Administrative Package Cover Page

This file contains the following documents:

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

Portada de Paquete Administrativo

Este archivo contiene los siguientes documentos:

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

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUMMARY OF APPLICATION IN PLAIN LANGUAGE FOR TPDES OR TLAP PERMIT APPLICATIONS

Summary of Application (in plain language) Template and Instructions for Texas Pollutant Discharge Elimination System (TPDES) and Texas Land Application (TLAP) Permit Applications

The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 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 Runge (CN600737357) operates the City of Runge Wastewater Treatment Plant (RN: 101917839), a treatment plant with a primary settling pond system that consists of a bar screen, facultative lagoon, effluent storage pond, and irrigation fields. The facility is located at 400 W. Lyons , in the City of Runge, Karnes County, Texas 78151. This request is to renew the Texas Land Application Permit (TLAP). This permit will not authorize a discharge of pollutants into water in the state.

Discharges from the facility are expected to contain CBOD5, suspended solids, ammonia nitrogen, nitrate nitrogen, kjeldahl nitrogen, sulfate, chloride, phosphorus, E. coli, and dissolved solids. The irrigated effluent is treated by a bar screen and pumped via a wet well and lift station to a facultative lagoon for settling. The treated effluent is then conveyed to a storage pond and pumped to the irrigation field.

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

AGUAS RESIDUALES DOMÉSTICAS /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.

La ciudad de Runge (CN600737357) opera la planta de tratamiento de aguas residuals de la ciudad de Runge (RN: 101917839, una planta de tratamiento con un sistema de estanque de sedimentación primario que consta de una pantalla de barras, una laguna facultativa, un estanque de alacenamiento de efluentes y campos de riego.. La instalación está ubicada en 400 W. Lyons, en la ciudad de Runge, Condado de Karnes, Texas 78151. Este solicitud es para renovar el Permiso de solicitud de tierras de Texas (TLAP). Este permiso no autorizará una descarga de contaminantes en el agua en el estado.

Se espera que las descargas de la instalación contengan CBOD5, sólidos suspendidos, nitrógeno amoniacal, nitrógeno nitrato, nitrógeno kjeldahl, sulfato, cloruro, fósforo, E. coli y sólidos disueltos. El efluente irrigado . está tratado por mediante una rejilla de barras y bombeado a través de un pozo húmedo y una estación de bombeo hacia una laguna facultativa para su sedimentación. Luego, el efluente tratado se transporta a un estanque de almacenamiento y se bombea al campo de riego.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

PERMIT NO. WQ0010266001

APPLICATION. City of Runge, P.O. Box 206, Runge, Texas 78151, has applied to the Texas Commission on Environmental Quality (TCEQ) to renew Texas Land Application Permit (TLAP) No. WQ0010266001 to authorize the disposal of treated wastewater at a volume not to exceed a daily average flow of 110,000 gallons per day via surface irrigation on 42 acres. The domestic wastewater treatment facility and disposal site is located at 300 East Cleveland Street, in the City of Runge, in Karnes County, Texas 78151. TCEQ received this application on February 14, 2025. The permit application will be available for viewing and copying at Runge City Hall, 109 North Helena Street, Runge, in Karnes County, Texas, prior to the date this notice is published in the newspaper. The application, including any updates, and associated notices are available electronically at the following webpage: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tlap-applications. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For the exact location, refer to the application. https://gisweb.tceq.texas.gov/LocationMapper/?marker=-97.707777,28.881111&level=18

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

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

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

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

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

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

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

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 Runge at the address stated above or by calling Mr. Homer Lott, Mayor at 830-239-4121.

Issuance Date: March 13, 2025

Comisión de Calidad Ambiental del Estado de Texas

AVISO DE RECIBO DE LA SOLICITUD E
INTENCION DE OBTENER PERMISO PARA LA CALIDAD DEL AGUA
RENOVACION

PERMISO NO. WQ0010266001

SOLICITUD. Ciudad de Runge, P.O. Box 206, Runge, Texas 78151, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) para renovar el Permiso No. WQ0010266001 de disposición de aguas residuales para autorizar Planta de tratamiento de aguas residuales de la ciudad de Runge la disposición de aguas residuales tratadas en un volumen que no sobrepasa un flujo promedio diario de 110,000 galones por día por medio de riego superficial en 42 acres. La planta de tratamiento de aguas domésticos residuales y el área de disposición están ubicados en 300 Este Cleveland Street, en la ciudad de Runge en el Condado de Karnes, Texas. La TCEQ recibió esta solicitud el día 14 de febrero de 2025. La solicitud para el permiso estará disponible para leerla y copiarla en 109 North Helena Street, en la ciudad de Runge, en el condado de Karnes, Texas 78151 antes de la fecha de publicación de este aviso en el periódico. La aplicación incluidas las actualizaciones y los avisos asociados están disponibles electrónicamente en la siguiente pagina 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 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 ciudad de Runge
a la dirección indicada arriba o llamando a Alcalde, Homer Lott al 830-239-4121

Fecha de emisión 13 de marzo de 2025

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST

Complete and submit this checklist with the application.

APPLICANT NAME: City of Runge

PERMIT NUMBER (If new, leave blank): WQ00 10266001

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

	Y	N		Y	N
Administrative Report 1.0	☒	☐	Original USGS Map	☒	☐
Administrative Report 1.1	☐	☒	Affected Landowners Map	☐	☒
SPIF	☐	☒	Landowner Disk or Labels	☐	☒
Core Data Form	☒	☐	Buffer Zone Map	☐	☒
Public Involvement Plan Form	☐	☒	Flow Diagram	☒	☐
Technical Report 1.0	☒	☐	Site Drawing	☒	☐
Technical Report 1.1	☐	☒	Original Photographs	☐	☒
Worksheet 2.0	☐	☒	Design Calculations	☐	☒
Worksheet 2.1	☐	☒	Solids Management Plan	☐	☒
Worksheet 3.0	☒	☐	Water Balance	☐	☒
Worksheet 3.1	☐	☒			
Worksheet 3.2	☐	☒			
Worksheet 3.3	☐	☒			
Worksheet 4.0	☐	☒			
Worksheet 5.0	☐	☒			
Worksheet 6.0	☒	☐			
Worksheet 7.0	☐	☒			

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: 26617

Check/Money Order Amount: $815.00

Name Printed on Check: City of Runge

EPAY — Voucher Number: N/A

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 10266001

EPA I.D. (TPDES only): TX Click to enter text.

Expiration Date: March 1, 2025

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 Runge

(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: 600737357

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: Lott, Homer

Title: Mayor Credential: Click to enter text.

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: Mr. Last Name, First Name: Stoner, Kyle

Title: Graduate Engineer Credential: E.I.T.

Organization Name: Cope Engineering, Inc.

Mailing Address: 8611 Botts Lane City, State, Zip Code: San Antonio, TX., 78217

Phone No.: 210-828-7070 E-mail Address: kyle@copeengineeringtx.com

Check one or both: ☒ Administrative Contact ☒ Technical Contact

B. Prefix: Mr. Last Name, First Name: Cope, Brian

Title: Vice President Credential: P.E.

Organization Name: Cope Engineering, Inc.

Mailing Address: 8611 Botts Lane City, State, Zip Code: San Antonio, TX., 78217

Phone No.: 210-828-7070 E-mail Address: brian@copeengineeringtx.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: Lott, Homer

Title: Mayor Credential: Click to enter text.

Organization Name: City of Runge

Mailing Address: P.O. Box 206 City, State, Zip Code: Runge, TX., 78151

Phone No.: 830-239-4121 E-mail Address: city.of.runge@sbcglobal.net

B. Prefix: Ms. Last Name, First Name: Castro, Esmeralda

Title: City Secretary Credential: Click to enter text.

Organization Name: City of Runge

Mailing Address: P.O. Box 206 City, State, Zip Code: Runge, TX, 78151

Phone No.: 830-239-4121 E-mail Address: city.of.runge@sbcglobal.net

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: Ms. Last Name, First Name: Castro, Esmeralda

Title: City Secretary Credential: Click to enter text.

Organization Name: City of Runge

Mailing Address: P.O. Box 206 City, State, Zip Code: Runge, TX., 78151

Phone No.: 830-239-4121 E-mail Address: city.of.runge@sbcglobal.net

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: Lott, Homer

Title: Mayor Credential: Click to enter text.

Organization Name: City of Runge

Mailing Address: P.O. Box 206 City, State, Zip Code: Runge, TX., 78151

Phone No.: 830-239-4121 E-mail Address: city.of.runge@sbcglobal.net

Section 8. Public Notice Information (Instructions Page 27)

A. Individual Publishing the Notices

Prefix: Mr. Last Name, First Name: Lott, Homer

Title: Mayor Credential: Click to enter text.

Organization Name: City of Runge

Mailing Address: P.O. Box 206 City, State, Zip Code: Runge, TX., 78151

Phone No.: 830-239-4121 E-mail Address: city.of.runge@sbcglobal.net

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: Lott, Homer

Title: Mayor Credential: Click to enter text.

Organization Name: City of Runge

Mailing Address: P.O. Box 206 City, State, Zip Code: Runge, TX., 78151

Phone No.: 830-239-4121 E-mail Address: city.of.runge@sbcglobal.net

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: Lobby

Physical Address of Building: 109 N. Helena St.

City: Runge County: Karnes

Contact (Last Name, First Name): Lott, Homer

Phone No.: 830-239-4121 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? Click to enter text.

F. Plain Language Summary Template

Complete the Plain Language Summary (TCEQ Form 20972) and include as an attachment.

Attachment:

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: N/A

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** 101917839

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 Runge Wastewater Treatment Plant

C. Owner of treatment facility: City of Runge

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: City of Runge

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

Organization Name: City of Runge

Mailing Address: P.O. Box 206 City, State, Zip Code: Runge, TX., 78151

Phone No.: 830-239-4121 E-mail Address: city.of.runge@sbcglobal.net

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: N/A

E. Owner of effluent disposal site:

Prefix: Click to enter text. Last Name, First Name: City of Runge

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

Organization Name: City of Runge

Mailing Address: P.O. Box 206 City, State, Zip Code: Runge, TX., 78151

Phone No.: 830-239-4121 E-mail Address: city.of.runge@sbcglobal.net

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: N/A

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: N/A

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): City of Runge

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

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: N/A

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: Runge, Texas

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

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

The treated effluent is pumped from the storage pond to the irrigation area approximately 300 feet south of the facility.

E. For **TLAPs**, please identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: Ojo de Agua Creek

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: Click to enter text. WQ0010266001

Applicant: City of Runge

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): Homer Lott

Signatory title: Mayor

Signature: Mayor Homer Lott Date: 9/25/24

(Use blue ink)

Subscribed and Sworn to before me by the said Mayor Homer Lott

on this 25th day of September, 2024.

My commission expires on the 16th day of January, 2028.

D Wolfe

Notary Public

[SEAL]

Bexar

County, Texas

DOUGLAS WOLFE
Notary Public, State of Texas
Comm. Expires 01-16-2028
Notary ID 126365618

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:

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST OF COMMON DEFICIENCIES

Below is a list of common deficiencies found during the administrative review of domestic wastewater permit applications. To ensure the timely processing of this application, please review the items below and indicate by checking Yes that each item is complete and in accordance applicable rules at 30 TAC Chapters 21, 281, and 305. If an item is not required this application, indicate by checking N/A where appropriate. Please do not submit the application until the items below have been addressed.

Core Data Form (TCEQ Form No. 10400) ☒ Yes
(Required for all application types. Must be completed in its entirety and signed. Note: Form may be signed by applicant representative.)

Correct and Current Industrial Wastewater Permit Application Forms ☒ Yes
(TCEQ Form Nos. 10053 and 10054. Version dated 6/25/2018 or later.)

Water Quality Permit Payment Submittal Form (Page 19) ☒ Yes
(Original payment sent to TCEQ Revenue Section. See instructions for mailing address.)

7.5 Minute USGS Quadrangle Topographic Map Attached ☒ Yes
(Full-size map if seeking "New" permit. 8 ½ x 11 acceptable for Renewals and Amendments)

Current/Non-Expired, Executed Lease Agreement or Easement ☒ N/A ☐ Yes

Landowners Map ☒ N/A ☐ Yes
(See instructions for landowner requirements)

Things to Know:

- All the items shown on the map must be labeled.
- The applicant's complete property boundaries must be delineated which includes boundaries of contiguous property owned by the applicant.
- The applicant cannot be its own adjacent landowner. You must identify the landowners immediately adjacent to their property, regardless of how far they are from the actual facility.
- If the applicant's property is adjacent to a road, creek, or stream, the landowners on the opposite side must be identified. Although the properties are not adjacent to applicant's property boundary, they are considered potentially affected landowners. If the adjacent road is a divided highway as identified on the USGS topographic map, the applicant does not have to identify the landowners on the opposite side of the highway.

Landowners Cross Reference List ☒ N/A ☐ Yes
(See instructions for landowner requirements)

Landowners Labels or USB Drive attached ☒ N/A ☐ Yes
(See instructions for landowner requirements)

Original signature per 30 TAC § 305.44 – Blue Ink Preferred ☒ Yes
(If signature page is not signed by an elected official or principle executive officer, a copy of signature authority/delegation letter must be attached)

Plain Language Summary ☒ Yes

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): 0.110

2-Hr Peak Flow (MGD): 0.300

Estimated construction start date: Existing

Estimated waste disposal start date: Existing

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: July, 1996

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.**

The treatment process is a primary settling pond system that consists of a bar screen, facultative lagoon, effluent storage pond, and irrigation field. Sewage effluent enters the bar screen and is pump (via a wet well and lift station) to a facultative lagoon for settling. The treated effluent is then conveyed to a storage pond and pumped to an irrigation area approximately 300 feet south of the facility for disposal by means of surface irrigation on non-public access agricultural land.

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)
Facultative Pond (Existing)	1	363'Lx121'Wx8'd & 12'd
Storage Pond (Existing)	1	537'Lx179'Wx6'd
Irrigation Area (Existing)	1	42 Acres

C. Process Flow Diagram

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

Attachment: No. 4

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: 28d52'32"N
- Longitude: 97d42'15"W

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: No. 5

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

The treatment facility serves the City of Runge, a +/- 760 acre area composed of residential and commercial development.

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
		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.**

The permit allows for a design flow not to exceed 0.11 MGD. The facility is currently operating at 0.065 MGD. However, the existing ponds are designed for maximum capacity; therefore, no additional expansion is needed in the future to accommodate 0.11 MGD.

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: 10/05/99

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.

The required buffer zones of 150' around all wastewater treatment plant structures and 500' around the facultative lagoon are maintained within the property boundaries or land owned by the City of Runge.

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.*

-facility is maintained and operated by a City employee holding a Category D license.
-flow meters are used to monitor effluent flow and quality five times a week.
-irrigation site is monitored and maintained by the City of Runge for ponding or contamination.
-a meter is used to monitor volume of effluent applied for irrigation.
-analysis of representative soil sample from disposal site is taken annually.
-a right of way easement agreement with owner(s) of irrigation site is executed.

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 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		14.8	1	Grab	1/14/25
Total Suspended Solids, mg/l		39	1	Grab	1/14/25
Ammonia Nitrogen, mg/l		3.36	1	Grab	1/14/25
Nitrate Nitrogen, mg/l		0.989	1	Grab	1/14/25
Total Kjeldahl Nitrogen, mg/l		4.48	1	Grab	1/14/25
Sulfate, mg/l		43.4	1	Grab	1/14/25
Chloride, mg/l		276	1	Grab	1/14/25
Total Phosphorus, mg/l		1.58	1	Grab	1/14/25
pH, standard units		7.8	1	Grab	1/14/25
Dissolved Oxygen*, mg/l			N/A		
Chlorine Residual, mg/l		<0.1	1	Grab	1/14/25
E.coli (CFU/100ml) freshwater		770	1	Grab	1/14/25
Entercocci (CFU/100ml) saltwater			N/A		
Total Dissolved Solids, mg/l		856	1	Grab	1/14/25
Electrical Conductivity, µmohs/cm, †		1550	1	Grab	1/14/25
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					
Total Dissolved Solids, mg/l					
pH, standard units					
Fluoride, mg/l					
Aluminum, mg/l					
Alkalinity ($CaCO_3$), mg/l					

Section 8. Facility Operator (Instructions Page 50)

Facility Operator Name: Jesse Sandoval

Facility Operator's License Classification and Level: Waste Water Treatment Class D Operator

Facility Operator's License Number: WW0052079

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

A. WWTP's Biosolids Management Facility Type

N/A

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: The City of Runge does not produce enough sludge from the facultative pond to haul off at this time.

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): The City of Runge does not produce enough sludge from the facultative pond to haul off at this time.

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: No. 6
- USDA Natural Resources Conservation Service Soil Map:

  Attachment: No. 7
- Federal Emergency Management Map:

  Attachment: No. 8
- Site map:

  Attachment: No. 9

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: N/A

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: Homer Lott

Title: Mayor

Signature: _____

Date: 9/25/24

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: N/A

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
Agricultural Land – Bermuda grass	42	65,000	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
1	2.21	11.8	6'dx179'Wx537'L	Clay (compacted)

Attach a copy of a liner certification that was prepared, signed, and sealed by a Texas licensed professional engineer for each pond.

Attachment:

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.

The irrigation area is not irrigated during wet weather. A portion of the irrigation area is in the backwater of the tributary of Ojo de Aqua Creek.

Provide the source used to determine the 100-year frequency flood level:

NFIP FIMA Firm Map No. 48255C0300C and Map No. 48255C0425C, Effective October 19, 2010

Provide a description of tailwater controls and rainfall run-on controls used for the land application site.

A berm is constructed along the irrigation boundary area to prevent any run on from Ojo de Aqua Creek.

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:** No. 10

- 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:** No. 11

- 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
7903704	Public	Y	Open	Outside buffer
7903705	Public	N	Plugged	Outside buffer
7903707	Public	Y	Cased	Outside buffer
7903708	Public	Y	Cased	Outside buffer
7911204	Private	Y	Open	Outside buffer

If water quality data or well log information is available please include the information in an attachment listed by Well ID.

Attachment: No. 12

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: No. 13

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: N/A

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: No. 14

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: No. 15

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
Schattel Clay Shc	0-80"	Slow	low	71
Coy Clay Loam	0-80"	Very slow	high	71
Pernitas Sandy Clay Loam	0-80"	Moderate	moderate	58
Weesatche Fine Sandy Loam	0-80"	Moderate	high	58
Colibro Sandy Clay Loam	0-80"	High	moderate	30

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
June 2022	.0061	24	N/A	8.9	N/A	42
July 2022	.0261	19	N/A	9.0	N/A	42
Aug. 2022	.0218	19	N/A	8.4	N/A	42
Sept. 2022	.0385	38	N/A	7.3	N/A	42
Oct. 2022	.0192	25	N/A	8.8	N/A	42
Nov. 2022	.0351	53	N/A	8.8	N/A	42
Dec. 2022	.0366	76	N/A	8.6	N/A	42
Feb. 2023	.0399	96	N/A	6.8	N/A	42
April 2023	.0649	15	N/A	9.3	N/A	42
May 2023	.0752	21	N/A	9.8	N/A	42
July 2023	.0392	15	N/A	8.3	N/A	42
Aug. 2023	.0437	20	N/A	8.2	N/A	42
Oct. 2023	.0316	35	N/A	8.8	N/A	42
Nov. 2023	.0162	24	N/A	8.7	N/A	42
Dec. 2023	.0494	44	N/A	8.3	N/A	42
Jan. 2024	.0475	25	N/A	8.8	N/A	42
Feb. 2024	.0479	17	N/A	8.9	N/A	42
Mar. 2024	.0409	21	N/A	9.0	N/A	42
April 2024	.0522	21	N/A	9.1	N/A	42
May 2024	.0470	12	N/A	8.6	N/A	42
June 2024	.0422	13	N/A	8.1	N/A	42
July 2024	.0343	13	N/A	8.5	N/A	42
Aug. 2024	.0312	20	N/A	9.0	N/A	42
Oct. 2024	.0000	18	N/A	9.0	N/A	42

Provide a discussion of all persistent excursions above the permitted limits and any corrective actions taken.

Click to enter text.

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: 0 (zero)

Average Daily Flows, in MGD: 0 (zero)

Significant IUs – non-categorical:

Number of IUs: 0 (zero)

Average Daily Flows, in MGD: 0 (zero)

Other IUs:

Number of IUs: 0 (zero)

Average Daily Flows, in MGD: 0 (zero)

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.

Section 2. POTWs with Approved Programs or Those Required to Develop a Program (Instructions Page 90)

N/A

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)

N/A

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.

