected from pumped well, but not filtered or preserved

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		265	mg/L as CACO 3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		323.39	mg/L	
00910	CALCIUM (MG/L)		68	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		96	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		1.9	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		342	mg/L as CACO 3	
00920	MAGNESIUM (MG/L)		42	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		17.72	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		8.2	SU	
00937	POTASSIUM, TOTAL (MG/L AS K)		11	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		39	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		1.06		
00932	SODIUM, CALCULATED, PERCENT		22	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		45	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		992	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		37	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		20	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		516	mg/L	

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 23-10-110

groundwater

Water Quality Analysis

Sample Date: 3/6/1985 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Other or Identity Unknown

Sampled Aquifer: Ogallala Formation, Fredericksburg Group and Antlers Sand

Analyzed Lab: Texas Department of Health **Reliability:** Reliability unknown or not available

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
01002	ARSENIC, TOTAL (UG/L AS AS)	<	10	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		160	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.6	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		2100	ug/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

TEXAS DEPARTMENT OF WATER RESOURCES

WELL SCHEDULE

110

Aquifer(s) TO-K Project No. 6198 State Well No. 23-10-~~16~~

Field No./Owner's Well No. JJ-98 County HALE

1. Location: ¼, ¼, Section, Block, Survey, Longitude 101-50-08, Latitude 33-50-38

Jerry Oswalt

2. Owner: ~~C.R. Phillips~~ Address: Abernathy, Texas

Tenant (other): Address:

Driller: Taylor Bros. Address:

3. Land Surface Elevation: 3352 ft. above msl determined by

4. Drilled: 19 55; Dug, Cable Tool, Rotary, Air,

5. Depth: Rept. 218 ft. Meas. ft.

6. Borehole Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed

7. Pump: Mfr. Type Turb

No. Stages, Bowls Diam. in., Setting ft.

Column Diam. 6 in., Length Tailpipe ft.

8. Motor: Mfr. Fuel Elec. HP.

9. Yield: Flow gpm, Pump gpm, Meas., Rept., Est. Date

10. Performance Test: Date Length of Test Made by

Static Level ft. Pumping Level ft. Drawdown ft.

Production gpm Specific Capacity gpm/ft.

11. Quality: (Remarks on taste, odor, color, etc.)

Analyses

✓ Date 7-19-83 Laboratory TDS Sp Cond

Date Laboratory TDS Sp Cond

12. Other data available as circled: Pumping test, Power & Yield Test, Drillers Logs, Formation Samples, Geophysical Log(s) 6010 (type)

13. Water Level(s): ft. rept. meas. 19 above below which is ft. above below Land Surface

ft. rept. meas. 19 above below which is ft. above below Land Surface

14. Use: Dom., Stock, Public Supply, Ind., Irr., Observation, Other (Test Hole, Oil Test, etc.)

15. Recorded by: PLW-R. Williams Source of data: B-6010 ✓ Date: 7-19-83

16. Remarks: Sampled 7-19-83 - Pumping on arrival.
Saturated thickness includes 44 ft. of Cretaceous
Base of TO-K @ 3136

17. Location or Sketch:

Pumping on arrival 3136
44
3180

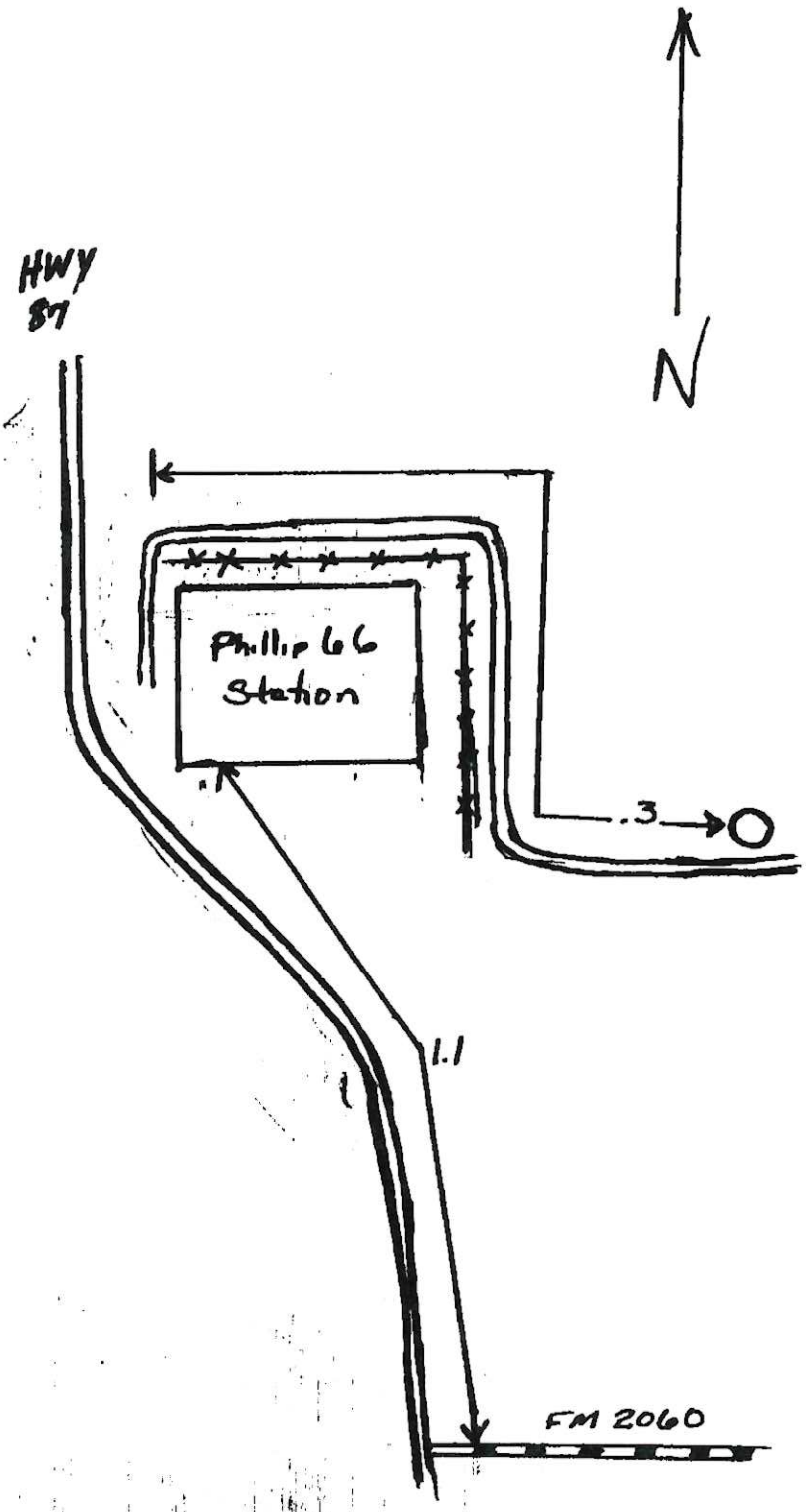
CASING, BLANK PIPE & WELL SCREEN
Cemented From ft. to ft.