ATTACHMENT No. 1

ADMINISTRATIVE REPORT 1.0
SECTION 3

CORE DATA FORM

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 600737357		RN 101917839

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 Runge

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
		746002019	

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: P.O. Box 206

City	Runge	State	TX	ZIP	78151	ZIP + 4	

16. Country Mailing Information *(if outside USA)*	17. E-Mail Address *(if applicable)*
	city.of.runge@sbcglobal.net

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

(830) 239-4121		( ) -

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 Runge Wastewater Treatment Plant

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	400 W. Lyons							
	City	Runge	**State**	TX	**ZIP**	78151	**ZIP + 4**	
24. County	Karnes							

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:	28.87556		**28. Longitude (W) In Decimal:**	97.70417	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
28	52	32	97	42	15

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.)*

A wastewater treatment plant for Runge

34. Mailing Address:	**P.O. Box 206**							
	City	**Runge**	**State**	**TX**	**ZIP**	**78151**	**ZIP + 4**	
35. E-Mail Address:	**city.of.runge@sbcglobal.net**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(830) 239-4121		( ) -

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:
	WQ0010266001			

SECTION IV: Preparer Information

40. Name:	Kyle Stoner		**41. Title:**	Graduate Engineer
42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**	
(210) 828-7070		( ) -	kyle@copeengineeringtx.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:	Cope Engineering, Inc.	**Job Title:**	Graduate Engineer	
Name *(In Print):*	Kyle Stoner		**Phone:**	(210) 828- **7070**
Signature:			**Date:**	2/14/25

ATTACHMENT No. 2

ADMINISTRATIVE REPORT 1.0
SECTION 8

PLAIN LANGUAGE SUMMARY

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUMMARY OF APPLICATION IN PLAIN LANGUAGE FOR TPDES OR TLAP PERMIT APPLICATIONS

Summary of Application (in plain language) Template and Instructions for Texas Pollutant Discharge Elimination System (TPDES) and Texas Land Application (TLAP) Permit Applications

The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 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.

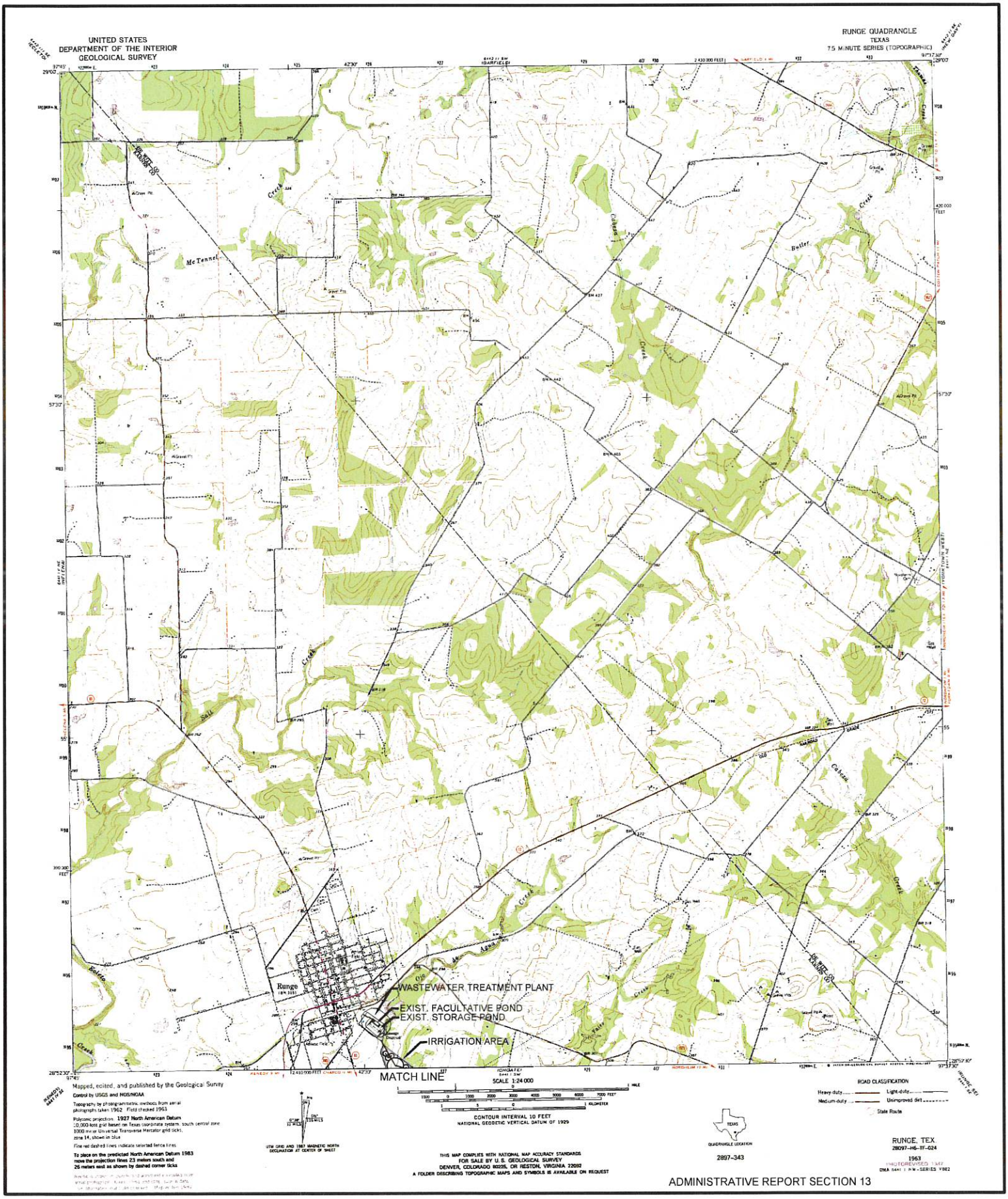
City of Runge (CN600737357) operates the City of Runge Wastewater Treatment Plant (RN: 101917839), a treatment plant with a primary settling pond system that consists of a bar screen, facultative lagoon, effluent storage pond, and irrigation fields. The facility is located at 400 W. Lyons , in the City of Runge, Karnes County, Texas 78151. This request is to renew the Texas Land Application Permit (TLAP). This permit will not authorize a discharge of pollutants into water in the state.

Discharges from the facility are expected to contain CBOD5, suspended solids, ammonia nitrogen, nitrate nitrogen, kjeldahl nitrogen, sulfate, chloride, phosphorus, E. coli, and dissolved solids. The irrigated effluent is treated by a bar screen and pumped via a wet well and lift station to a facultative lagoon for settling. The treated effluent is then conveyed to a storage pond and pumped to the irrigation field.

ATTACHMENT No. 3

ADMINISTRATIVE REPORT 1.0
SECTION 13

USGS TOPOGRAPHIC MAP



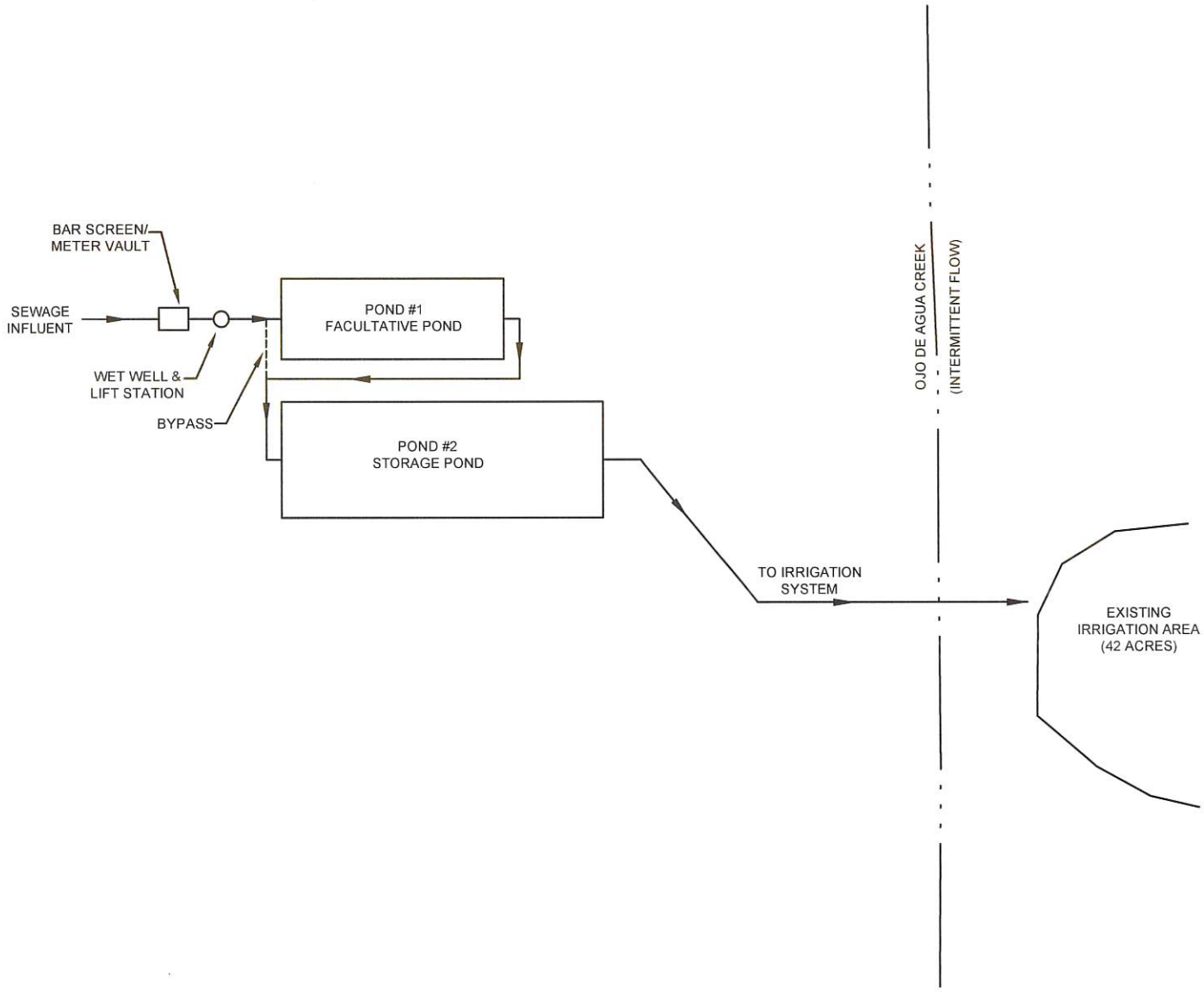
ADMINISTRATIVE REPORT SECTION 13

ADMINISTRATIVE REPORT SECTION 13

ATTACHMENT No. 4

DOMESTIC TECHNICAL REPORT 1.0
ITEM 2C

FLOW DIAGRAM



COPE ENGINEERNG, INC.
8611 BOTTS LANE
SAN ANTONIO, TX 78217
(210) 828-7070 OFFICE

TEXAS REG. #F-16078

WWW.COPEENGINEERINGTX.COM

FLOW DIAGRAM
DOMESTIC TECHNICAL REPORT 1.0
ITEM 2C

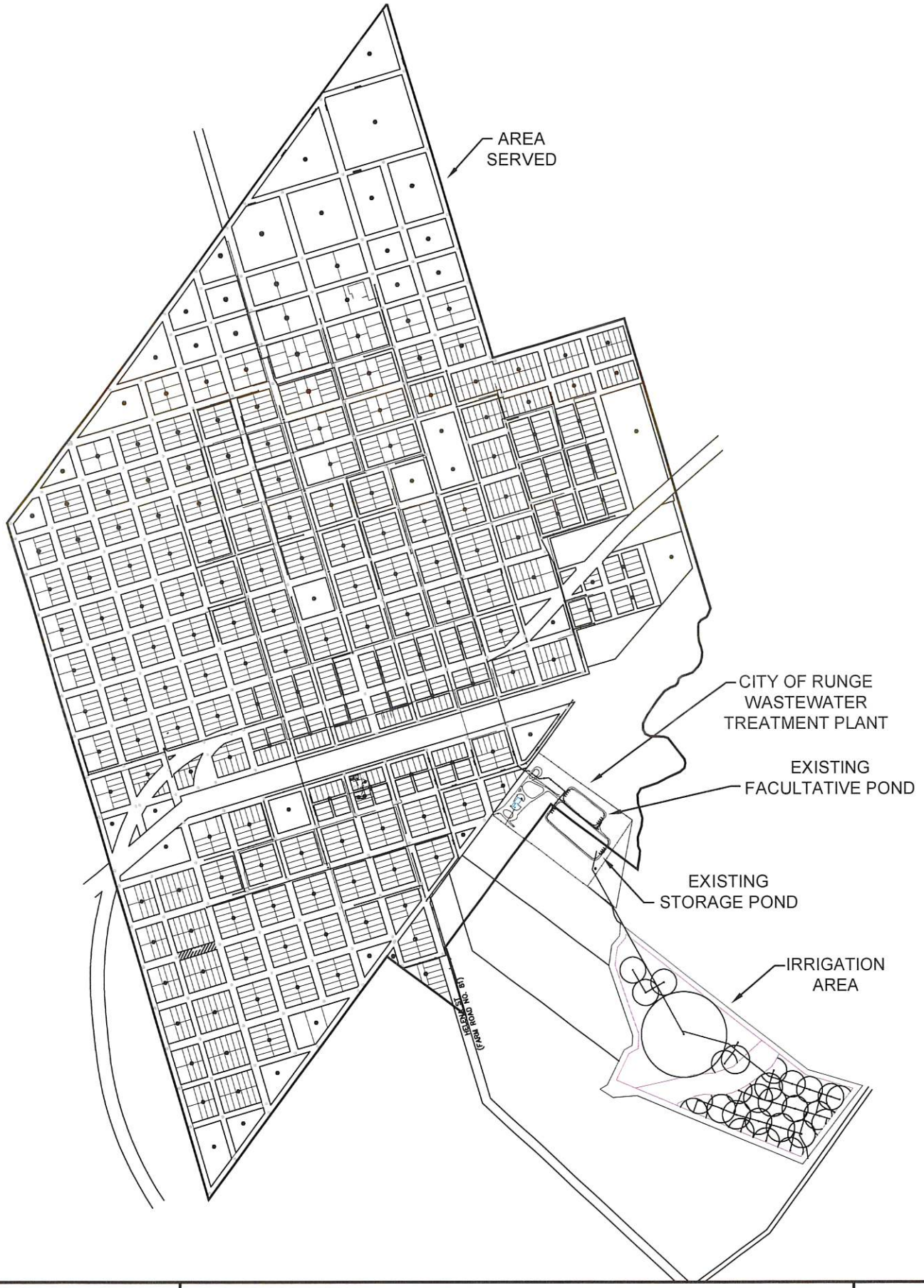
CITY OF RUNGE TEXAS

SHT 1 OF 1

ATTACHMENT No. 5

DOMESTIC TECHNICAL REPORT 1.0
SECTION 3

SITE DRAWING



COPE ENGINEERNG, INC.
8611 BOTTS LANE
SAN ANTONIO, TX 78217
(210) 828-7070 OFFICE

TEXAS REG. #F-16078

WWW.COPEENGINEERINGTX.COM

SITE DRAWING
DOMESTIC TECHNICAL REPORT 1.0
ITEM 3

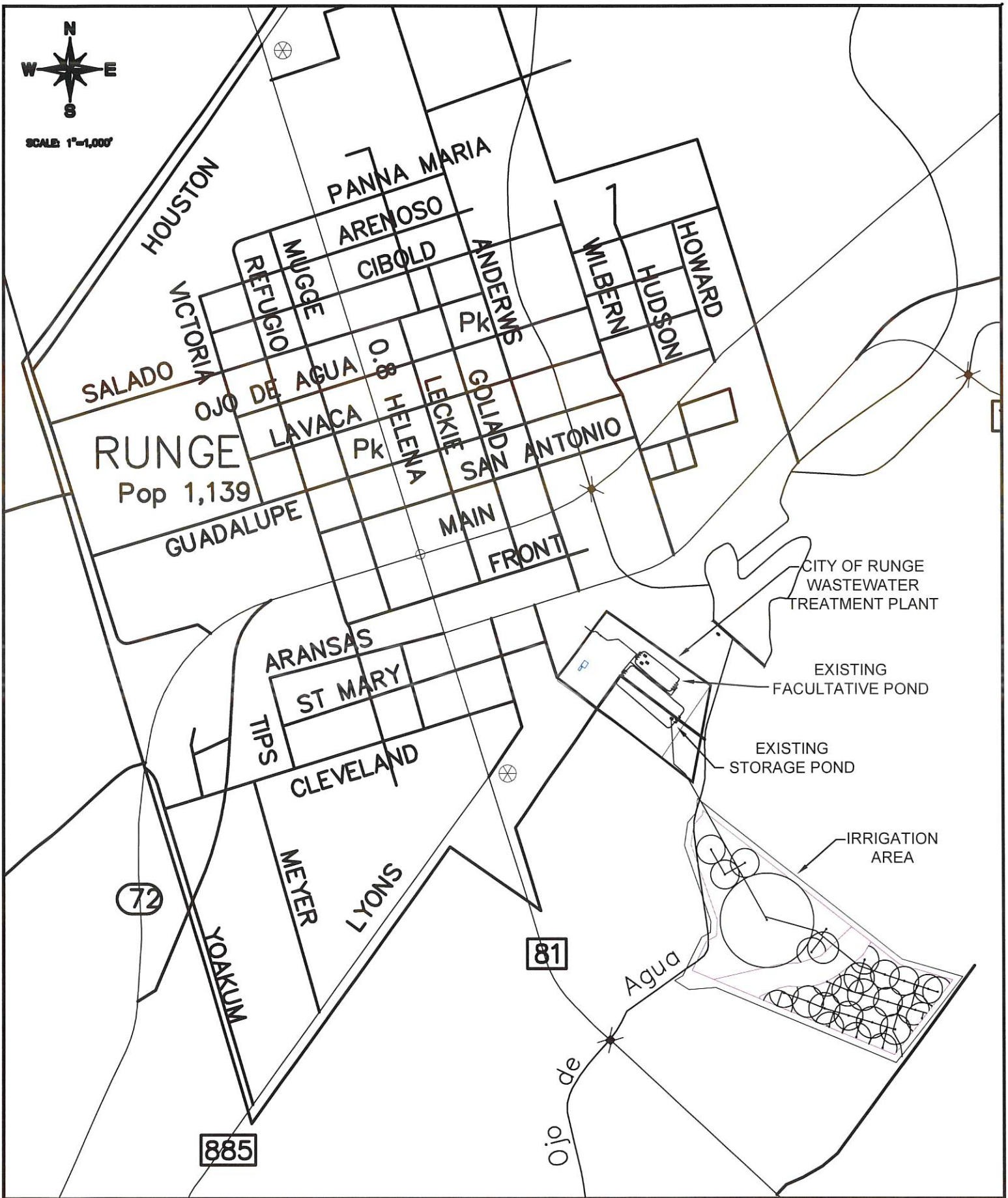
CITY OF RUNGE TEXAS

SHT 1 OF 1

ATTACHMENT No. 6

DOMESTIC TECHNICAL REPORT 1.0
ITEM 11A

GENERAL HIGHWAY (COUNTY) MAP



COPE ENGINEERNG, INC.
8611 BOTTS LANE
SAN ANTONIO, TX 78217
(210) 828-7070 OFFICE
TEXAS REG. #F-16078
WWW.COPEENGINEERINGTX.COM

GENERAL HIGHWAY (COUNTY) MAP
DOMESTIC TECHNICAL REPORT 1.0
ITEM 11A

CITY OF RUNGE TEXAS

SHT 1 OF 1

ATTACHMENT No. 7

DOMESTIC TECHNICAL REPORT 1.0
ITEM 11A

USDA NATURAL RESOURCES CONSERVATION SERVICE SOIL MAP

Soil Map—Karnes County, Texas
(City of Runge Wastewater Plant)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Karnes County, Texas
Survey Area Data: Version 21, Aug 30, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

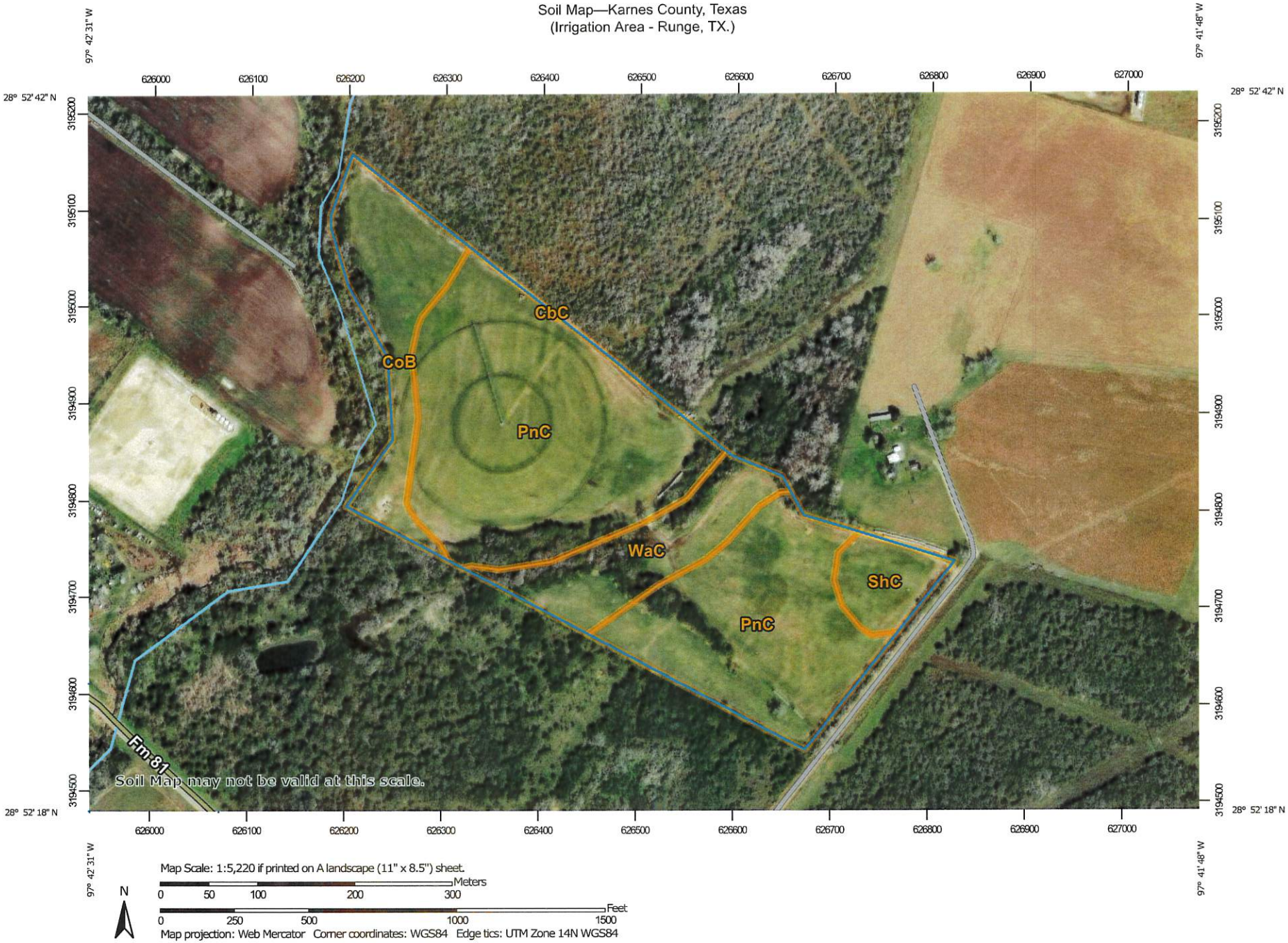
Date(s) aerial images were photographed: May 28, 2010—Oct 17, 2017

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CaA	Clareville clay loam, 0 to 1 percent slopes	10.0	58.4%
CoB	Coy clay loam, 1 to 3 percent slopes	0.4	2.6%
MoA	Monteola clay, 0 to 1 percent slopes	6.6	38.9%
PnC	Pernitas sandy clay loam, 2 to 5 percent slopes	0.0	0.1%
Totals for Area of Interest		**17.1**	**100.0%**

Soil Map—Karnes County, Texas
(Irrigation Area - Runge, TX.)



Map Scale: 1:5,220 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Karnes County, Texas
Survey Area Data: Version 21, Aug 30, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 28, 2010—Oct 17, 2017

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

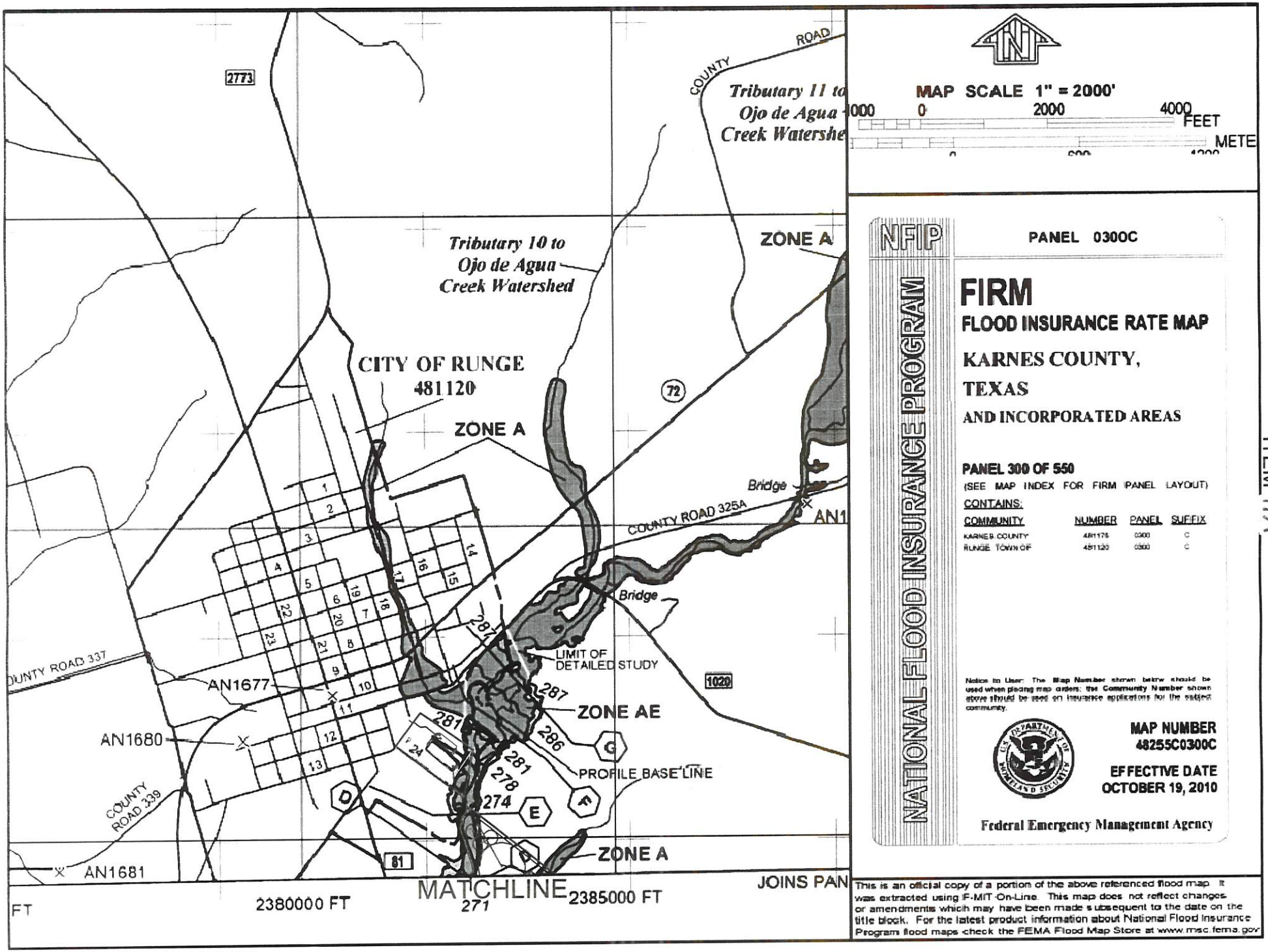
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CbC	Collbro sandy clay loam, 3 to 5 percent slopes	0.0	0.0%
CoB	Coy clay loam, 1 to 3 percent slopes	5.8	14.7%
PnC	Pernitas sandy clay loam, 2 to 5 percent slopes	26.4	67.5%
ShC	Schattel clay loam, 2 to 5 percent slopes	2.0	5.2%
WaC	Weesatche fine sandy loam, 2 to 5 percent slopes	4.9	12.5%
Totals for Area of Interest		**39.1**	**100.0%**

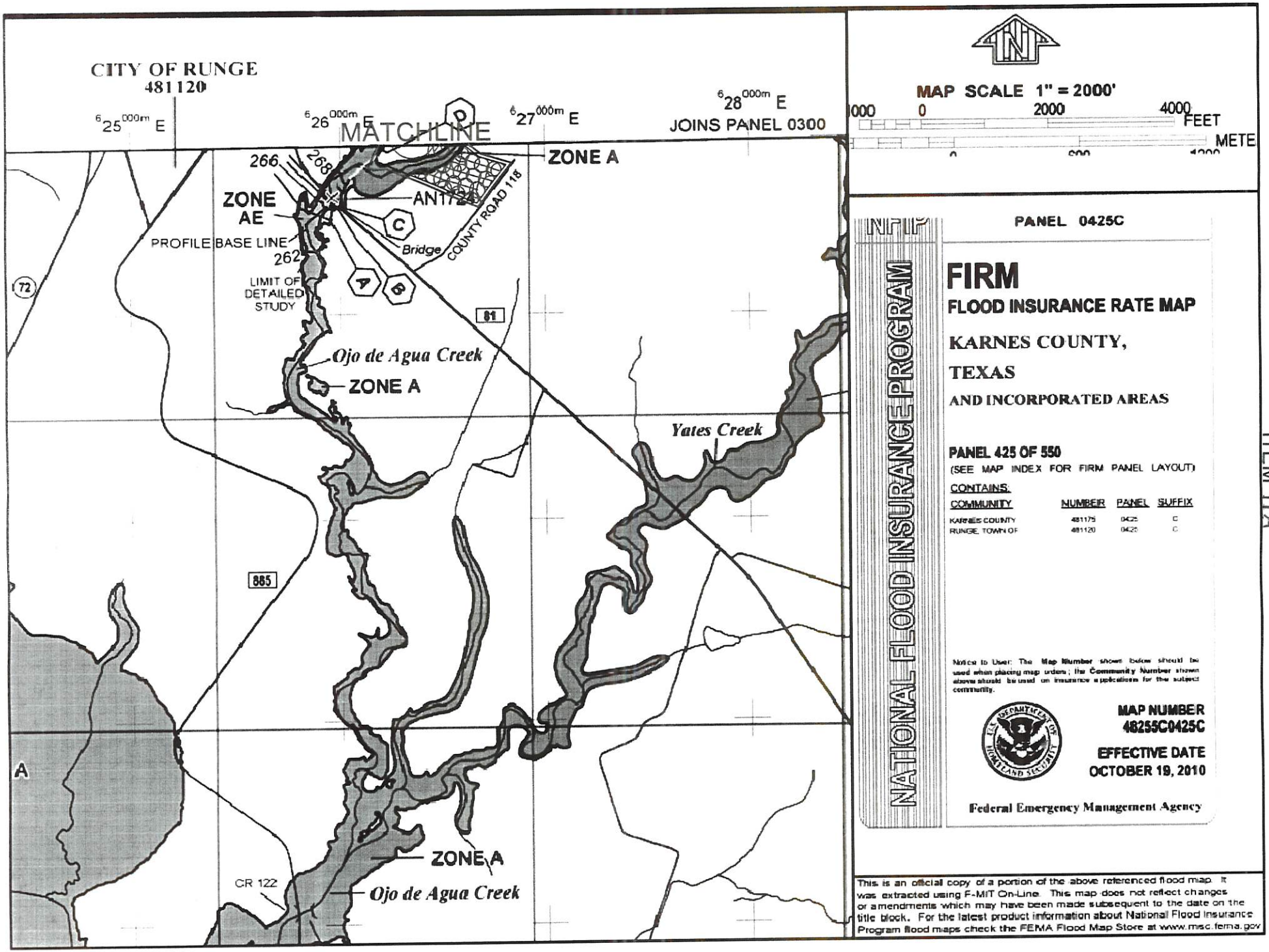
ATTACHMENT No. 8

DOMESTIC TECHNICAL REPORT 1.0
ITEM 11A

FEDERAL EMERGENCY MANAGEMENT MAP



DOMESTIC TECHNICAL REPORT 1.0
ITEM 11A

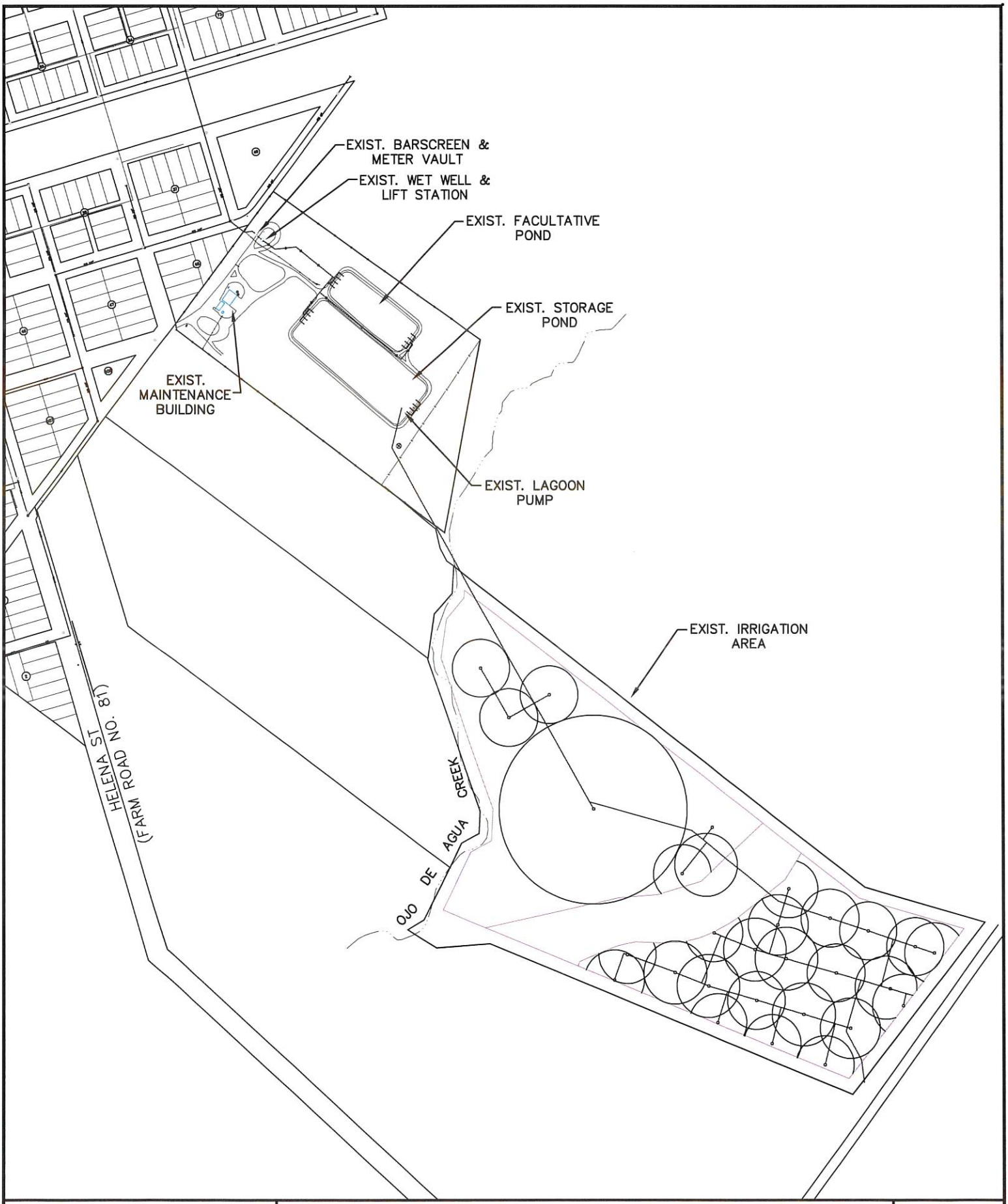


DOMESTIC TECHNICAL REPORT 1.0
ITEM 11A

ATTACHMENT No. 9

DOMESTIC TECHNICAL REPORT 1.0
ITEM 11A

SITE MAP



COPE ENGINEERNG, INC.
8611 BOTTS LANE
SAN ANTONIO, TX 78217
(210) 828-7070 OFFICE
TEXAS REG. #F-16078
WWW.COPEENGINEERINGTX.COM

SITE MAP
DOMESTIC TECHNICAL REPORT 1.0
ITEM 11A

CITY OF RUNGE TEXAS

SHT 1 OF 1

ATTACHMENT No. 10

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.0
LAND DISPOSAL OF EFFLUENT

SECTION 5

ANNUAL CROPPING PLAN

DOMESTIC WORKSHEET 3.0
SECTION 5

ANNUAL CROPPING PLAN

The irrigation site is composed of 42 acres used for agricultural pasture land.

The predominant soil on the surface at the irrigation site is Pernitas sandy clay loam (PnC). See attached USDA NRCS Soil Map in the attachments of this application.

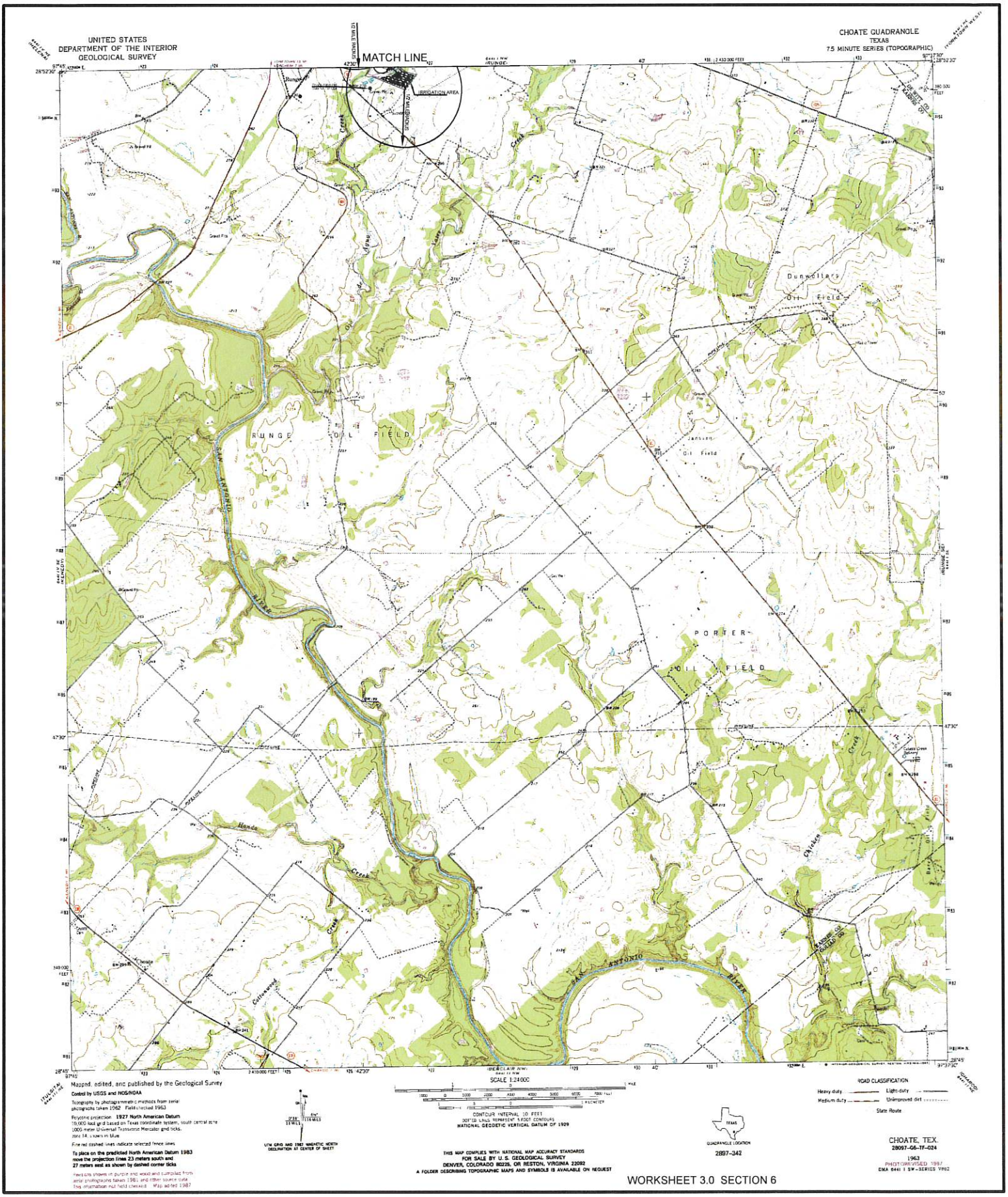
The predominant cover is Coastal Bermuda grass. The minimum harvest height is 4" and the maximum harvest height is 24". It is harvested twice a year for the typical hay bailing activity. It has high salt tolerance and requires no supplemental watering. The growing season 8 out of 10 years is about 350 days per year for temperature above 24°F. No additional fertilizers are required.