Diam. (in.)	Type	Setting (feet) From	Setting (feet) to
16		0	175

W/L Obs. Well ___ W/Q Obs. Well ___

State Well No. 23-10-~~16~~

TDWR-0808



Lubbock

23-10-110

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TDWR ONLY
Organization No. 410 Lab No. [ ]
Work No. 0192

CHEMICAL WATER ANALYSIS REPORT

Send report to:

Data Collection and Evaluation Section
Texas Department of Water Resources
P.O. Box 13087
Austin, Texas 78711

County 095 Hale
State Well No. 23-10-110
Well No.
Date Collected 07-19-83

Owner Jerry Oswalt — Send copy to owner — Sample No. [ ] By R. Williams
Address Abernathy, Texas — Well Location
Date Drilled 1955 Depth 218' ft. WBF Cret-Ogallala — Source (type of well) Turb.
Producing intervals — Water level — ft. Sample depth [ ] ft.
Sampled after pumping Pumping hrs. Yield — GPM meas. est. — Temperature 068 °F [ ] °C
Point of collection At Well — Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use Irr. (4) Remarks

(FOR LABORATORY USE ONLY)

Laboratory No. [redacted]

CHEMICAL ANALYSIS

Date Received AUG 19 1983 KEY PUNCHED — Date Reported SEP 16 1983

WATER ANALYSIS

State Well No. - -
Date: 090883 KEY PUNCHED Sample No: EW3-2988

	MG/L	ME/L		MG/L	ME/L
Silica: 00955:	39		Carbonate: 00445:	0	0
Calcium: 00910:	68	3.42	Bicarbonate: 00440:	323	5.3
Magnesium: 00920:	42	3.46	Sulfate: 00945:	37	.77
Sodium: 00929:	45	1.96	Chloride: 00940:	96	2.71
T. Cations		9.12	Fluoride: 00951:	1.9	.1
Potassium: 00937:	11	.28	Nitrate: 71850:	17.72	.29
Manganese: 01055:		%Na	T. Anions		9.16
			pH: 00403:	8.2	
Boron: 01022:		SAR			
			180 deg TDS: 70300:	484	
Total Iron: 01045:		RSC	P. Alk.: 00415:	0	
Other			T. Alk.: 00410:	265	
(Specific Cond.: 00095:		831	T. Hardness: 00900:	344	

Diluted Conductance (micromhos/cm3)
8 x124 =992

Ammonia-N: 00610:
Nitrite-N: 00615:
Nitrate-N: 00620:
Organic Nitrogen: 00605:

__ items will be analyzed if checked.

Diluted Conductance (micromhos/cm^3): _____ x _____ = [ ]

"☐" items will be analyzed if checked.

[1] The bicarbonate reported in this analysis can be converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure used in the computation of dissolved solids.
[2] Nitrogen cycle requires separate sample.
[3] Total Iron and Manganese require separate sample.

[2] Nitrogen Cycle

Ammonia - N	00610	[ ].[ ][ ][ ]
Nitrite - N	00615	[ ].[ ][ ][ ]
Nitrate - N	00620	[ ].[ ][ ][ ]
Organic Nitrogen	00605	[ ].[ ][ ][ ]

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TDWR ONLY
Organization No. _____ Lab No. DOE?
Work No. _____

CHEMICAL WATER ANALYSIS REPORT

Sr 2.1
Ba .16
Br .6
As <.01

Send report to:
Data Collection and Evaluation Section
Texas Department of Water Resources
P.O. Box 13087
Austin, Texas 78711

County 095 HALE
State Well No. 23-10-110
074 Well No.
Date Collected 03-06-85

Owner _____ Send copy to owner Sample No. _____ By NATIV
Address _____ Well Location _____
Date Drilled _____ Depth _____ ft. WBF _____ Source (type of well) _____
Producing intervals _____ Water level _____ ft. Sample depth _____ ft.
Sampled after pumping _____ hrs. Yield _____ GPM meas. est. Temperature _____ °F _____ °C
Point of collection _____ Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use _____ Remarks Copied from BEG OF-WTWI-1985-34 funded by DOE

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

Laboratory No. _____ Date Received _____ KEY PUNCHED Date Reported _____

		MG/L	ME/L
Silica	00955		
Calcium	00910	87	
Magnesium	00920	61	
Sodium	00929	51	
	Total		
☐ Potassium	00937	12.5	
☐ Manganese	01055		%Na
☐ Boron	01022		SAR
☐ Total Iron	01045	.02	RSC
☐ (other) _____		MG/L	

Specific Conductance (micromhos/cm³) 00095 _____
Diluted Conductance (micromhos/cm³): _____ X _____ =

☐ " items will be analyzed if checked.

		MG/L	ME/L
Carbonate	00445	0	
Bicarbonate	00440	295	
Sulfate	00945	44	
Chloride	00940	88	
Fluoride	00951	1.6	
Nitrate	71850	18.00	
pH	00403	8.0	
	Total		
[1] Dissolved Solids (~~residue at 180°C~~) Calc	70300	508	
Phenolphthalein Alkalinity as C aCO_3	00415	0	
Total Alkalinity as C aCO_3	00410	242	
Total Hardness as C aCO_3	00900	469	
[2] Nitrogen Cycle			
Ammonia - N	00610		
Nitrite - N	00615		
Nitrate - N	00620		
Organic Nitrogen	00605		

[1] The bicarbonate reported in this analysis can be converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure used in the computation of dissolved solids.
[2] Nitrogen cycle requires separate sample.
[3] Total Iron and Manganese require separate sample.

Texas Water Development Board

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 23-10-205

groundwater

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	2310205	**Well Type**	Withdrawal of Water
County	Hale	**Well Use**	Unused
River Basin	Brazos	**Water Level Observation**	Miscellaneous Measurements
Groundwater Management Area	2	**Water Quality Available**	No
Regional Water Planning Area	O - Llano Estacado	**Pump**	Turbine
Groundwater Conservation District	High Plains UWCD #1	**Pump Depth** (feet below land surface)	
Latitude (decimal degrees)	33.861389	**Power Type**	LP Gas Engine
Latitude (degrees minutes seconds)	33° 51' 41" N	**Annular Seal Method**	
Longitude (decimal degrees)	-101.823611	**Surface Completion**	
Longitude (degrees minutes seconds)	101° 49' 25" W	**Owner**	W.W.SHERRILL
Coordinate Source	+/- 1 Second	**Driller**	BILL WOLF & SONS IRRIGATION SUPPLY
Aquifer Code	121OGLL - Ogallala Formation	**Other Data Available**	Drillers Log
Aquifer	Ogallala	**Well Report Tracking Number**	
Aquifer Pick Method		**Plugging Report Tracking Number**	
Land Surface Elevation (feet above sea level)	3351	**U.S. Geological Survey Site Number**	
Land Surface Elevation Method	Interpolated From Topo Map	**Texas Commission on Environmental Quality Source Id**	
Well Depth (feet below land surface)	393	**Groundwater Conservation District Well Number**	
Well Depth Source	Driller's Log	**Owner Well Number**	
Drilling Start Date		**Other Well Number**	
Drilling End Date	2/19/1966	**Previous State Well Number**	
Drilling Method	Mud (Hydraulic) Rotary	**Reporting Agency**	Texas Water Development Board
Borehole Completion	Gravel Pack w/Perforations	**Created Date**	4/12/1988
		Last Update Date	

Remarks REPORTED YIELD 125 GPM. BASE AT 395 FT.

Casing

Diameter (in.)	Casing Type	Casing Material	Schedule	Gauge	Top Depth (ft.)	Bottom Depth (ft.)
12	Blank	Steel			0	323
12	Screen	Steel			323	393