ATTACHMENT No. 11

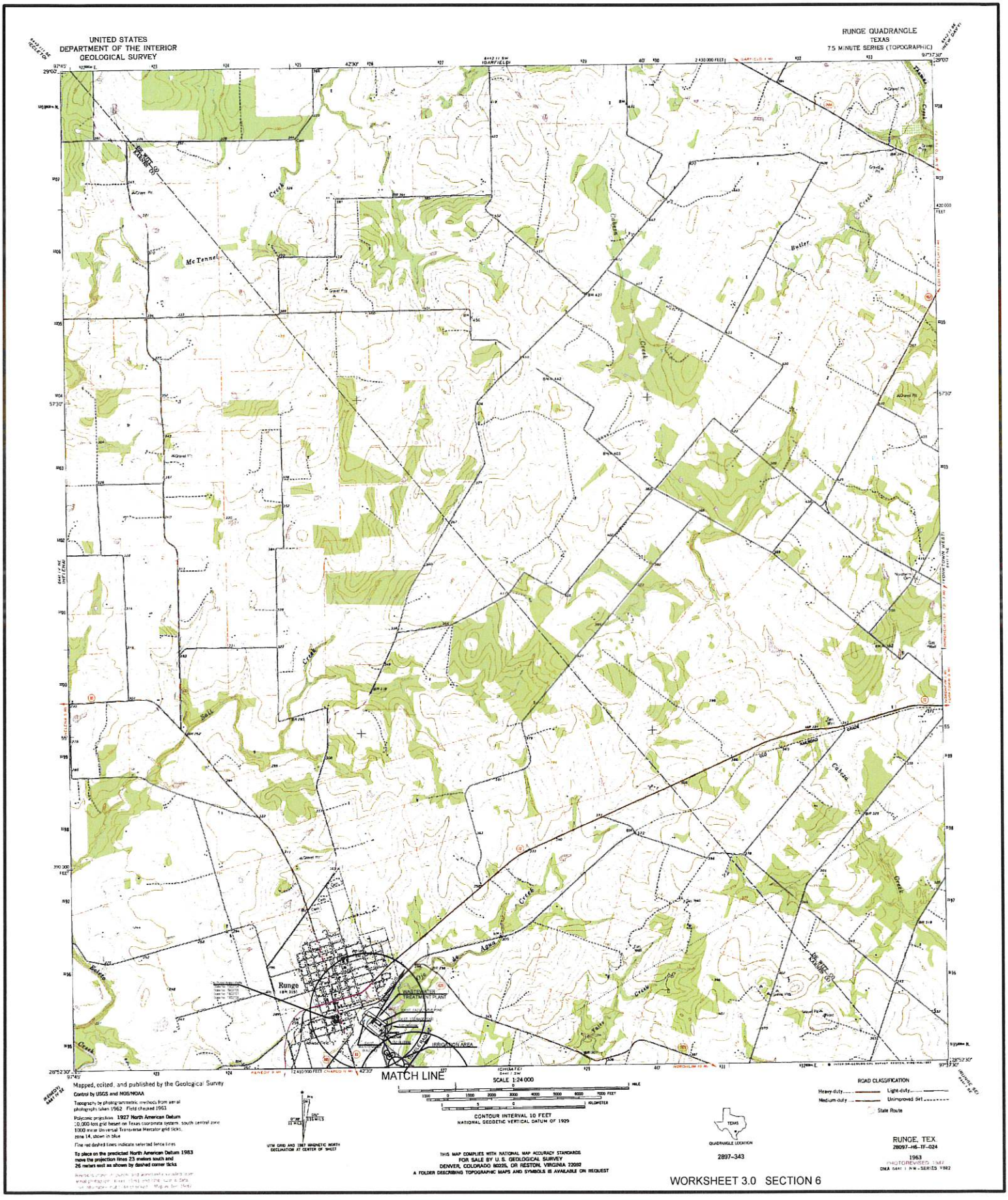
DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.0
LAND DISPOSAL OF EFFLUENT

SECTION 6

NEARBY WELL & MAP INFORMATION (USGS MAP)



WORKSHEET 3.0 SECTION 6



WORKSHEET 3.0 SECTION 6

ATTACHMENT No. 12

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.0
LAND DISPOSAL OF EFFLUENT

SECTION 6

WELL ID INFORMATION

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 79-03-704

groundwater

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	7903704	**Well Type**	Withdrawal of Water
County	Karnes	**Well Use**	Public Supply
River Basin	San Antonio	**Water Level Observation**	Miscellaneous Measurements
Groundwater Management Area	15	**Water Quality Available**	Yes
Regional Water Planning Area	L - South Central Texas	**Pump**	Submersible
Groundwater Conservation District	Evergreen UWCD	**Pump Depth** (feet below land surface)	
Latitude (decimal degrees)	28.881389	**Power Type**	Electric Motor
Latitude (degrees minutes seconds)	28° 52' 53" N	**Annular Seal Method**	
Longitude (decimal degrees)	-97.712778	**Surface Completion**	
Longitude (degrees minutes seconds)	097° 42' 46" W	**Owner**	City of Runge well # 2
Coordinate Source	Global Positioning System - GPS	**Driller**	Layne-Texas Co.
Aquifer Code	122JSPR - Jasper Aquifer	**Other Data Available**	Drillers Log
Aquifer	Gulf Coast	**Well Report Tracking Number**	
Aquifer Pick Method		**Plugging Report Tracking Number**	
Land Surface Elevation (feet above sea level)	310	**U.S. Geological Survey Site Number**	
Land Surface Elevation Method	Interpolated From Topo Map	**Texas Commission on Environmental Quality Source Id**	G1280003B
Well Depth (feet below land surface)	212	**Groundwater Conservation District Well Number**	
Well Depth Source	Driller's Log	**Owner Well Number**	
Drilling Start Date		**Other Well Number**	
Drilling End Date	0/0/1935	**Previous State Well Number**	
Drilling Method		**Reporting Agency**	Texas Water Development Board
Borehole Completion		**Created Date**	6/21/2001
		Last Update Date	10/4/2006

Remarks Reported yield, 132 gpm. Drawdown 26 ft. Screened from 156 to 190 ft

Casing - No Data

Well Tests

Test Date	Test Type	Yield (gallons per minute)	Drawdown (ft.)	Test Hours
	Unknown	132	26	0

Lithology

Top Depth (ft.)	Bottom Depth (ft.)	Description
0	4	SURFACE SOIL
4	66	HARD YELLOW CLAY
66	67	ROCK
67	96	HARD CLAY
96	116	CLAY AND BOULDERS
116	136	CLAY
136	154	HARD CLAY AND BOULDERS
154	188	SAND
188	212	CLAY

Annular Seal Range - No Data

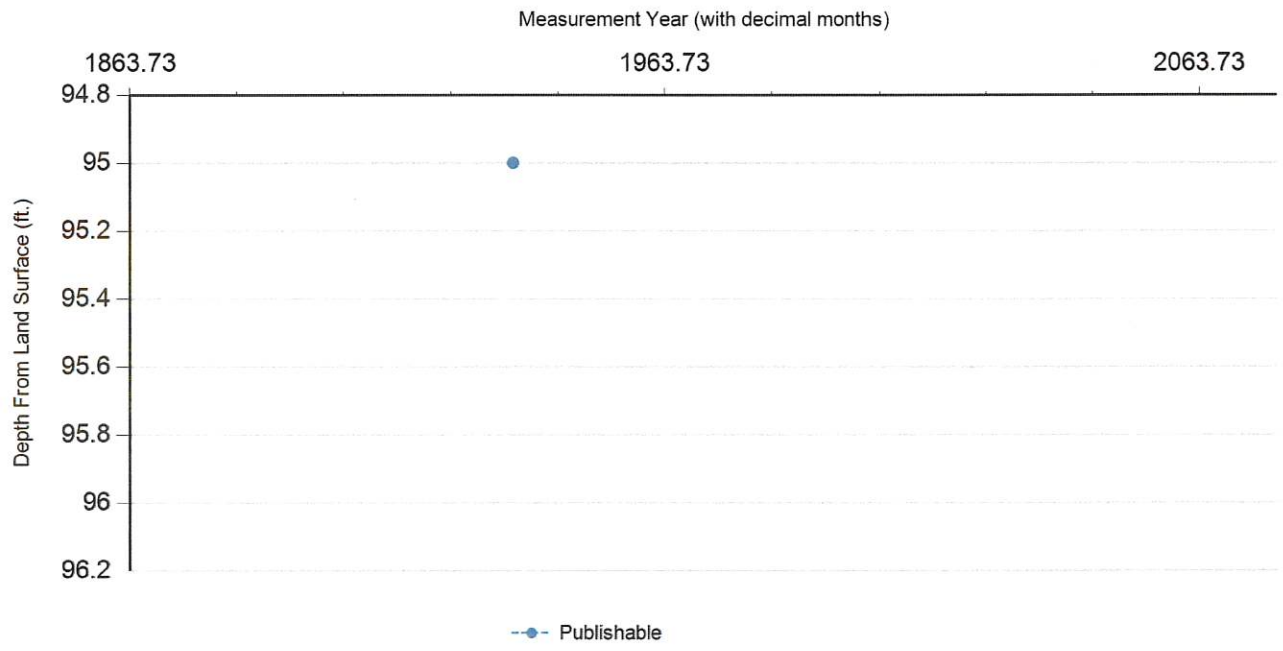
Borehole - No Data

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	0/0/1935		95		215	1	Other or Source of Measurement Unknown	Unknown		
X	8/7/2006					1	Texas Water Development Board	Steel Tape	28	

Code Descriptions

Status Code	Status Description
P	Publishable
X	No Measurement

Remark ID	Remark Description
28	Uncertain of reason for no measurement

Water Quality Analysis

Sample Date: 3/31/1937 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** U.S. Geological Survey

Sampled Aquifer: Jasper Aquifer

Analyzed Lab: U.S. Geological Survey Lab **Reliability:** From a report; unknown sample collection & preservation

Collection Remarks: Analysis taken from M-151

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		85.25	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		104.03	mg/L	
00910	CALCIUM (MG/L)		54	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		312	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		266	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		32	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		3.44		
00932	SODIUM, CALCULATED, PERCENT		51	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)	calculated	129	mg/L	
00945	SULFATE, TOTAL (MG/L AS SO4)		23	mg/L as SO4	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		601	mg/L	

Water Quality Analysis

Sample Date: 4/18/1954 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** U.S. Geological Survey

Sampled Aquifer: Jasper Aquifer

Analyzed Lab: **Reliability:** From a report; unknown sample collection & preservation

Collection Remarks: B-6007

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		231.15	mg/L as CACO 3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		282.08	mg/L	
00910	CALCIUM (MG/L)		130	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		315	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		1	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		472	mg/L as CACO 3	
01045	IRON, TOTAL (UG/L AS FE)		200	ug/L	
00920	MAGNESIUM (MG/L)		36	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		6.7	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.1	SU	
00937	POTASSIUM, TOTAL (MG/L AS K)		27	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		20	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		1.96		
00932	SODIUM, CALCULATED, PERCENT		31	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		98	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1540	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		36	mg/L as SO4	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		808	mg/L	

Water Quality Analysis

Sample Date: 10/0/1955 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** U.S. Geological Survey

Sampled Aquifer: Jasper Aquifer

Analyzed Lab: **Reliability:** From a report; unknown sample collection & preservation

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)		234.43	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		286.09	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)		300	ug/L	
00910	CALCIUM (MG/L)		121	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		312	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.5	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		425	mg/L as CACO3	
01045	IRON, TOTAL (UG/L AS FE)	<	10	ug/L	
00920	MAGNESIUM (MG/L)		30	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		5.1	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.6	SU	
00937	POTASSIUM, TOTAL (MG/L AS K)		7.8	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		37	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		2.7		
00932	SODIUM, CALCULATED, PERCENT		39	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		128	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1450	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		35	mg/L as SO4	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		817	mg/L	

Water Quality Analysis

Sample Date: 7/23/1981 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Jasper Aquifer

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)		205	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		250.17	mg/L	
00910	CALCIUM (MG/L)		131	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		353	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.6	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		454	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		31	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		7.3	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		8	SU	
00937	POTASSIUM, TOTAL (MG/L AS K)		8	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		31	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		2.67		
00932	SODIUM, CALCULATED, PERCENT		38	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		131	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1659	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		36	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		28	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		851	mg/L	

Water Quality Analysis

Sample Date: 6/21/2001 **Sample Time:** 1500 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Jasper Aquifer

Analyzed Lab: LCRA - Lower Colorado River Authority **Reliability:** Sampled using TWDB protocols

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
39086	ALKALINITY FIELD DISSOLVED AS CACO3		229	mg/L as CACO3	
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		222	mg/L as CACO3	
01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	4	ug/L	
01095	ANTIMONY, DISSOLVED (UG/L AS SB)	<	1	ug/L	
01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	2	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		141	ug/L	
01010	BERYLLIUM, DISSOLVED (UG/L AS BE)	<	1	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		270.92	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)		379	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		1.42	mg/L	
01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	1	ug/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		133	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		340	mg/L	
01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	1	ug/L	
01035	COBALT, DISSOLVED (UG/L AS CO)	<	1	ug/L	
01040	COPPER, DISSOLVED (UG/L AS CU)	<	2	ug/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.67	mg/L	
04241	GROSS ALPHA RADIATION,TOTAL, PRODUCED WATER(pCi/L)		7.3	pCi/L	2.7
04242	GROSS BETA RADIATION, TOTAL, PRODUCED WATER(pCi/L)		10	pCi/L	3
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		482	mg/L as CACO3	
01046	IRON, DISSOLVED (UG/L AS FE)	<	51	ug/L	
01049	LEAD, DISSOLVED (UG/L AS PB)	<	1	ug/L	
01130	LITHIUM, DISSOLVED (UG/L AS LI)		32.8	ug/L	
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		35.9	mg/L	
01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	1	ug/L	
01060	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	1	ug/L	
01065	NICKEL, DISSOLVED (UG/L AS NI)		1.65	ug/L	

Texas Water Development Board

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 79-03-704

groundwater division

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		7.61	mg/L as NO3	
00631	NITRITE PLUS NITRATE, DISSOLVED (MG/L AS N)		1.72	mg/L as N	
00400	PH (STANDARD UNITS), FIELD		7.1	SU	
00935	POTASSIUM, DISSOLVED (MG/L AS K)		7.92	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	4	ug/L	
00955	SILICA, DISSOLVED (MG/L AS SI02)		31.7	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		2.66		
00932	SODIUM, CALCULATED, PERCENT		37	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		134	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1584	MICR	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		2750	ug/L	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		35.8	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		25.3	C	
01057	THALLIUM, DISSOLVED (UG/L AS TL)	<	1	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		862	mg/L	
01085	VANADIUM, DISSOLVED (UG/L AS V)		8.29	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)		175	ug/L	

Water Quality Analysis

Sample Date: 6/21/2001 **Sample Time:** **Sample Number:** 1 **Collection Entity:** Texas Commission on Environmental Quality

Sampled Aquifer: Jasper Aquifer

Analyzed Lab: Immunoassay at TCEQ **Reliability:** Sampled using TWDB protocols, but NOT filtered

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
39033	ATRAZINE, TOTAL, UG/L	<	0.05	ug/L	
82612	METOLACHLOR, WHOLE WATER, TOTAL RECOVERABLE, UG/L	<	0.05	ug/L	

Water Quality Analysis

Sample Date: 8/7/2006 **Sample Time:** 0838 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Jasper Aquifer

Analyzed Lab: Energy Labs Inc. **Reliability:** Sampled using TWDB protocols

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
39086	ALKALINITY FIELD DISSOLVED AS CACO3		224	mg/L as CACO3	
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)	<	1	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		284	mg/L as CACO3	
01503	ALPHA, DISSOLVED (PC/L)		9	PC/L	0.8
01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	1	ug/L	
01095	ANTIMONY, DISSOLVED (UG/L AS SB)	<	1	ug/L	
01000	ARSENIC, DISSOLVED (UG/L AS AS)		2	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		138	ug/L	
01010	BERYLLIUM, DISSOLVED (UG/L AS BE)	<	1	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		346.57	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)		360	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		1.7	mg/L	
01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	1	ug/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		130	mg/L	
28004	CARBON-14 DISS APPARENT AGE (YEARS BP)		12160	Y-BP	70
82172	CARBON-14 FRACTION MODERN		0.22		0.0019
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		353	mg/L	
01030	CHROMIUM, DISSOLVED (UG/L AS CR)		2	ug/L	
01035	COBALT, DISSOLVED (UG/L AS CO)	<	1	ug/L	
01040	COPPER, DISSOLVED (UG/L AS CU)		1	ug/L	
82081	DELTA CARBON 13 C13/C12 PER MIL		-7.2	0/00	
50791	DEUTERIUM, EXPRESSED AS PERMIL VSMOW		-25	0/00	1
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.6	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		472	mg/L as CACO3	
01046	IRON, DISSOLVED (UG/L AS FE)		167	ug/L	
01049	LEAD, DISSOLVED (UG/L AS PB)		1	ug/L	
01130	LITHIUM, DISSOLVED (UG/L AS LI)		42	ug/L	
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		35	mg/L	
01056	MANGANESE, DISSOLVED (UG/L AS MN)		5	ug/L	
01060	MOLYBDENUM, DISSOLVED (UG/L AS MO)		1	ug/L	

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 79-03-704

groundwater

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		7.08	mg/L as NO3	
00631	NITRITE PLUS NITRATE, DISSOLVED (MG/L AS N)		1.6	mg/L as N	
50790	OXYGEN-18, EXPRESSED AS PERMIL VSMOW		-4.7	0/00	0.3
50982	OXYGEN-18/OXYGEN-16 OF SULFATE (RATIO PER MIL)		4.5	0/00	0.4
00400	PH (STANDARD UNITS), FIELD		6.94	SU	
00935	POTASSIUM, DISSOLVED (MG/L AS K)		8.3	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
01145	SELENIUM, DISSOLVED (UG/L AS SE)		6	ug/L	
00955	SILICA, DISSOLVED (MG/L AS SI02)		30.2	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		2.63		
00932	SODIUM, CALCULATED, PERCENT		38	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		131	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1468	MICR	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		2480	ug/L	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		39	mg/L as SO4	
49932	SULFUR-34/32 OF SULFATE, DISSOLVED, PER MIL		11	0/00	0.3
00010	TEMPERATURE, WATER (CELSIUS)		25	C	
01057	THALLIUM, DISSOLVED (UG/L AS TL)	<	1	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		907	mg/L	
07012	TRITIUM IN WATER (TRITIUM UNITS)		0.1	TU	0.09
01085	VANADIUM, DISSOLVED (UG/L AS V)		9	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)		251	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

Aquifer(s) Oakville Sandstone Project No. F-39 State Well No. 79-03-704

Field No./Owner's Well No. #2 County Karnes (128)

1. Location: ___ ±, ___ ±, Section ___, Block ___, Survey ___, Lat. 28-52-52 N, Long. 97-42-45 W

2. Owner: City of Runge Address: ___

Tenant (other): ___ Address: ___

Driller: Layne Texas Address: ___

3. Land Surface Elevation: 300 ft. above msl determined by USGS

4. Drilled: ___ 1935; Dug, Cable Tool, Rotary, Air, ___

5. Depth: Rept. 212 ft. Meas. ___ ft.

6. Borehole Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed

7. Pump: Mfr. ___ Type Turbine

No. Stages ___, Bowls Diam. ___ in., Setting ___ ft.

Column Diam. ___ in., Length Tailpipe ___ ft.

8. Motor: Mfr. ___ Fuel Elec HP. 10

9. Yield: Flow ___ gpm, Pump 132 gpm, Meas. (Rept.), Est. ___ Date ___

10. Performance Test: Date ___ Length of Test ___ Made by ___

Static Level ___ ft. Pumping Level ___ ft. Drawdown 26 ft.

Production ___ gpm Specific Capacity ___ gpm/ft.