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

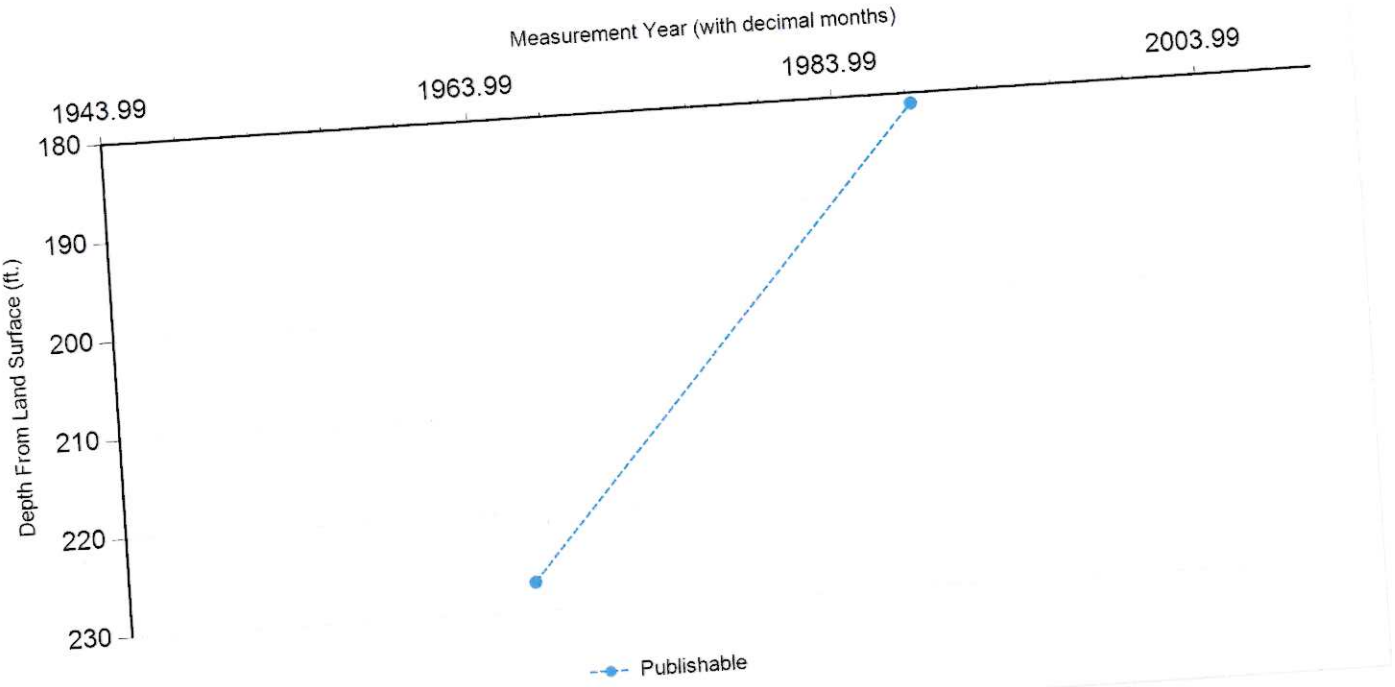
Packers - No Data

Texas Water Development Board

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 23-10-205

groundwater

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	2/19/1966		227		3124	1	Registered Water Well Driller	Unknown		
P	4/12/1988		181.05	(45.95)	3169.95	1	Texas Water Development Board	Steel Tape		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis - No Data Available

TEXAS WATER DEVELOPMENT BOARD
WELL SCHEDULE

State Well No. 25 10 305 (10–17) Previous Well No. (19–26) County Hale (28–30) 189

River Basin Brazos (32–33) 12 Zone (35) 1 Lat. (37–42) 33 51 41 Long. (44–50) 101 49 23 Source of Coord. (52) 1

Owner's Well No. _____ Location NE 1/4, NE 1/4, Section 11, Block C-2, Survey _____

Owner [redacted] (10–31) Driller Bill Watt & Sons Irrigation Supply (33–52)

Address 4608 144th, Lubbock, Tx Address Abernathy, Tx

Tenant _____ Address _____

Date Drilled 02 19 1966 (10–17) Depth 393 (19–23) Source of Depth Datum D (25) Altitude 3351 (27–30) Source of Alt. Datum M (32)

Aquifer Ogallala (34–41) Well Type W (43) User _____ (45–53)

Well Construction Const. Method Rotary (55) H Casing Material New Steel (57) S

Screen Material Steel (Torch cut) 9/16" (59) S Completion Gravel Packed/Perf (61) F

Lift Data Pump Mfr. Amarillo-Alhambra Type Turbine (63) T No. Stages _____

Bowls Diam. _____ in. Setting 380 ft. Column Diam. _____ in. Length Tailpipe _____ ft.

Motor Mfr. NONE Fuel or Power Butane (65) L Horsepower 30.00 (67–73)

Yield Flow _____ GPM Pump 125 GPM Meas., (Rept.) Est. _____ Date 2/19/66

Performance Test Date _____ Length of Test _____ Production _____ GPM

Static Level _____ ft. Pumping Level _____ ft. Drawdown _____ ft. Sp. Cap. _____ GPM/ft.

Quality (Remarks on Taste, Odor, Color, Etc.) _____

Casing or Blank Pipe (C)
Well Screen or Slotted Zone (S)
Open Hole (O)
Cemented from _____ to _____

	Diam. (in.)	From	To	
10–23	C 12	0	323	
26–39	S 12	323	393	
42–55				
58–71				
10–23				
26–39				
42–55				
58–71				
10–23				
26–39				
42–55				
58–71				
10–23				
26–39				
42–55				
58–71				

Water Use Primary Use unused (10) U Secondary Use _____ (12) I Tertiary Use _____ (14)

Other Data Available: Water Level (16) M Water Quality (18) N Logs (20–25) D Other Data (27–31)

Water Levels
Date 102 02 19 1966 Meas. 227.00 ft. (+) Above (–) Below Landsurface
Date 04 12 1988 Meas. 181.05 ft. (+) Above (–) Below Landsurface

Recorded By M.E. Hayes Date Record Collected or Updated 04 12 1988 (33–40) Reporting Agency 01 (42–43)

Remarks (10–46) Reported yield 125 GPM. Base at 395 ft. (44–80)

Well Schedule In TWDB File Y (45)

Aquifer OGALLALA

WATER WELL LOCATION SKETCH

TEXAS WATER DEVELOPMENT BOARD

GROUND WATER DATA & PROTECTION

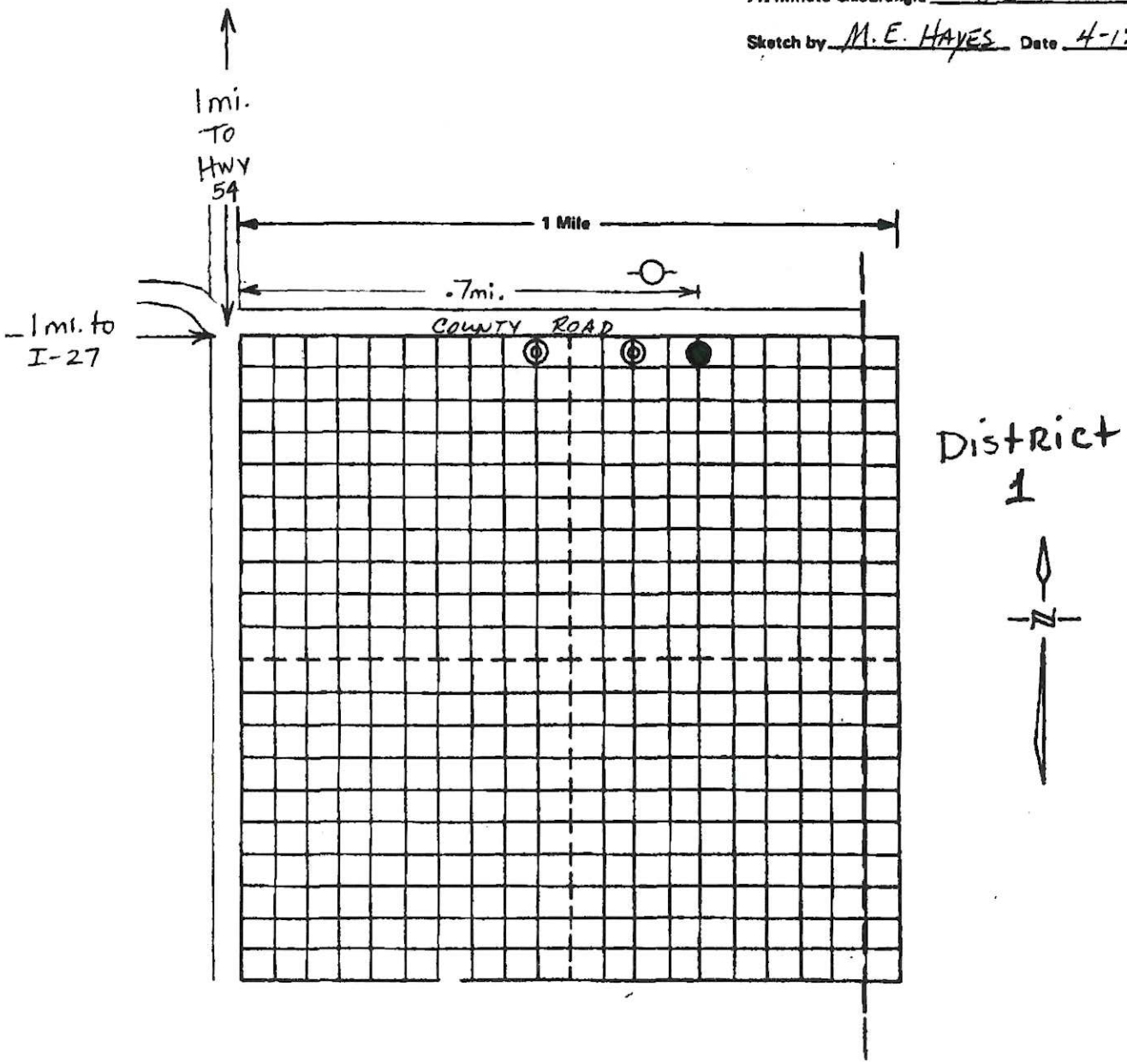
Section 11 in Block C-2

HALE County

2½-minute Quadrangle 2 in

7½-minute Quadrangle 23-10

Sketch by M. E. HAYES Date 4-12-88



23 10 285

Send original copy by certified mail to the Texas Water Development Board P. O. Box 12386 Austin, Texas 78711

State of Texas

WATER WELL REPORT

For TWDB use only
Well No. 22-10-2B
Located on map X-1
Received: 11
Form GW 8
Form GW 9

1) OWNER:
Person having well drilled W. W. Sherrill (Name) Address 4608 14th (Street or RFD) Lubbock (City) Texas (State)

Landowner W. W. Sherrill (Name) Address 4608 14th (Street or RFD) Lubbock (City) Texas (State)

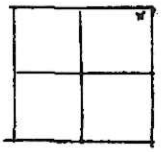
2) LOCATION OF WELL:
County Hale Labor ____ League ____ Abstract No. ____

NW¼ NE¼ SW¼ SE¼ of Section 11 Block No. C-2 Survey ____
(Circle as many as are known)

miles in 2½ NE (N.E., S.W. etc.) direction from Abernathy, Texas (Town)

NE1

10 yards from North Section line
34 yards from East Section line



NORTH

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 22 in. Depth drilled 395 ft. Depth of completed well 395 ft. Date drilled 2/19/66
All measurements made from 0 ft. above ground level.

From (ft.)	To (ft.)	Description and color of formation material
0	73	Surface
73	81	Caprock
81	103	Red sandy clay
103	112	Brown clay & sand layers
112	123	Brown clay & sand layers & broken rock
123	130	Sand
130	158	Clay
158	240	Sand & clay layers
240	268	Sand Stone & clay layers
268	346	Sand & clay layers
346	395	Sand & gravel
	395	Red bed

(Use reverse side if necessary)

7) COMPLETION (Check):
Straight wall ☐ Gravel packed ☑ Other ☐
Under reamed ☐ Open hole ☐

8) WATER LEVEL:
Static level 227 ft. below land surface Date 2-19-66
Artesian pressure ____ lbs. per square inch Date ____

9) CASING:
Type: old ☐ New ☑ Steel ☑ Plastic ☐ Other ☐
Cemented from ____ ft. to ____ ft.