11. Quality: (Remarks on taste, odor, color, etc.) ___

Analyses

77° F Date 10/55 Laboratory ___ TDS ___ Sp Cond ___

Date 7/13/81 Laboratory ___ TDS ___ Sp Cond ___

12. Other data available (as circled): Pumping Test, Power & Yield Test, Drillers Log, Formation Samples, Geophysical Log(s) ___

CASING, BLANK PIPE & WELL SCREEN Cemented From ___ ft. to ___ ft.

Diam. (In.)	Type (type)	Setting (feet) from	Setting (feet) to
10		0	212
Screen		156	190

RECEIVED AUG 17 1981 CR/TDWR

13. Water Level(s): 95 ft. rept. meas. ___ 1935 above/below LSD 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: D Jones Source of data: B-6007 Date: 7/30/81

16. Remarks: ___

17. Location or Sketch: Next Page

TDWR-0308

W/L Obs. Well ___ W/Q Obs. Well ___

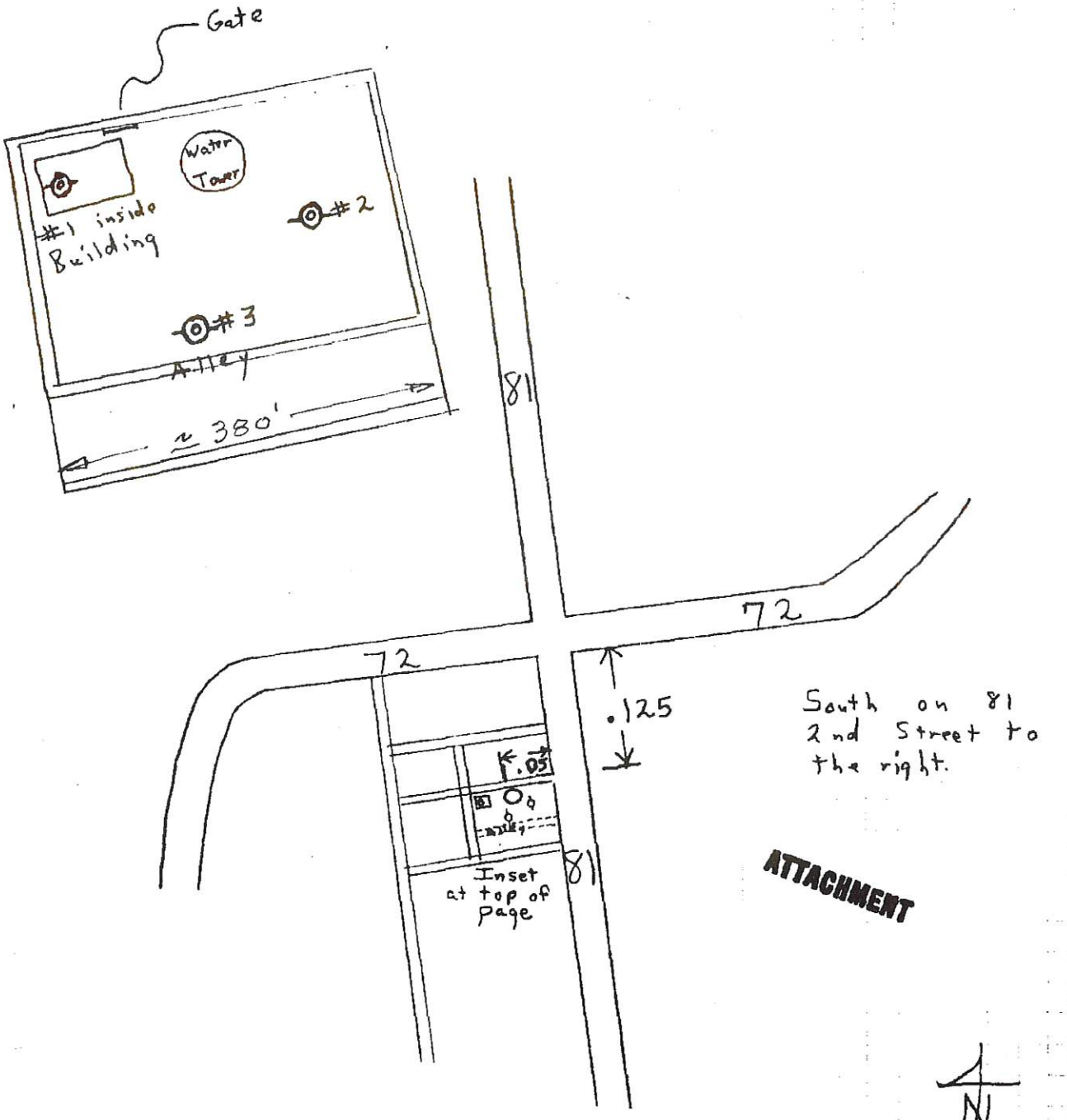
State Well No. 79-03-704

TE S D ARTMENT OF WATER RES RCE

BY____ DATE____ DIVISION ____ SHEET NO.____ OF____

CHKD____ DATE____ JOB NAME 28- 79-03-7

JOB NO. E-39 PROG. CODE Well #2



PZ 79-03-704

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. 01
Work No. 6040

CHEMICAL WATER ANALYSIS REPORT

Send report to:

Data Collection and Evaluation Section
Texas Department of Water Resources
P.O. Box 13087
Austin, Texas 78711

RECEIVED
MAR 31 1982

County 128 Karnes
State Well No. 79-03-704
Well No. #2
Date Collected 07-23-81

Location _____ Sample No. _____ By _____
Source (type of well) Turb. Elec Owner City of Runge
Date Drilled _____ Depth _____ ft. WBF _____
Producing intervals _____ Water level _____ ft. Sample depth _____ ft.
Sampled after pumping 5 Min hrs. Yield _____ GPM meas. est. Temperature 82 °F _____ °C
Point of collection Faucet Appearance ☑ clear ☐ turbid ☐ colored ☐ other
Use Public Remarks _____

(FOR LABORATORY USE ONLY)

Laboratory N CE1-17031

CHEMICAL ANALYSIS JUL 27 1981

Date Received JUL 27 1981

KEY PUNCHED SEP 2 1981

Date Reported AUG 31 '81

		MG/L	ME/L
Silica	00955	31	
Calcium	00915	131	6.57
Magnesium	00925	31	2.53
Sodium	00929	131	5.70
Total			14.80
☐ Potassium	00937	8.	0.20
[3] ☐ Manganese	01055	.	15.00
☐ Boron	01022	.	%Na _____
[3] ☐ Total Iron	01045	.	SAR _____
			RSC _____

☐ (other) _____ MG/L

Specific Conductance (micromhos/cm3) 00095 1220

Diluted Conductance (micromhos/cm3) 21 x 79 = 1659

" ☐ " items will be analyzed if checked.

		MG/L	ME/L
Carbonate	00445	0	
Bicarbonate 123	00440	250	4.10
Sulfate	00945	36	0.75
Chloride	00940	353	9.95
Fluoride	00951	0.6	0.03
Nitrate	00403	7.3	0.12
pH	00403	8.0	
Total			14.95
[1] Dissolved Solids (residue at 180°C)	70300		960
Phenolphthalein Alkalinity as $CaCO_3$	00415		0
Total Alkalinity as $CaCO_3$ (4.10)	00410		205
Total Hardness as $CaCO_3$ (9.10)	00900		455
[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 _____

TDWR-0148 (Rev. 1-8-80)

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. _____
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

County 128 KARNES
State Well No. 79-03-704
Well No. _____
Date Collected 10-06-55

Location _____ Sample No. _____ By _____
Source (type of well) _____ Owner _____
Date Drilled _____ Depth _____ ft. WBF _____
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 _____

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. _____ Date Received _____ Date Reported _____

		MG/L	ME/L
Silica	00955	37	
Calcium	00915	121	
Magnesium	00925	30	
Sodium	00929	128	
	Total		
☐ Potassium	00937	7.8	
[3] ☐ Manganese	01055	.	%Na 39
☐ Boron	01022	.3	SAR 2.7
[3] ☐ Total Iron	01045	.0	RSC 0
☐ (other) _____		MG/L	
Specific Conductance (micromhos/cm3)	00095	1450	
Diluted Conductance (micromhos/cm3)		x	

		MG/L	ME/L
Carbonate	00445	.	
Bicarbonate	00440	286	
Sulfate	00945	35	
Chloride	00940	312	
Fluoride	00951	.5	
Nitrate	71850	5.1	
pH	00403	7.6	Total
[1] Dissolved Solids (residue at 180° C)	70300		813
Phenolphthalein Alkalinity as C aCO_3	00415		
Total Alkalinity as C aCO_3	00410		
Total Hardness as C aCO_3	00900		426
[2] Nitrogen Cycle			
Ammonia - N	00610		
Nitrite - N	00615		
Nitrate - N	00620		
Organic Nitrogen	00605		

" ☐ " 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.

Analyst _____ Checked By _____

TDWR-0148 (Rev. 1-8-80)

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. [ ]
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

County 128 KARNES
State Well No. 79-03-704
Well No. _____
Date Collected 04-18-54

Location _____ Sample No. [ ] By _____

Source (type of well) _____ Owner _____

Date Drilled _____ Depth _____ ft. WBF _____

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 B-6007

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. _____ Date Received _____ Date Reported _____

		MG/L	ME/L
Silica	00955	20	
Calcium	00915	130	
Magnesium	00925	36	
Sodium	00929	98	
	Total		
☐ Potassium	00937	2.7	
[3] ☐ Manganese	01055		
☐ Boron	01022		
[3] ☐ Total Iron	01045	.2	
☐ (other) _____		MG/L	

%Na 30
SAR 2.0
RSC 0

Specific Conductance (micromhos/cm[3]) 00095 1540

Diluted Conductance (micromhos/cm[3]) _____ x _____

" ☐ " items will be analyzed if checked.

		MG/L	ME/L
Carbonate	00445		
Bicarbonate	00440	282	
Sulfate	00945	36	
Chloride	00940	315	
Fluoride	00951	1.0	
Nitrate	71850	6.7	
pH	00403	7.1	
		Total	

[1] Dissolved Solids (residue at 180°C)	70300	962
Phenolphthalein Alkalinity as C aCO_3	00415	
Total Alkalinity as C aCO_3	00410	
Total Hardness as C aCO_3	00900	472

[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 _____

TDWR-0148 (Rev. 1-8-80)

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
Program No. _____ Lab No. 02
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

County 128 KARNES
State Well No. 79-03-704
_____ Well No. _____
Date Collected 03-31-37

Location _____ Sample No. _____ By USGS

Source (type of well) _____ Owner City of Runge

Date Drilled 1935 Depth 212 ft. WBF OAKVILLE SANDSTONE

Producing intervals _____ Water level _____ ft. Sample depth _____ ft.

Sampled after pumping _____ hrs. Yield 132 GPM meas. est. Temperature _____ °F _____ °C

Point of collection _____ Appearance ☐ clear ☐ turbid ☐ colored ☐ other

Use P.S. Remarks _____

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

Laboratory No. _____ Date Received _____ Date Reported _____

	MG/L	ME/L
Silica		
Calcium	54	
Magnesium	32	
Sodium	129	
Total		
☐ Potassium		
[3] ☐ Manganese		
☐ Boron		
[3] ☐ Total Iron		
☐ (other) _____	MG/L	

%Na _____
SAR _____
RSC _____

Specific Conductance (micromhos/cm[3]) _____

Diluted Conductance (micromhos/cm[3]) _____ X _____

	MG/L	ME/L
Carbonate		
Bicarbonate	104	
Sulfate	23	
Chloride	312	
Fluoride		
Nitrate		
pH		
Total		
[1] Dissolved Solids (residue at 180°C)	601	
Phenolphthalein Alkalinity as $CaCO_3$		
Total Alkalinity as $CaCO_3$		
Total Hardness as $CaCO_3$	265	
[2] Nitrogen Cycle		
Ammonia - N		
Nitrite - N		
Nitrate - N		
Organic Nitrogen		

" ☐ " 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.

Analyst _____ Checked By _____

TDWR-0148 (Rev.7-78)

Table 6.- Drillers' logs of wells in Karnes County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)

Well E-39

Owner: City of Runge, well 2. Driller: Layne-Texas Co.

Surface soil	4	4	Clay	20	136
Clay, hard, yellow	62	66	Clay, hard and boulders	18	154
Rock	1	67	Sand	34	188
Clay, hard	29	96	Clay	24	212
Clay and boulders	20	116			

79-03-704

TWDB Water Quality Field Data Sheet

New Well: yes / no
State Well Number: 79-03-704
County: KARNES
County Code: 255
Aquifer Code: 122JSPR
Aquifer Id: 15

Send Results To: Owner / Lessee
Owner's Name: CITY OF RUNGE
Lessee's Name:
Attention:
Mailing Address: BOX 206 RUNGE 78151
Well Number: 2

Type of Sample: (LCRA) / HACH
Sample Number: 1049
Date: 6-21-01
Sampler(s): MB

CIRCLE BOTTLES TAKEN:

1 (on ice)	2	3 (on ice)	4 (on ice)	5
~~500ml (filtered)~~	~~500ml (filtered)~~	~~250ml (filtered)~~	40 ml (not filtered)	1 gallon (filtered)
Anions / Total Alkalinity	Cations	Nitrate/Nitrite	Atrazine	Radioactivity
no preservative	1ml Nitric (HNO3)	0.5 ml Sulfuric (H2SO4)	**no preservative**	10 ml Nitric (HNO3)

Add enough of the proper acid to each bottle that is preserved to drop the pH to 2.

Daily Meter Calibration:

pH	7	7.0
	4 or 10	10.0
Conductivity	500	501
	1000	1001
	2000	2000
	5000	

Time In: 1440
Time Out: 1535

W. L. depth from LSD (ft.): POA
W.L. remark:

Pumping Since: POA
Sampling Point: FAW

Well Use: PUBLIC
Lift: S
Power: E

Latitude: 28 52 54
Longitude: 97 42 46
Elevation: 302

Sample Time: 1500
Filter pressure: hand pump / line

Field Alkalinity Titration:

7.11 Start pH 4.52 End pH
50 ml. Sample Size
11.45 ml. Acid added for Total
ml. Acid added for Phenol

Items below calculated from ml. acid added data:
Field Total Alkalinity: 229 mg/L
Field Phenol Alkalinity: mg/L

Notes: @100 GPM.

Water Quality Stabilization Parameters Table

			Final Readings:	
Time:	1450	1500		
pH:	7.09	7.10		
Temperature (Celsius):	25.0	25.3		
Conductivity (uS/cm):	1582	1584		
Conductivity Temperature (Celsius):	25.2	25.6		

Items Below Calculated Later From Results:
Total Hardness: 482
Calculated TDS (mg/L): 862
Balanced: B

Data Entered By Sampler Into Database: ~~yes~~ / no

LCRA Environmental Laboratory Services

Date: *17-Jul-01*

CLIENT: Texas Water Development Board
Client Sample ID: 79-03-704
Lab Order: 0106204 **File No:** 16418
Project: TWDB 00-01B
Collection Date: 06/21/2001 3:00:00 PM
Lab ID: 0106204-13
Matrix: GROUNDWATER

Analyses	Storet	Result	PQL	Qual	Units	DF	BatchID	Date Analyzed
ICP METALS DISSOLVED			**E200.7**					Analyst: **SW**
Calcium		133	0.204		mg/L	1.02	R9416	07/05/2001
Magnesium		35.9	0.204		mg/L	1.02	R9416	07/05/2001
Potassium		7.92	0.204		mg/L	1.02	R9416	07/05/2001
Sodium		134	0.714		mg/L	1.02	R9416	07/05/2001
ICP METALS DISSOLVED			**E200.7**					Analyst: **SW**
Boron		379	51.0		µg/L	1.02	R9418	07/05/2001
Iron		ND	51.0		µg/L	1.02	R9418	07/05/2001
Strontium		2750	20.4		µg/L	1.02	R9418	07/05/2001
ICPMS DISSOLVED METALS			**E200.8**					Analyst: **PJM**
Aluminum		ND	4.00		µg/L	1	R9366	07/03/2001
Antimony		ND	1.00		µg/L	1	R9366	07/03/2001
Arsenic		ND	2.00		µg/L	1	R9366	07/03/2001
Barium		141	1.00		µg/L	1	R9366	07/03/2001
Beryllium		ND	1.00		µg/L	1	R9366	07/03/2001
Cadmium		ND	1.00		µg/L	1	R9366	07/03/2001
Chromium		ND	1.00		µg/L	1	R9366	07/03/2001
Cobalt		ND	1.00		µg/L	1	R9366	07/03/2001
Copper		ND	2.00		µg/L	1	R9366	07/03/2001
Lead		ND	1.00		µg/L	1	R9366	07/03/2001
Lithium		32.8	2.00		µg/L	1	R9366	07/03/2001
Manganese		ND	1.00		µg/L	1	R9366	07/03/2001
Molybdenum		ND	1.00		µg/L	1	R9366	07/03/2001
Nickel		1.65	1.00		µg/L	1	R9366	07/03/2001
Selenium		ND	4.00		µg/L	1	R9366	07/03/2001
Thallium		ND	1.00		µg/L	1	R9366	07/03/2001
Vanadium		8.29	1.00		µg/L	1	R9366	07/03/2001
Zinc		175	4.00		µg/L	1	R9366	07/03/2001
CATION/ANION BALANCES			**CALCULATION**					Analyst: **AMJ**
Cation/Anion Balance		Balanced			Date	1	R9482	07/11/2001
RADIOLOGICALS			**RADIOCHEM**					Analyst: **SB**
ALPHA, Gross		7.3			pci/L	1	R9444	07/02/2001
BETA, Gross		10			pci/L	1	R9444	07/02/2001

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

LCRA Environmental Laboratory Services

Date: *17-Jul-01*

CLIENT: Texas Water Development Board
Client Sample ID: 79-03-704

Lab Order: 0106204 **File No:** 16418
Project: TWDB 00-01B
Collection Date: 06/21/2001 3:00:00 PM
Lab ID: 0106204-13
Matrix: GROUNDWATER

Analyses	Storet	Result	PQL	Qual	Units	DF	BatchID	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY			**E300**					Analyst: **AMJ**
Bromide Dissolved		1.42	0.100		mg/L	5	R9465B	07/10/2001
Chloride Dissolved		340	5.00		mg/L	5	R9465B	07/10/2001
Fluoride Dissolved		0.673	0.0500		mg/L	5	R9465B	07/10/2001
Sulfate Dissolved		35 8	5.00		mg/L	5	R9465B	07/10/2001
ALKALINITY			**M2320 B**					Analyst: **WM**
Alkalinity, Phenolphthalein		ND			mg/L CaCO	1	R9253	06/27/2001
Alkalinity, Total (As CaCO3)		222	2.00		mg/L CaCO	1	R9253	06/27/2001
NITRATE AND NITRITE			**E353.2**					Analyst: **WR**
Nitrogen, Nitrate & Nitrite		1.72	0.0200		mg/L	1	R9315H	06/29/2001
SILICA			**E370.1**					Analyst: **WR**
Silica, Dissolved (as SiO2)		31.7	0.500		mg/L	1	R9509A	07/12/2001

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Gulf Coast FY06

TWDB Water Quality Field Data Sheet

Newly Inventoried Well 452

SWN: 79.03.704
County: KARNES
County Code: 255
Aquifer Code: 122JSPER
Aquifer Id: 15

Name: City of Runge
Address: PO Box 206
Runge Tx. 78151
Phone Number:
Attention:
Well Name or #:

ID Number: 452
Date: 8-7-06
Sampler(s): D GARCIA

1	2	3	4	5	6	7	8	9	10	11
250 ml unfiltered O-18 Deuterium	250ml filtered Iodide	500ml filtered Anions/T. Alk.	500ml filtered Nitrate	1 L unfiltered Tritium	1 L unfiltered C14/C13 corr	2 L filtered Cation/G. Alpha U 234,235,238	2 L unfiltered S-34/O-18 (Sulfate)	2 L unfiltered Chlorine-36	2 L unfiltered Sr-87/Sr-86	2 L unfiltered Radium (228/226)
None	Ice	Ice	Ice +H2SO4	None	NaOH (*)	(HNO3)	None	None	None	None

All acidified samples pH <2.0. (*) If natural pH<7, then add NaOH until pH is >7. If natural pH is ≥7, no NaOH required.