Diameter (inches)	Setting From (ft.)	Setting To (ft.)	Gage
12¾	+1	393	.203

10) SCREEN:
Type TORCH CUT
Perforated ☐ Slotted ☐

Diameter (inches)	Setting From (ft.)	Setting To (ft.)	Slot size
12¾"	323	393	3/16"

11) WELL TESTS:
Was a pump test made? ☑ Yes ☐ No If yes by whom? Bill Wolf & Sons Inc.
Yield: 125 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 California Western Pumps
Type Turbine H.P. 30
Designed pumping rate 150 gpm ☑ gph ☐
Type power unit BUTANE
Depth to bowls, cylinder, jet, etc., 380 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.

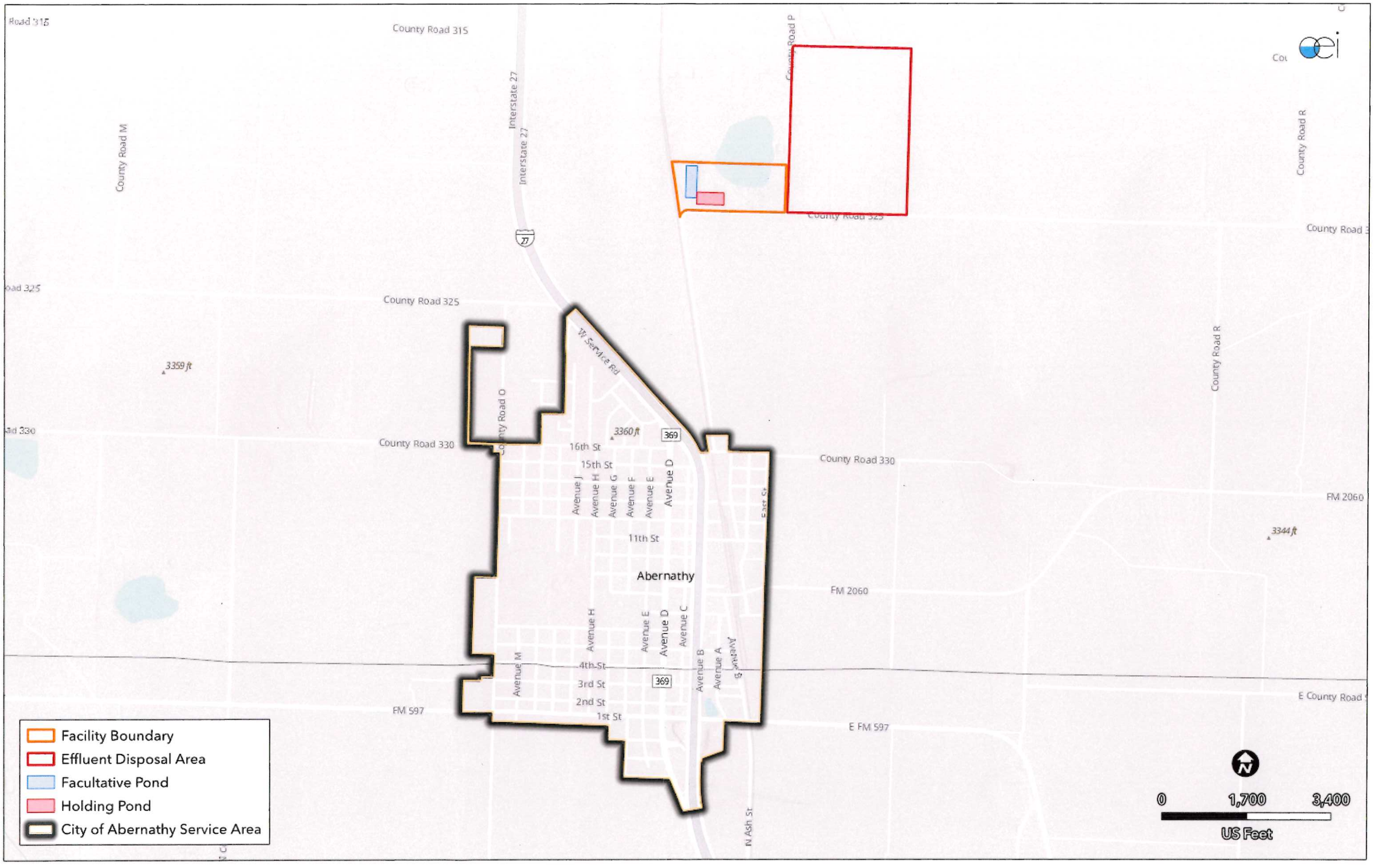
NAME C. W. Wolf (Type or Print) Water Well Drillers Registration No. 559

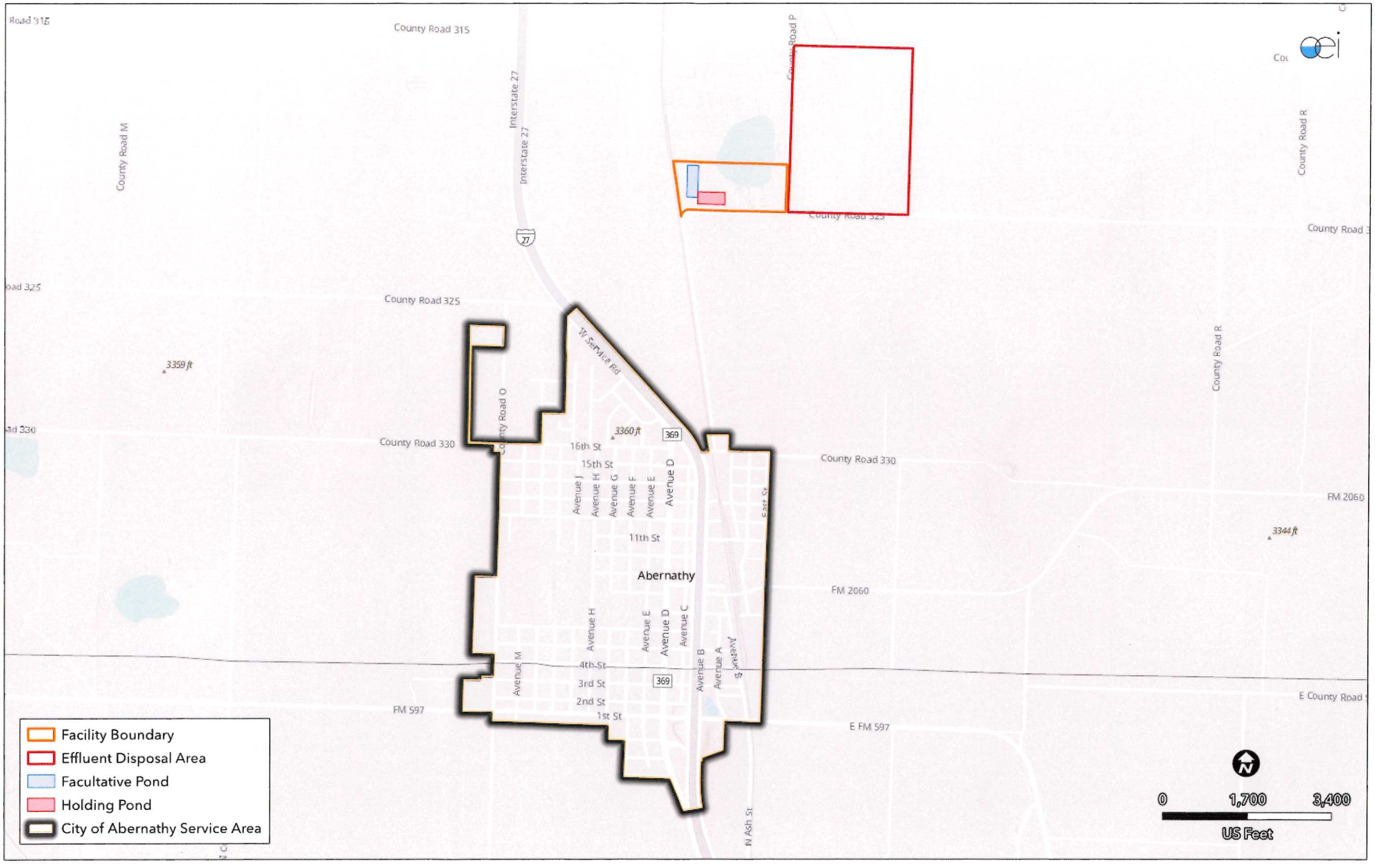
Address Box 490 (Street or RFD) Abernathy (City) Texas (State)

(Signed) C. W. Wolf (Water Well Driller) Bill Wolf & Sons Irrigation Supply (Company Name)