Calibration Verification Readings

pH 26.5	7 =	699
	4 or 10 =	10.00
Slp 95.6		738
Conductivity	500 =	530
	1000 =	996
	2000 =	1917
	5000 =	4800

Time In: 8:00
Time Out: 9:30

Water Level: POA
W.L. remark:
M.P. =

Pumping time:
Sampling Point: FAW

Well Use: Public Supply
Lift: S
Power: E

FIELD G.P.S. readings
Latitude: 28° 52' 53.7"
Longitude: 97° 42' 46.5"

Casing Type: Steel
Casing Size: 10 "

Sample Time: 0838
Filter pressure: hand pump / line / spring

Field Alkalinity Titration:
723 Start pH 4.49 End pH
mL Sample Size
mL Acid Phenol (> 8.3)
11.2 mL Acid Total (to pH 4.5)
mL acid added x 20 = Alkalinity

Phenol Alkalinity (82244): mg/L
Total Alkalinity (39086): 224 mg/L

Items Below Calculated Later From Results:
Dissolved Solids (mg/L): 907
Hardness (as CaCO3): 472
Balanced: B

Water Quality Stabilization Parameters Table (At least 3 readings @ 5 min. intervals)

									Notes:
Time	0820	0825	0830	0835					
pH	6.95	6.92	6.94	6.94					
Celsius Temp.	25.2	25.0	25.0	25.0					
Conductivity	1457	1457	1466	1468					

Data Entered By Sampler Into Database: yes / no

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client: Texas Water Development Board
Project: TWDB
Lab ID: C06080705-012
Client Sample ID: 7903704 (852)

Report Date: 09/19/06
Collection Date: 08/07/06 08:38
DateReceived: 08/15/06
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Phenolphthalein as CaCO3	ND	mg/L		1		A2320 B	08/17/06 14:44 / th
Alkalinity, Total as CaCO3	284	mg/L		1		A2320 B	08/17/06 14:44 / th
Bromide	1.7	mg/L		0.10		E300.0	08/19/06 01:51 / eli-b
Calcium	130	mg/L		0.5		E200.7	08/28/06 21:09 / ts
Chloride	353	mg/L		1		A4500-Cl B	08/16/06 15:02 / jl
Fluoride	0.6	mg/L		0.1		A4500-F C	08/16/06 14:01 / th
Magnesium	35.0	mg/L		0.5		E200.7	08/28/06 21:09 / ts
Nitrogen, Nitrate+Nitrite as N	1.6	mg/L		0.1		E353.2	08/21/06 13:22 / jal
Potassium	8.3	mg/L		0.5		E200.7	08/28/06 21:09 / ts
Silica	30.2	mg/L		0.1		E200.7	08/28/06 21:09 / ts
Sodium	131	mg/L		0.5		E200.7	08/28/06 21:09 / ts
Sulfate	39	mg/L		1		A4500-SO4 E	08/18/06 15:41 / bm
NON-METALS							
Iodide	ND	mg/L		0.10		E300.0	08/23/06 03:35 / eli-b
METALS - DISSOLVED							
Aluminum	ND	ug/L		1		E200.8	08/23/06 04:08 / sml
Antimony	ND	ug/L		1		E200.8	08/22/06 04:40 / bws
Arsenic	2	ug/L		1		E200.8	08/22/06 04:40 / bws
Barium	138	ug/L		1		E200.8	08/22/06 04:40 / bws
Beryllium	ND	ug/L		1		E200.8	08/22/06 04:40 / bws
Boron	360	ug/L		100		E200.7	08/28/06 21:09 / ts
Cadmium	ND	ug/L		1		E200.8	08/22/06 04:40 / bws
Chromium	2	ug/L		1		E200.8	08/22/06 04:40 / bws
Cobalt	ND	ug/L		1		E200.8	08/22/06 04:40 / bws
Copper	1	ug/L		1		E200.8	08/22/06 04:40 / bws
Iron	167	ug/L		30		E200.7	08/28/06 21:09 / ts
Lead	1	ug/L		1		E200.8	08/22/06 04:40 / bws
Lithium	42	ug/L		1		E200.8	08/26/06 13:53 / bws
Manganese	5	ug/L		1		E200.8	08/22/06 04:40 / bws
Molybdenum	1	ug/L		1		E200.8	08/22/06 04:40 / bws
Selenium	6	ug/L		1		E200.8	08/22/06 04:40 / bws
Strontium	2480	ug/L		1		E200.8	08/22/06 04:40 / bws
Thallium	ND	ug/L		1		E200.8	08/22/06 04:40 / bws
Vanadium	9	ug/L		1		E200.8	08/22/06 04:40 / bws
Zinc	251	ug/L		1		E200.8	08/22/06 04:40 / bws
RADIONUCLIDES - DISSOLVED							
Gross Alpha	9.0	pCi/L		1.0		E900.0	09/03/06 00:16 / rs
Gross Alpha precision (±)	0.8	pCi/L				E900.0	09/03/06 00:16 / rs
Radium 226	0.5	pCi/L		0.2		E903.0	09/11/06 10:44 / trs

Report Definitions: RL - Analyte reporting limit. QCL - Quality control limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client: Texas Water Development Board
Project: TWDB
Lab ID: C06080705-012
Client Sample ID: 7903704 (852)

Report Date: 09/19/06
Collection Date: 08/07/06 08:38
DateReceived: 08/15/06
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - DISSOLVED							
Radium 226 precision (±)	0.2	pCi/L				E903.0	09/11/06 10:44 / trs
Radium 228	ND	pCi/L		1.0		RA-05	08/29/06 11:43 / pj
Uranium 234	3.5	pCi/L		0.2		E907.0	09/05/06 11:00 / df
Uranium 234 precision (±)	0.8	pCi/L				E907.0	09/05/06 11:00 / df
Uranium 235	ND	pCi/L		0.2		E907.0	09/05/06 11:00 / df
Uranium 238	3.0	pCi/L		0.2		E907.0	09/05/06 11:00 / df
Uranium 238 precision (±)	0.7	pCi/L				E907.0	09/05/06 11:00 / df
DATA QUALITY							
A/C Balance (± 5)	-4.00	%				Calculation	08/31/06 15:48 / cp
Anions	16.6	meq/L				Calculation	08/31/06 15:48 / cp
Cations	15.3	meq/L				Calculation	08/31/06 15:48 / cp

Report Definitions: RL - Analyte reporting limit. QCL - Quality control limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

BETA ANALYTIC INC.
DR. M.A. TAMERS and MR. D.G. HOOD
UNIVERSITY BRANCH
4985 S.W. 74 COURT
MIAMI, FLORIDA, USA 33155
PH: 305/667-5167 FAX: 305/663-0964
E-MAIL: beta@radiocarbon.com

REPORT OF RADIOCARBON DATING ANALYSES

Dr. Sheryl Garling

Report Date: 9/29/2006

Energy Laboratories, Inc.

Material Received: 8/28/2006

Sample Data	Apparent C14 Age (fraction modern)	C13/C12 Ratio	
Beta - 220278	17320 +/- 90 BP (Fmdn 0.1157 +/- 0.0013)	-10.6 o/oo	78-48-403
SAMPLE : C06080938-001C ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (water DIC): carbonate precipitation			
Beta - 220279	2950 +/- 40 BP (Fmdn 0.6923 +/- 0.0034)	-10.9 o/oo	78-39-804
SAMPLE : C06080938-002C ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (water DIC): carbonate precipitation			
Beta - 220280	26580 +/- 170 BP (Fmdn 0.0365 +/- 0.0008)	-10.9 o/oo	78-48-302
SAMPLE : C06080938-003C ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (water DIC): carbonate precipitation			
Beta - 220281	12160 +/- 70 BP (Fmdn 0.2200 +/- 0.0019)	-7.2 o/oo Karnes	79-03-704 ✓
SAMPLE : C06080938-004C ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (water DIC): carbonate precipitation			
Beta - 220282	16910 +/- 90 BP (Fmdn 0.1218 +/- 0.0014)	-8.3 o/oo	79-49-505
SAMPLE : C06080938-005C ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (water DIC): carbonate precipitation			

Dates are reported as RCYBP (raduicarbon years before present, "present" = 1950A.D.). By International convention, the modern reference standard was 95% of the C14 content of the National Bureau of Standards' Oxalic Acid & calculated using the Libby C14 half life (5568 years). Quoted errors represent 1 standard deviation statistics (68% probability) & are based on combined measurements of the sample, background, and modern reference standards.

Measured C13/C12 ratios were calculated relative to the PDB-1 international standard and the RCYBP ages were normalized to -25 per mil. If the ratio and age are accompanied by an (*), then the C13/C12 value was estimated, based on values typical of the material type. The quoted results are NOT calibrated to calendar years. Calibration to calendar years should be calculated using the Conventional C14 age.

Client: ENERGY LABORATORIES, INC.
Recvd : 06/08/28
Job# : 2251
Final : 06/10/27

Purchase Order: 1643
Contact: S. Dobos 307/235-0515
2393 Salt Creek Hwy, PO Box 3258
Casper, WY 82602

07012

Cust LABEL INFO	JOB.SX	REFDATE	QUANT	ELYS	TU	eTU
C06080938-001B	2251.01	060803	1000	275	-0.01	0.09
C06080938-002B	2251.02	060803	1000	275	0.07	0.09
C06080938-003B	2251.03	060804	1000	275	0.07	0.09
C06080938-004B	2251.04	060807	1000	275	0.10	0.09
C06080938-005B	2251.05	060803	1000	275	0.00	0.09
C06080938-006B	2251.06	060803	1000	275	-0.04	0.09
C06080938-007B	2251.07	060807	1000	275	3.94	0.13
C06080938-008B	2251.08	060808	1000	275	0.08	0.09
C06080938-009B	2251.09	060808	1000	275	-0.08	0.09
C06080938-010B	2251.10	060808	1000	275	-0.01	0.09
C06080938-011B	2251.11	060809	1000	275	-0.04	0.09
C06080938-012B	2251.12	060809	1000	275	0.11	0.09

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C06080938-001	7848403 (847)	08/03/06 9:08	08/18/06	Aqueous	Subcontracted, Beta Analytic Subcontracted, Tritium Laboratory Subcontracted, ZymaX
C06080938-002	7839804 (848)	08/03/06 11:10	08/18/06	Aqueous	Same As Above
C06080938-003	7848302 (851)	08/04/06 9:05	08/18/06	Aqueous	Same As Above
C06080938-004	7903704 (852)	08/07/06 8:38	08/18/06	Aqueous	Same As Above
C06080938-005	7949505 (849)	08/03/06 14:20	08/18/06	Aqueous	Same As Above
C06080938-006	7957206 (850)	08/03/06 16:08	08/18/06	Aqueous	Same As Above
C06080938-007	7902505 (853)	08/07/06 10:10	08/18/06	Aqueous	Same As Above
C06080938-008	8035807 (854)	08/08/06 9:28	08/18/06	Aqueous	Same As Above
C06080938-009	8035808 (855)	08/08/06 10:28	08/18/06	Aqueous	Same As Above
C06080938-010	7912703 (856)	08/08/06 14:18	08/18/06	Aqueous	Same As Above
C06080938-011	8304210 (857)	08/09/06 9:05	08/18/06	Aqueous	Same As Above
C06080938-012	7960702 (858)	08/09/06 11:40	08/18/06	Aqueous	Same As Above

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative or Report.

If you have any questions regarding these tests results, please call.

Report Approved By: R. A. Reading

ZymaX FORENSICS

REPORT OF ANALYTICAL RESULTS

Client: C Wagner Energy Laboratories, Inc. 2393 Salt Creek Hwy Casper, WY 82602	**Lab Number:** 40210 **Received:** 8/24/2006 **Matrix:** Water
Project: **Project Number:** **Collected by:** Client	**Sample Description:** See Below **Analyzed:** 10/30/2006 **Method:** CF-IRMS

$\delta^{34}S$ $\delta^{18}O$ 49932 50982

LAB NUMBER	SAMPLE DESCRIPTION	$\delta^{34}S$ ‰	$\delta^{18}O$ ‰
40210-1	C06080938-001A	12.4	11.3
40210-2	C06080938-002A	13.3	6.8
40210-3	C06080938-003A	NR	NR
40210-4	C06080938-004A	11.0	4.5
40210-5	C06080938-005A	NR	NR
40210-6	C06080938-006A	12.4	6.6
40210-7	C06080938-007A	10.2	4.7
40210-8	C06080938-008A	19.8	17.0
40210-9	C06080938-009A	17.1	16.7
40210-10	C06080938-010A	9.5	5.7
40210-11	C06080938-011A	11.8	8.8
40210-12	C06080938-012A	12.4	6.6
	Analytical Precision (1-sigma)	0.3	0.4

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C06080938-001	7848403 (847)	08/03/06 9:08	08/18/06	Aqueous	Subcontracted, Beta Analytic Subcontracted, Tritium Laboratory Subcontracted, ZymaX
C06080938-002	7839804 (848)	08/03/06 11:10	08/18/06	Aqueous	Same As Above
C06080938-003	7848302 (851)	08/04/06 9:05	08/18/06	Aqueous	Same As Above
C06080938-004	7903704 (852)	08/07/06 8:38	08/18/06	Aqueous	Same As Above
C06080938-005	7949505 (849)	08/03/06 14:20	08/18/06	Aqueous	Same As Above
C06080938-006	7957206 (850)	08/03/06 16:08	08/18/06	Aqueous	Same As Above
C06080938-007	7902505 (853)	08/07/06 10:10	08/18/06	Aqueous	Same As Above
C06080938-008	8035807 (854)	08/08/06 9:28	08/18/06	Aqueous	Same As Above
C06080938-009	8035808 (855)	08/08/06 10:28	08/18/06	Aqueous	Same As Above
C06080938-010	7912703 (856)	08/08/06 14:18	08/18/06	Aqueous	Same As Above
C06080938-011	8304210 (857)	08/09/06 9:05	08/18/06	Aqueous	Same As Above
C06080938-012	7960702 (858)	08/09/06 11:40	08/18/06	Aqueous	Same As Above

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative or Report.

ZymaX FORENSICS

REPORT OF ANALYTICAL RESULTS

Client: C Wagner Energy Laboratories, Inc. 2393 Salt Creek Hwy Casper, WY 82602	Lab Number: 40210 Received: 08/24/06 Matrix: Water
Project: Project Number: Collected by: Client	Sample Description: See Below Analyzed: 09/30/06 Method: CF-IRMS

$\delta^{18}O$ δD 50790 50791

LAB NUMBER	SAMPLE DESCRIPTION	$\delta^{18}O$ ‰	δD ‰
40210-1	C06080938-001A	-5.3	-26
40210-2	C06080938-002A	-4.2	-21
40210-3	C06080938-003A	-4.3	-25
40210-4	C06080938-004A	-4.7	-25
40210-5	C06080938-005A	-4.5	-26
40210-6	C06080938-006A	-4.0	-24
40210-7	C06080938-007A	-3.9	-21
40210-8	C06080938-008A	-4.0	-20
40210-9	C06080938-009A	-3.7	-20
40210-10	C06080938-010A	-4.1	-22
40210-11	C06080938-011A	-4.1	-21
40210-12	C06080938-012A	-3.9	-21
	Analytical Precision (1-sigma)	0.3	1.0

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C06080938-001	7848403 (847)	08/03/06 9:08	08/18/06	Aqueous	Subcontracted, Beta Analytic Subcontracted, Tritium Laboratory Subcontracted, ZymaX
C06080938-002	7839804 (848)	08/03/06 11:10	08/18/06	Aqueous	Same As Above
C06080938-003	7848302 (851)	08/04/06 9:05	08/18/06	Aqueous	Same As Above
C06080938-004	7903704 (852)	08/07/06 8:38	08/18/06	Aqueous	Same As Above
C06080938-005	7949505 (849)	08/03/06 14:20	08/18/06	Aqueous	Same As Above
C06080938-006	7957206 (850)	08/03/06 16:08	08/18/06	Aqueous	Same As Above
C06080938-007	7902505 (853)	08/07/06 10:10	08/18/06	Aqueous	Same As Above
C06080938-008	8035807 (854)	08/08/06 9:28	08/18/06	Aqueous	Same As Above
C06080938-009	8035808 (855)	08/08/06 10:28	08/18/06	Aqueous	Same As Above
C06080938-010	7912703 (856)	08/08/06 14:18	08/18/06	Aqueous	Same As Above
C06080938-011	8304210 (857)	08/09/06 9:05	08/18/06	Aqueous	Same As Above
C06080938-012	7960702 (858)	08/09/06 11:40	08/18/06	Aqueous	Same As Above

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative or Report.

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 79-03-705

groundwater

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	7903705	**Well Type**	Withdrawal of Water
County	Karnes	**Well Use**	Unused
River Basin	San Antonio	**Water Level Observation**	Miscellaneous Measurements
Groundwater Management Area	15	**Water Quality Available**	Yes
Regional Water Planning Area	L - South Central Texas	**Pump**	
Groundwater Conservation District	Evergreen UWCD	**Pump Depth** (feet below land surface)	
Latitude (decimal degrees)	28.881667	**Power Type**	
Latitude (degrees minutes seconds)	28° 52' 54" N	**Annular Seal Method**	
Longitude (decimal degrees)	-97.713056	**Surface Completion**	
Longitude (degrees minutes seconds)	097° 42' 47" W	**Owner**	City of RungeWell #1
Coordinate Source	+/- 1 Second	**Driller**	Unknown
Aquifer Code	122JSPR - Jasper Aquifer	**Other Data Available**	Aquifer Test
Aquifer	Gulf Coast	**Well Report Tracking Number**	
Aquifer Pick Method		**Plugging Report Tracking Number**	
Land Surface Elevation (feet above sea level)	310	**U.S. Geological Survey Site Number**	
Land Surface Elevation Method	Interpolated From Topo Map	**Texas Commission on Environmental Quality Source Id**	G1280003A
Well Depth (feet below land surface)	156	**Groundwater Conservation District Well Number**	
Well Depth Source	Another Government Agency	**Owner Well Number**	E-40
Drilling Start Date		**Other Well Number**	
Drilling End Date	0/0/1914	**Previous State Well Number**	
Drilling Method	Cable Tool	**Reporting Agency**	Texas Water Development Board
Borehole Completion		**Created Date**	5/20/1997
		Last Update Date	5/27/2011

Remarks Well E-40 in TBWE B-6007. Reported yield 67.5 GPM in 1956. Aquifer test results in TWDB R-98. No test data in TWDB files.

Casing - No Data

Well Tests

Test Date	Test Type	Yield (gallons per minute)	Drawdown (ft.)	Test Hours
0/0/1956	Unknown	68		0
1956-01-20	Unknown	68		0

Lithology

Top Depth (ft.)	Bottom Depth (ft.)	Description
0	4	SURFACE SOIL
4	66	HARD YELLOW CLAY
66	67	ROCK
67	96	HARD CLAY
96	116	CLAY AND BOULDERS
116	136	CLAY
136	154	HARD CLAY AND BOULDERS
154	188	SAND
188	212	CLAY

Annular Seal Range - No Data

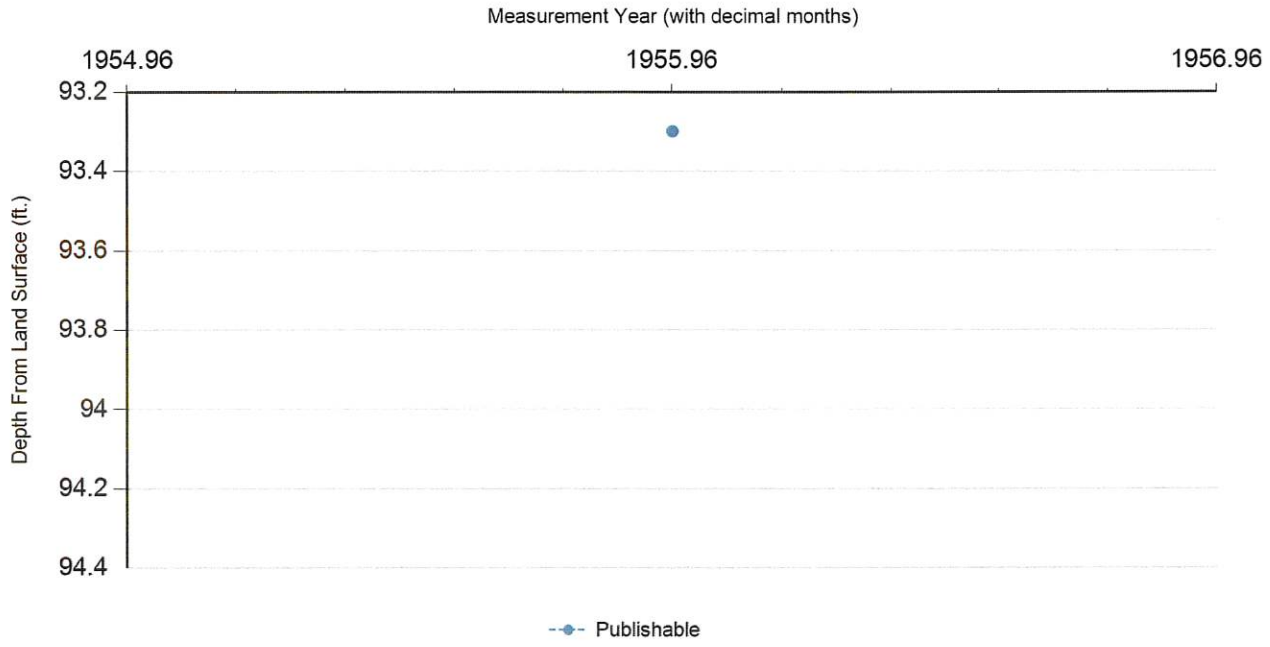
Borehole - No Data

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	12/20/1955		93.3		216.7	1	Other or Source of Measurement Unknown	Unknown		

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis

Sample Date: 10/0/1955 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** U.S. Geological Survey

Sampled Aquifer: Jasper Aquifer

Analyzed Lab: **Reliability:** From a report; unknown sample collection & preservation

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)		221.31	mg/L as CACO 3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		270.07	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)		300	ug/L	
00910	CALCIUM (MG/L)		141	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		388	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.5	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		491	mg/L as CACO 3	
01045	IRON, TOTAL (UG/L AS FE)		200	ug/L	
00920	MAGNESIUM (MG/L)		34	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		5.6	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.6	SU	
00937	POTASSIUM, TOTAL (MG/L AS K)		8.5	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		35	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		2.79		
00932	SODIUM, CALCULATED, PERCENT		38	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		142	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1670	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		36	mg/L as SO4	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		923	mg/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 79-03-705

groundwater division

TEXAS DEPARTMENT OF WATER RESOURCES

WELL SCHEDULE

Aquifer(s) Oakville Sandstone Project No. E-40 State Well No. 79-03-705

Field No./Owner's Well No. #1 County Karnes (128)

1. Location: ___ ¼, ___ ¼, Section ___, Block ___, Survey ___, Lat. 28-52-53 N. Long. 97-42-46 W

2. Owner: City of Runge Address: ___

Tenant (other): ___ Address: ___

Driller: ___ Address: ___

3. Land Surface Elevation: 300 ft. above msl determined by Topo

4. Drilled: ___ 19 14 ; Dug, Cable Tool, Rotary, Air, ___

5. Depth: Rept. 156 ft. Meas. ___ ft.

6. Borehole Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed

7. Pump: Mfr. ___ Type Turbine

No. Stages ___, Bowls Diam. ___ In., Setting ___ ft.

Column Diam. ___ In., Length Tailpipe ___ ft.

8. Motor: Mfr. ___ Fuel Elec HP. 15

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

770 F Date 10-55 Laboratory ___ TDS ___ Sp Cond ___

Date ___ Laboratory ___ TDS ___ Sp Cond ___

12. Other data available (as circled): Pumping Test, Power & Yield Test, Drillers Log, Formation Samples, Geophysical Log(s) ___ (type)

13. Water Level(s): 93.3 ft. ~~rept.~~ meas. 12/20/1955 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: D. Jones Source of data: B-6002 Date: 7/30/81

16. Remarks: ___

17. Location or Sketch: Next Page

CASING, BLANK PIPE & WELL SCREEN
Cemented From ___ ft. to ___ ft.

Diam. (In.)	Type	Setting (feet) from	to

RECEIVED
NOV 18 1982
CR/...

TDWR-0308

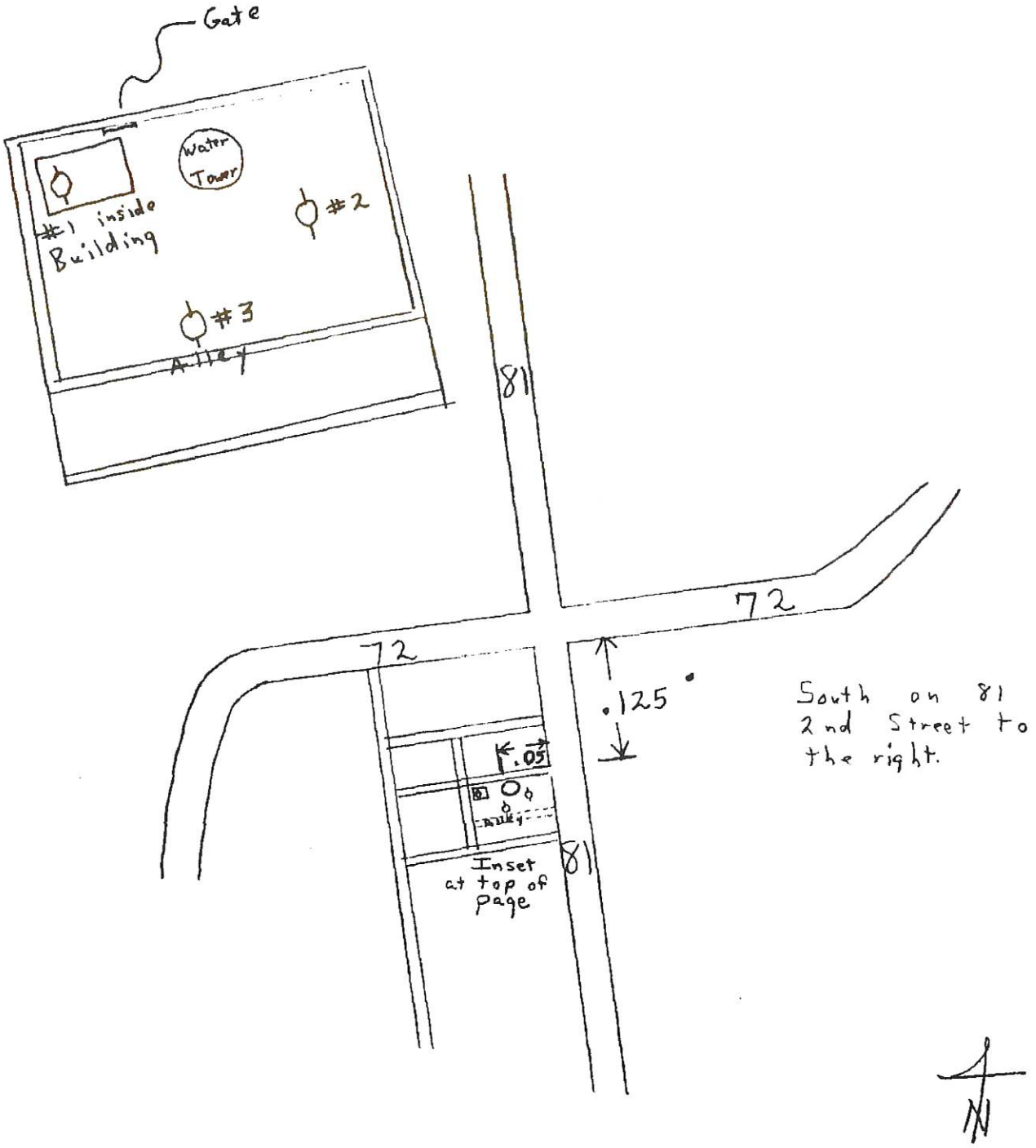
W/L Obs. Well ___ W/Q Obs. Well ___
State Well No. 79-03-705

T S DEPARTMENT OF WATER RE RCES

BY____ DATE____ DIVISION ____ SHEET NO.____ OF____

CHKD____ DATE____ JOB NAME 128 79-03-705

JOB NO. E-40 PROG. CODE well #1



79-03-705

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. [ ]
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

(X)

County 120 HARNES
State Well No. 79-03-705
_____ Well No. _____
Date Collected 10-00-55

Location _____ Sample No. [ ] By _____
Source (type of well) _____ Owner _____
Date Drilled _____ Depth 156 ft. WBF _____
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 _____

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. _____ Date Received _____ Date Reported _____

		MG/L	ME/L
Silica	00955	35	
Calcium	00915	141	
Magnesium	00925	34	
Sodium	00929	142	
	Total		
☐ Potassium	00937	8.5	
[3] ☐ Manganese	01055	.	%Na 38
☐ Boron	01022	.3	SAR 2.8
[3] ☐ Total Iron	01045	.2	RSC 0
☐ (other) _____		MG/L	
Specific Conductance (micromhos/cm^3)	00095	1670	
Diluted Conductance (micromhos/cm^3)		X	

		MG/L	ME/L
Carbonate	00445		
Bicarbonate	00440	270	
Sulfate	00945	36	
Chloride	00940	388	
Fluoride	00951	.5	
Nitrate	71850	.56	
pH	00403	7.6	
	Total		
[1] Dissolved Solids (residue at 180°C)	70300		924
Phenolphthalein Alkalinity as C aCO_3	00415		
Total Alkalinity as C aCO_3	00410		
Total Hardness as C aCO_3	00900		492
[2] Nitrogen Cycle			
Ammonia - N	00610		
Nitrite - N	00615		
Nitrate - N	00620		
Organic Nitrogen	00605		

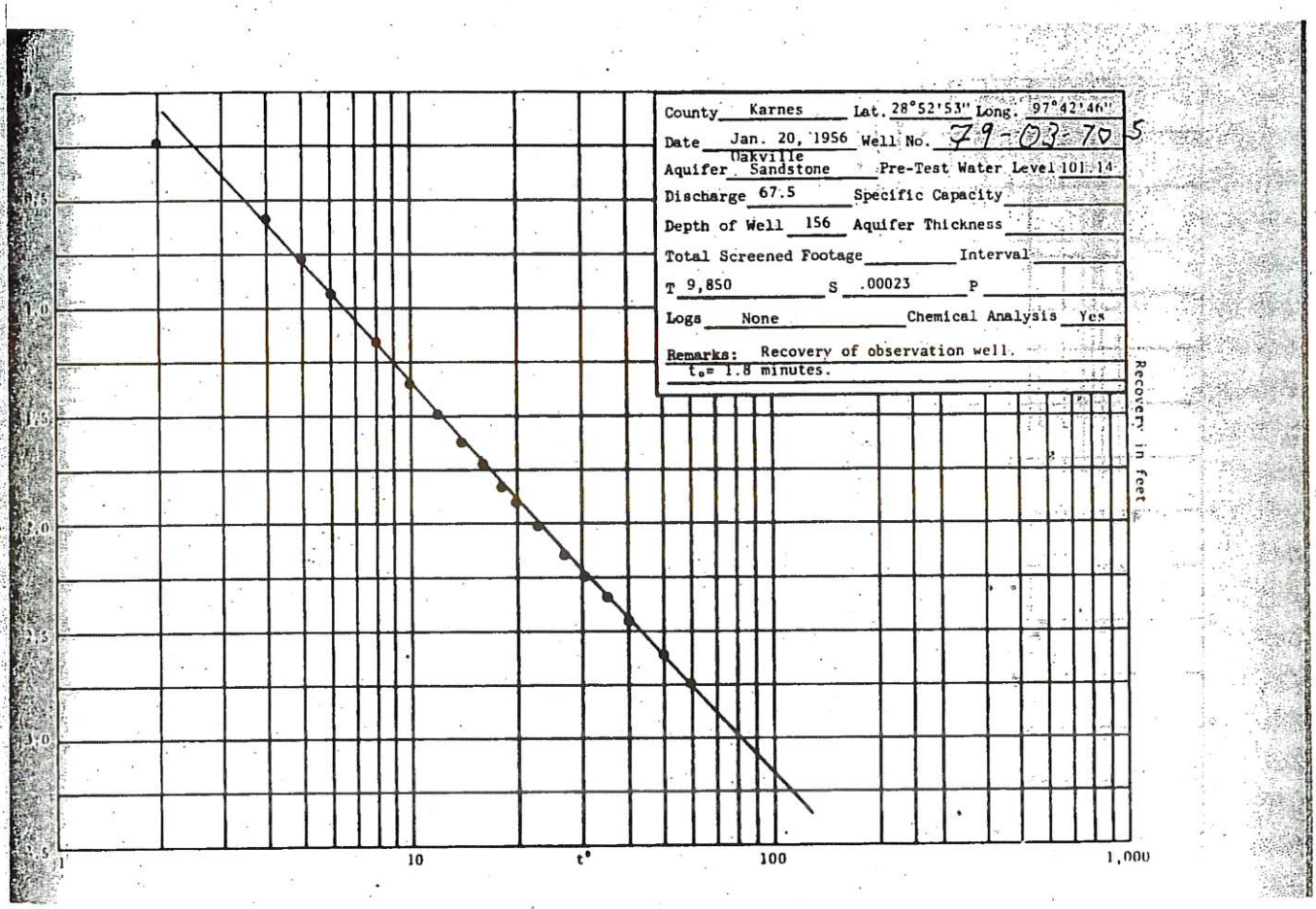
" ☐ " items will be analyzed if checked.

[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.

Analyst _____ Checked By _____

TDWR-0148 (Rev. 1-8-80)

79-03-705


County Karnes Lat. 28°52'53" Long. 97°42'46"
Date Jan. 20, 1956 Well No. 79-03-705
Aquifer Oakville Sandstone Pre-Test Water Level 101.14
Discharge 67.5 Specific Capacity
Depth of Well 156 Aquifer Thickness
Total Screened Footage Interval
T 9,850 S .00023 P
Logs None Chemical Analysis Yes
Remarks: Recovery of observation well.
t_o = 1.8 minutes.
Recovery in feet
1
10
t'
100
1,000

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 79-03-707

groundwater

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	7903707
County	Karnes
River Basin	San Antonio
Groundwater Management Area	15
Regional Water Planning Area	L - South Central Texas
Groundwater Conservation District	Evergreen UWCD
Latitude (decimal degrees)	28.881111
Latitude (degrees minutes seconds)	28° 52' 52" N
Longitude (decimal degrees)	-97.712778
Longitude (degrees minutes seconds)	097° 42' 46" W
Coordinate Source	+/- 1 Second
Aquifer Code	121EVGL - Evangeline Aquifer
Aquifer	Gulf Coast
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	310
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	211
Well Depth Source	Driller's Log
Drilling Start Date	
Drilling End Date	1/31/1977
Drilling Method	Mud (Hydraulic) Rotary
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Public Supply
Water Level Observation	None
Water Quality Available	Yes
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	City of Runge
Driller	Layne-Texas
Other Data Available	Drillers Log
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	G1280003C
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	5/20/1997
Last Update Date	6/6/1997

Remarks

Casing

Diameter (in.)	Casing Type	Casing Material	Schedule	Gauge	Top Depth (ft.)	Bottom Depth (ft.)
12	Blank	Steel			0	145
8	Blank	Steel			0	155
8	Screen	Stainless Steel			155	190
8	Blank	Steel			190	195
8	Screen	Stainless Steel			195	200
8	Blank	Steel			200	208
8	Screen	Stainless Steel			208	210

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: 3/14/1977 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Registered Water Well Driller

Sampled Aquifer: Evangeline Aquifer

Analyzed Lab: Pope Testing Lab **Reliability:** Reliability unknown or not available

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)		248	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		302.65	mg/L	
00910	CALCIUM (MG/L)		123	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		294	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.6	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		418	mg/L as CACO3	
01045	IRON, TOTAL (UG/L AS FE)		100	ug/L	
00920	MAGNESIUM (MG/L)		27	mg/L	
01055	MANGANESE, TOTAL (UG/L AS MN)		0	ug/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		5.6	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.2	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		26	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		2.68		
00932	SODIUM, CALCULATED, PERCENT		39	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)	calculated	126	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1440	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		0	mg/L as SO4	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		751	mg/L	

Water Quality Analysis

Sample Date: 9/15/1983 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Evangeline Aquifer

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)		209	mg/L as CACO 3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		255.05	mg/L	
00910	CALCIUM (MG/L)		118	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		314	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.6	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		413	mg/L as CACO 3	
00920	MAGNESIUM (MG/L)		29	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		5.89	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		8	SU	
00937	POTASSIUM, TOTAL (MG/L AS K)		9	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		61	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		2.76		
00932	SODIUM, CALCULATED, PERCENT		40	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		129	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1639	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		36	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		26	C	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		827	mg/L	

Water Quality Analysis

Sample Date: 5/23/1990 **Sample Time:** 1540 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Evangeline Aquifer

Analyzed Lab: Texas Department of Health **Reliability:** Sampled using TWDB protocols

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
39740	2,4,5-T, TOTAL, UG/L	<	5	ug/L	
39045	2,4,5-TP INCLUDES ACIDS & SALTS IN WATER, UG/L	<	5	ug/L	
39730	2,4-D, TOTAL, UG/L	<	20	ug/L	
34253	A-BHC-ALPHA, TOTAL, UG/L	<	0.03	ug/L	
77825	ALACHLOR, TOTAL, UG/L	<	0.1	ug/L	
39330	ALDRIN, TOTAL, UG/L	<	0.2	ug/L	
39086	ALKALINITY FIELD DISSOLVED AS CACO3		220	mg/L as CACO3	
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		234	mg/L as CACO3	
01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	50	ug/L	
01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10	ug/L	
82052	BANVEL (DICAMBA), TOTAL, UG/L	<	1	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		151	ug/L	
34255	B-BHC-BETA, TOTAL, UG/L	<	0.03	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		285.56	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)		610	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.17	mg/L	
01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	10	ug/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		107	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
39350	CHLORDANE, TOTAL, UG/L	<	0.2	ug/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		302	mg/L	
01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	20	ug/L	
01040	COPPER, DISSOLVED (UG/L AS CU)	<	20	ug/L	
39770	DACTHAL (DCPA), TOTAL, UG/L	<	0.05	ug/L	
39360	DDD, TOTAL, UG/L	<	0.15	ug/L	
39365	DDE, TOTAL, UG/L	<	0.1	ug/L	
39370	DDT, TOTAL, UG/L	<	0.15	ug/L	
46323	DELTA-BHC, TOTAL, UG/L	<	0.03	ug/L	
39570	DIAZINON, TOTAL, UG/L	<	0.3	ug/L	
39380	DIELDRIN, TOTAL, UG/L	<	0.1	ug/L	
81403	DURSBAN (CHLOROPYRIFOS), TOTAL, UG/L	<	0.6	ug/L	

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
34351	ENDOSULFAN SULFATE, TOTAL, UG/L	<	0.2	ug/L	
39388	ENDOSULFAN, TOTAL, UG/L	<	0.2	ug/L	
39390	ENDRIN, TOTAL, UG/L	<	0.2	ug/L	
46315	ETHYL PARATHION, TOTAL, UG/L	<	0.25	ug/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.68	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		401	mg/L as CACO 3	
39420	HEPTACHLOR EPOXIDE, TOTAL, UG/L	<	0.06	ug/L	
39410	HEPTACHLOR, TOTAL, UG/L	<	0.02	ug/L	
39700	HEXACHLOROBENZENE (HCB), TOTAL, UG/L	<	0.02	ug/L	
71865	IODIDE (MG/L AS I)	<	0.1	mg/L	
01046	IRON, DISSOLVED (UG/L AS FE)	<	20	ug/L	
01049	LEAD, DISSOLVED (UG/L AS PB)	<	50	ug/L	
39782	LINDANE, TOTAL, UG/L	<	0.03	ug/L	
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		32	mg/L	
39530	MALATHION, TOTAL, UG/L	<	0.4	ug/L	
01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20	ug/L	
71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	ug/L	
39480	METHOXYCHLOR, TOTAL, UG/L	<	0.5	ug/L	
39600	METHYL PARATHION, TOTAL, UG/L	<	0.25	ug/L	
01060	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	20	ug/L	
00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		1.37	mg/L as N	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		6.06	mg/L as NO3	
00613	NITRITE NITROGEN, DISSOLVED (MG/L AS N)	<	0.01	mg/L as N	
00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)	<	0.02	mg/L as N	
00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.1	mg/L as N	
00090	OXIDATION REDUCTION POTENTIAL (ORP), MILLIVOLTS		234.7	MV	
39488	PCB - 1221, TOTAL, UG/L	<	1	ug/L	
39492	PCB - 1232, TOTAL, UG/L	<	0.8	ug/L	
39496	PCB - 1242, TOTAL, UG/L	<	0.5	ug/L	
39500	PCB - 1248, TOTAL, UG/L	<	0.5	ug/L	
39504	PCB - 1254, TOTAL, UG/L	<	0.8	ug/L	
39508	PCB - 1260, TOTAL, UG/L	<	0.8	ug/L	
81649	PCB - 1262 (ARACLOR), TOTAL, UG/L	<	0.8	ug/L	
34671	PCB- 1016, TOTAL, UG/L	<	0.6	ug/L	
39032	PENTACHLOROPHENOL (PCP), TOTAL, UG/L	<	2	ug/L	
00400	PH (STANDARD UNITS), FIELD		7.02	SU	
00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.01	mg/L as P	

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 79-03-707

groundwater division

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
39720	PICLORAM, TOTAL, UG/L	<	3	ug/L	
82068	POTASSIUM 40 (K-40), DISSOLVED, PC/L		6.3	PC/L	
00935	POTASSIUM, DISSOLVED (MG/L AS K)		9	mg/L	
09503	RADIUM 226, DISSOLVED, PC/L		0.6	PC/L	0.1
81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)		0.4	PC/L	1.8
82305	RADON 222, DISSOLVED, PC/L		154	PC/L	6
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
01145	SELENIUM, DISSOLVED (UG/L AS SE)		4	ug/L	
00955	SILICA, DISSOLVED (MG/L AS SI02)		29	mg/L as SIO2	
01075	SILVER, DISSOLVED (UG/L AS AG)	<	10	ug/L	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		3.03		
00932	SODIUM, CALCULATED, PERCENT		43	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		139	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1478	MICR	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		2300	ug/L	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		32	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		25	C	
26403	THORIUM, NATURAL, DISSOLVED PC/L		-0.2	PC/L	0.4
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		799	mg/L	
39400	TOXAPHENE, TOTAL, UG/L	<	5	ug/L	
22703	URANIUM, NATURAL, DISSOLVED (UG/L AS U)		6	ug/L	
01085	VANADIUM, DISSOLVED (UG/L AS V)	<	20	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)		121	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

Log # 2847-343

Aquifer(s)_____ Project No. (7A) State Well No. 79-03-707

Field No./Owner's Well No. 3 County Karnes 128

1. Location: ¼, ¼, Section, Block, Survey, Lat. 28-52-53 N, Long. 97-42-45 W

2. Owner: City of Runge Address: Box 206 Runge, Tex. 78151

Tenant (other): do Address: do

Driller: Layne-Texas Address: P.O. Box 5465 Houston, Tex. 77011

3. Land Surface Elevation: 309 ft. above msl determined by Topo

4. Drilled: 01/31/ 19 77 ; Dug, Cable Tool, (Rotary), Air,

5. Depth: Rept. 211 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. in., Length Tailpipe ft.

8. Motor: Mfr. Fuel HP.

9. Yield: Flow gpm, Pump 125 gpm, Meas., Rept., Est. Date 3/14/77

10. Performance Test: Date 3/14/77 Length of Test 12 hrs. Made by Layne Texas

Static Level 98.0 ft. Pumping Level 155.0 ft. Drawdown 57.0 ft.