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

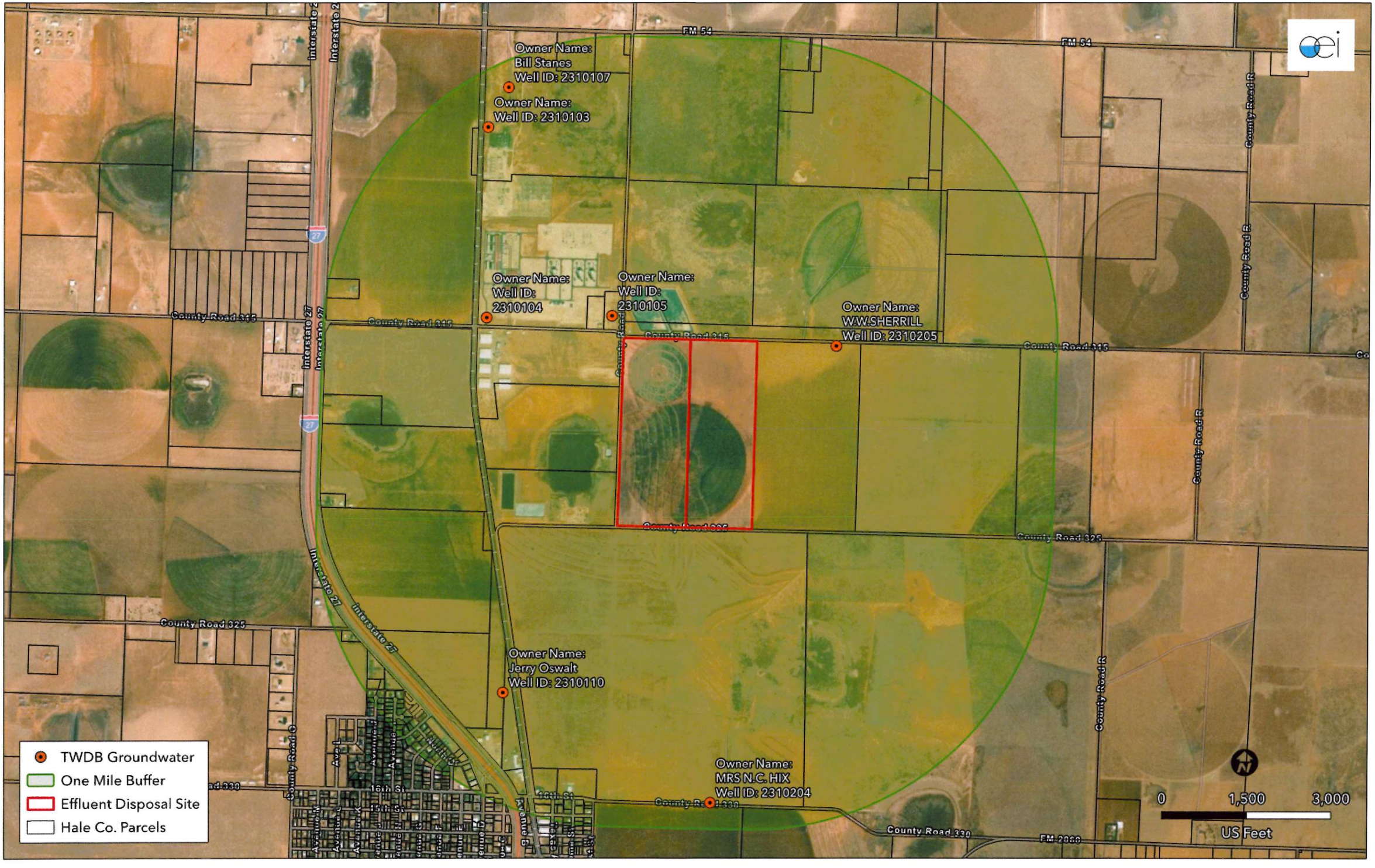
23-10-205


County Road 315
County Road M
Interstate 27
County Road P
County Road R
County Road 325
3359 ft
W Service Rd
County Road O
3360 ft
369
16th St
15th St
Avenue J
Avenue H
Avenue G
Avenue F
Avenue E
Avenue D
11th St
Abernathy
Avenue C
Avenue B
Avenue A
Avenue M
4th St
3rd St
2nd St
1st St
County Road 330
FM 2060
3344 ft
FM 597
E FM 597
N Ash St
0
1,700
3,400
US Feet
Facility Boundary
Effluent Disposal Area
Facultative Pond
Holding Pond
City of Abernathy Service Area


County Road 315
County Road M
Interstate 27
27
County Road P
County Road 325
County Road R
County Road 330
3359 ft
3360 ft
369
W Service Rd
16th St
15th St
11th St
Avenue J
Avenue H
Avenue G
Avenue F
Avenue E
Avenue D
Avenue C
Avenue B
Avenue A
Avenue M
Abernathy
4th St
3rd St
2nd St
1st St
FM 597
E FM 597
FM 2060
3344 ft
N Ash St
E County Road
Facility Boundary
Effluent Disposal Area
Facultative Pond
Holding Pond
City of Abernathy Service Area
0
1,700
3,400
US Feet


County Road 315
County Road P
County Road 325
AcA
Crop Type:
Wheat
OtA
Crop Type:
Wheat
AmA
Crop Type:
Wheat
OtB
Crop Type:
Wheat
AmB
Crop Type:
Wheat
AcA
Crop Type:
Wheat
OtA
Crop Type:
Wheat
MkB
Crop Type:
Wheat
Lo
Crop
Type:
Wheat
Web Soil Survey
MUSYM
AcA
AmA
AmB
Lo
MkB
OtA
OtB
Treatment Facility
Effluent Disposal Area
Hale Co. Parcels
0
400
800
US Feet


County Road 315
County Road P
County Road 325
AcA
Crop Type:
Wheat
OtA
Crop Type:
Wheat
AmA
Crop Type:
Wheat
OtB
Crop Type:
Wheat
AmB
Crop Type:
Wheat
AcA
Crop Type:
Wheat
OtA
Crop Type:
Wheat
MkB
Crop Type:
Wheat
Lo
Crop
Type:
Wheat
Web Soil Survey
MUSYM
AcA
AmA
AmB
Lo
MkB
OtA
OtB
Treatment Facility
Effluent Disposal Area
Hale Co. Parcels
0
400
800
US Feet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Bill Stanes
Well ID: 2310107
Owner Name:
Well ID: 2310103
Owner Name:
Well ID:
2310104
Owner Name:
Well ID:
2310105
Owner Name:
W.W.SHERRILL
Well ID: 2310205
Owner Name:
Jerry Oswalt
Well ID: 2310110
Owner Name:
MRS N.C. HIX
Well ID: 2310204
FM 54
County Road 315
County Road 325
County Road 330
Interstate 27
County Road R
County Road O
16th St
TWDB Groundwater
One Mile Buffer
Effluent Disposal Site
Hale Co. Parcels
0
1,500
3,000
US Feet


Owner Name:
Well ID:
2310104
Owner Name:
Well ID:
2310105
Owner Name:
WW.SHERRILL
Well ID: 2310205
County Road 315
Interstate 27
County Road P
County Road 325
TWDB Groundwater
Half Mile Buffer
Effluent Disposal Site
Hale Co. Parcels
0
900
1,800
US Feet