Production gpm Specific Capacity gpm/ft.

11. Quality: (Remarks on taste, odor, color, etc.)

Analyses

Date 03/14/77 Laboratory Edna Wood TDS Sp Cond

78° Date 09/15/82 Laboratory TDS Sp Cond

12. Other data available (as circled): (Pumping Test), (Power & Yield Test), (Drillers Log),

Formation Samples, Geophysical Log(s)

CASING, BLANK PIPE & WELL SCREEN Cemented From ft. to ft.

Diam. (in.)	Type	Setting (feet) from	to
12¾	Steel	+2.0	145
8⅝		+1.0	210
Screen		155	190
		195	200

13. Water Level(s): 98.0 ft. (rept. meas.) 03/14/ 1977 (above below) (type) L.S.D. which is ft. (above below) Land Surface

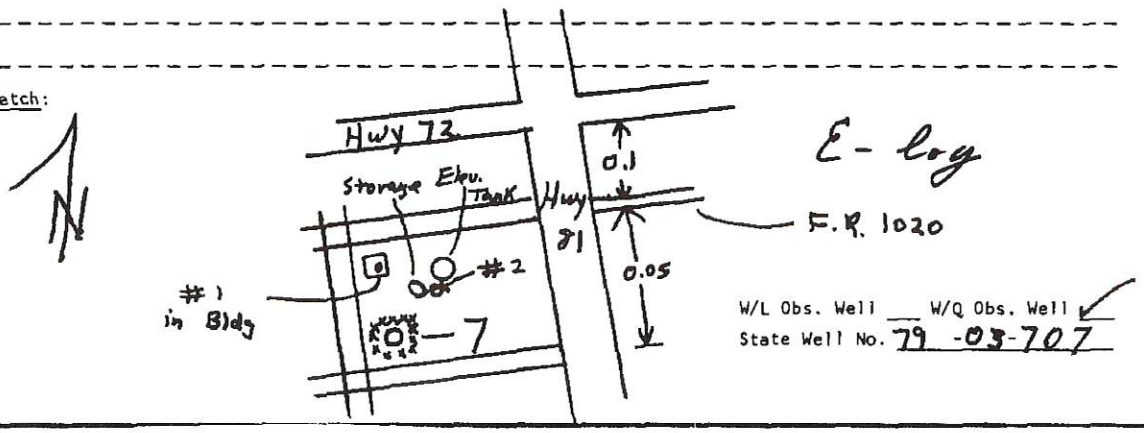
ft. rept. meas. 19 above below which is ft. above below Land Surface

14. Use: Dom., Stock, (Public Supply), Ind., Irr., Observation, Other (Test Hole, Oil Test, etc.)

15. Recorded by: D.R. Jones Source of data: Drillers Log Date: 09/15/83

16. Remarks:

17. Location or Sketch:



W/L Obs. Well ___ W/Q Obs. Well ✓

State Well No. 79-03-707

TDWR-0308

id original copy by
tified mail to the
as Water Development Board
O. Box 12386
rin, Texas 78711

State of Texas

WATER WELL REPORT

For TWDB use only
Well No. 79-03-7A
Located on map yes
Received: 7-81
26

OWNER:
Person having well drilled C. of Runge (Name) Address PO Box 206 (Street or RFD) Runge Tex. (City) 78157 (State)

Landowner (Name) Address (Street or RFD) (City) (State)

LOCATION OF WELL:
County KARNES, miles in direction from (N.E., S.W., etc.) (Town)

Locate by sketch map showing landmarks, roads, creeks, hiway number, etc.*

See attached map North

(Use reverse side if necessary)

or Give legal location with distances and directions from adjacent sections or survey lines.

Labor League

Block Survey

Abstract No.

(NW¼ NE¼ SW¼ SE¼) of Section

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

WELL LOG:
Diameter of hole in. Depth drilled ft. Depth of completed well ft. Date drilled 1-31-79

All measurements made from ft. above ground level.

From (ft.)	To (ft.)	Description and color of formation material
		See attached Completion Report

(Use reverse side if necessary)

9) Casing:
Type: Old | New | Steel | Plastic | Other
Cemented from ft. to ft.

Diameter (inches)	Setting From (ft.)	Setting To (ft.)	Gage

10) SCREEN:
Type
Perforated | Slotted

Diameter (inches)	Setting From (ft.)	Setting To (ft.)	Slot Size

COMPLETION (Check):
Straight wall | Gravel packed | Other
Under reamed | Open Hole

WATER LEVEL:
Static level ft. below land surface Date
Artesian pressure lbs. per square inch Date
Depth to pump bowls, cylinder, jet, etc., ft. below land surface.

11) WELL TESTS:
Was a pump test made? Yes No If yes, by whom?
Yield: gpm with ft. drawdown after hrs.
Bailer test gpm with ft. drawdown after hrs.
Artesian flow gpm
Temperature of water

12) WATER QUALITY:
Was a chemical analysis made? Yes No
Did any strata contain undesirable water? Yes No
Type of water? depth of strata

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

NAME Lozano Lawson (Type or Print) Water Well Drillers Registration No. 26

ADDRESS PO Box 6465 (Street or RFD) Houston (City) Tex. 77001 (State)

Signed Lozano Lawson (Water Well Driller) Layne Texas Co. (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available. PZ 79-03-707

Additional instructions on reverse side.

TWDBE-GW-53

79-03- 7A

FORM NO. 38

LAYNE TEXAS COMPANY,
HOUSTON -:- DALLAS

WELL LOG

REPORT NO.
S. O. 1402-7085
PAGE 1 of 1
FILE NO. 3849
DATE 1/31/77

CUSTOMER LOCATION

FOR City of Runge

LOCATION WELL St. Mary St.

SURVEY FIELD

COUNTY Karnes STATE Texas

OTHER LAND MARKS

WELL DATA

NAME WELL WELL NO. 3
ELEVATION DATUM
RT C GR
TEST HOLE SIZE 7-7/8" TD 211'
DATE STARTED DRILLING 1/29/77
DATE FINISHED DRILLING 1/31/77
DRILLER Atchinson RIG NO. 20
TYPE MUD Gel NO. SACKS 8
ELECTRIC LOG yes TYPE Widco
SURVEY Eastman TYPE Single Shot
OTHER

DEPTH STRATA	EACH STRATUM	DESCRIPTION FORMATION	SAMPLES DEPTH	SAMPLES TYPE	SAMPLES NUMBER
0		Surface			
1'	1'	Top Soil			
6'	5'	Clay			
67'	61'	Yellow Shale			
74'	7'	Sandy shale w/hard stks.			
106'	32'	Shale w/hard stks.			
107'	1'	Rock			
112'	5'	Shale w/hard stks.			
126'	14'	Sandy shale w/hard stks.			
154'	28'	Shale w/hard stks. & sand			
190'	36'	Sand w/shale & hard stks.			
195'	5'	Shale w/sand stks.			
200'	5'	Sand & hard stks.			
211'	11'	Shale w/sandy stks.			
			PZ	79-03 ~~-706~~ 707	
				79-03-7A	

EDNA WOOD LABORATORIES, INC.

WATER TECHNOLOGISTS . . CHEMIS . . MICROBIOLOGISTS

25 March 1977

To: Layne Texas Company
P. O. Box 9469
Houston, Texas 77011

SO #1402-7085

Sample marked: City of Runge, Karnes County, Texas. Taken: 3-14-77 after 12 hours pumping at 125 gpm. Static Head: 98'
Pumping Level: 155' Screened: 155' - 190', 195' - 200'
B. E. Atchison

Received: 3-16-77

WATER ANALYSIS

results in parts per million (mg/l) except as noted

Dissolved Residue at 350°C		842*	Conductance, micromhos/cm, 25°C		1,440
Total Dissolved Solids, actual†		996*	Color, units		4
Total Dissolved Solids, calc.		920	Turbidity, units		0
Silica	SiO_2	26	As Calcium Carbonate, $CaCO_3$:		
Calcium	Ca	123	Phenolphthalein Alkalinity		0
Magnesium	Mg	27	Total Alkalinity		248
Sodium (diff.) Na + K as	Na	126	Total Hardness		418
Carbonate	CO_3	0	Free Carbon Dioxide	CO_2	31
Bicarbonate	HCO_3	303	pH . . . 7.18		
Sulfate	SO_4	0	HYPOTHETICAL COMBINATIONS		
Chloride	Cl	296	Calcium Bicarbonate		403
Ortho-Phosphate	$O\text{-}PO_4$	15	Calcium Chloride		65
Total Fluoride	F	0.6	Magnesium Chloride		105
Total Nitrate	NO_3	5.6	Sodium Chloride		287
Total Manganese	Mn	< 0.02	Sodium Phosphate		26
Total Iron	Fe	0.07	Sodium Fluoride		1
Iron, filtered sample	Fe	-	Sodium Nitrate		7
			Silica		26
			Total Dissolved Solids, calc.		920
*Sample is hygroscopic; giving high values.			KEY PUNCHED		

†Total Dissolved Solids, actual = Dissolved Residue + 50.8% of bicarbonate (HCO_3) ion

EDNA WOOD LABORATORIES, INC.

6020
adp

PZ 79-03-707

By: Edna Wood
Edna Wood

79-03-TR

Tel: (713) 747-7271 • P. O. BOX 14171 • 4820 OLD SPANISH TRAIL • HOUSTON, TEXAS 77021

Water Quality Sampling Run

City of RUNGE
City Well #3
KEY PUNCHED

SWN: 79-03-707
County: KARNES
Aquifer(s):

Sample No. JCB-1990-069
Date: 5-23-90
By: [signature]

	Bottle 1	Bottle 2	Bottle 3	Bottle 4	Bottle 5	Bottle 6	Bottle 7	Total Sub-Samples
	1 liter Anions	1 liter Cations/HM	1 gallon Radioactivity	500 ml Nitrate/ Phosphate	1 Qt.(glass) (TOC) Organics	500 ml Cyanide	RADON	
		2ml	6ml	2ml	unfiltered			All filtered unless otherwise stipulated. All on ice.
Preserve with:	--	HNO_3 (Nitric)	HNO_3 (Nitric)	H_2SO_4 (Sulfuric)	--	NaOH (Sodium Hydroxide)		

Water Level ______ LSD
Temperature (00010) 25.3 °C
Specific Conductance (00094) 1478 µmhos/cm
pH (00400) 7.02
Eh (00090) 234.7 mv
Phenol ALK (82244) Ø mg/l
Total ALK (00431) 220 mg/l
Carbonate (00452) Ø meq/l Ø mg/l
Bicarbonate (00453) 4.4 meq/l 268.4 mg/l

Total Cations (+) ______
Total Anions (-) ______
Total Hardness (46570) 398
Dissolved Solids (70301) 800

AIR TEMP 41.0 °C **Notes & Calculations** TIME IN 3:00PM
WEATHER COND Hot Humid Sunny TIME OUT 4:15PM
PH CAL: COND CAL:
PH= SAME °C SC= SAME @ ____ SOL.
PH= ______ @ ______ °C SC= ______ @ ______ SOL.
TITRATION:
PH= 7.15 AT START 30.8 4 DROPS PHENOL
PH= 7.15 AFTER BROMCRESOL 31.0 50 ML OF SAMPLE
7.15
30.8
~~Ø ML H2SO4 @ PH Ø FOR CARBONATE IF PRESENT~~
11.0 ML H2SO4 @ PH 4.50 FOR BICARBONATE 32.8

REMARKS:

Pump Start POA:
RADON Samp Time: 3:37PM
Samp Time: 3:40 PM
Samp Point Faucet at well head

890091-B

TEL. 512-884-0371 PO BOX 2552 78403

JORDAN LABORATORIES, INC.
CHEMISTS AND ENGINEERS
CORPUS CHRISTI, TEXAS
JULY 5, 1990

TEXAS WATER DEVELOPMENT BOARD
P.O. BOX 13231
AUSTIN, TEXAS 78711-3231

REPORT OF ANALYSIS

RAD-JLB-1990-069

STATE WELL NUMBER: CITY WELL #3
79-03-707
COUNTY: KARNES
DATE AND TIME: 15:40 5-23-90
OWNER: CITY OF RUNGE
ADDRESS: BOX 206 RUNGE, TX 78151
DATE DRILLED: 1-31-77
SAMPLED AFTER PUMPING P.O.A. HRS.
DEPTH: 211'
YIELD: --- GPM
COLLECTION POINT: WELL HEAD
PH: 7.02
USE: PUBLIC S. TEMP.: 25.3 DEG.C.
SPEC. COND.: 1478

		ANALYSIS DATE
POTASSIUM 40, PCI/L	6.3	06-29-90
URANIUM (NATURAL), MG/L	0.006	05-29-90
RADON 222, PCI/L	154*	05-25-90
COUNTING ERROR, PCI/L +/-	6*	
RADIUM 226, PCI/L	0.6	06-05-90
COUNTING ERROR, PCI/L +/-	0.1	
THORIUM 232, PCI/L	-0.2	07-02-90
COUNTING ERROR, PCI/L +/-	0.4	
RADIUM 228, PCI/L	-0.4	06-11-90
COUNTING ERROR, PCI/L +/-	1.8	

* VALUE REFLECTS RADON 222 CONTENT AS OF 3:37 PM 5-23-90.

LAB. NO. M28-3649

KEY PUNCHED

RESPECTFULLY SUBMITTED,

CARL F. CROWNOVER

Texas Water Development Board

Chemical Water Analysis Report

HM-JCB 1990 069

HM = Heavy Trace and Alkaline-Earth Metals

TWDB Use Only

Work No. 320-3702

IAC No. _____

Send Reply To:
Ground Water Unit
Texas Water Development Board
P.O. Box 13231
Austin, Texas 78711

KEY PUNCHED

City Well #3

Attention: ERIC ADIDAS

State Well Number: 79-03-707

County: KARNES

Date & Time: 05-23-1990 15:40

Owner: CITY OF RUNGE

☒ Send Copy To Owner

Address: BOX 206 RUNGE TX 78151

Sampled After Pumping: POA Hours

Date Drilled: 01-31-1977 Depth: 211'

Yield: _____ GPM ☐ Measured ☐ Estimated

Collection Point: WELLHEAD pH 7.02

Use: PUBLIC S Temperature: 25.3 °C

By: James A Beauchamp

Specific Conductance: 1478

Requested Chemical Analysis

Laboratory No.: [redacted]

Date Received: MAY 25 1990

Date Reported: JUL 3 1990

		me/l	mg/l			me/l	mg/l
Calcium	(00915)		107	Sodium	(00930)		139
Magnesium	(00925)		32	Potassium	(00935)		9.0

		µg/l			µg/l
Aluminum	(01106)	<50	Manganese	(01056)	<20
Arsenic	(01000)	<10	Mercury	(71890)	<0.2
Barium	(01005)	151	✓ Molybdenum*	(01062)	<20
Cadmium	(01025)	<10	Selenium	(01145)	4
Chromium	(01030)	<20	Silver	(01075)	<10
Copper	(01040)	<20	✓ Strontium*	(01080)	2300
Iron	(01046)	<20	✓ Vanadium*	(01085)	<20
Lead	(01049)	<50	Zinc	(01090)	121

* Do not analyze unless it is checked.
Note: Crossout those elements not to be analyzed.

Texas Water Development Board

Chemical Water Analysis Report

GWR-JCB.1990 069
(Anions)

TWDB Use Only
Work No. 370-3702
IAC No. _____

Send Reply To:
Ground Water Unit
Texas Water Development Board
P.O. Box 13231
Austin, Texas 78711

KEY PUNCHED

City well #3

Attention: ERIC ADIDAS
State Well Number: 79-03-707
County: KARNES
Date & Time: 05-23-1990 15:40
Owner: CITY OF RUNGE ☒ Send Copy To Owner
Address: BOX 206 RUNGE TX 78151
Sampled After Pumping: POA Hours
Date Drilled: 01-31-1917 Depth: 211'
Yield: _____ GPM ☐ Measured ☐ Estimated
Collection Point: WELLHEAD pH 7.02
Use: PUBLICS Temperature: 25.3 °C
By: James A Beauchamp
Specific Conductance: 1478

Requested Chemical Analysis

Laboratory No.: [redacted]
Date Received: MAY 25 1990
Date Reported: JUN 20 1990

THD-Sample No. EBO 1297 Date Received 05/25/90 Date Reported 06/18/90

		MEQ/L	MG/L
Silica	(00955)		29
Sulfate	(00946)	0.67	32
Chloride	(00941)	8.52	302
Fluoride	(00950)	0.04	0.68
P. Akalinity	(00415)	0.00	0
T. Akalinity	(00410)	4.68	234
Iodide	(71865)		< 0.1
Boron	(*****)		0.61
Bromide	(71870)		0.17

890091-C

Texas Water Development Board

Chemical Water Analysis Report

GWN: JUB-990-069
(Nitrogen Cycle)

TWDB Use Only
Work No. 320-3707
IAC No. _____

Send Reply To:
Ground Water Unit
Texas Water Development Board
P.O. Box 13231
Austin, Texas 78711

KEY PUNCHED

Chywell # 3

Attention: ERIC ADIDAS
State Well Number: 79-03-707
County: KARNES
Date & Time: 05-23-1990 15:40
Owner: CITY OF RUNGE
X Send Copy To Owner
Address: BOX 206 RUNGE TX 78151
Sampled After Pumping: POA Hours
Date Drilled: 01-31-1977 Depth: 211'
Yield: _____ GPM ☐ Measured ☐ Estimated
Collection Point: WELLHEAD pH 7.02
Use: Public S Temperature: 25.3 °C
By: James H Beauchamp
Specific Conductance: 1478

Requested Chemical Analysis

Laboratory No.: [redacted]
Date Received: MAY 25 1990
Date Reported: JUN 1 1990

THD-Sample No. EB0 1347 Date Received 05/25/90 Date Reported 06/01/90

		MG/L			MG/L
Nitrate as N	(00618)	1.37			
KJE as N	(00623)	< 0.1	Ammonia as N	(00608)	< 0.02
			Nitrite as N	(00613)	< 0.01
			Orthophosphate as P	(00671)	0.01

*Note: To convert NO_3-N to NO_3, multiply by 4.427.

890091-D

Texas Water Development Board

Chemical Water Analysis Report

MISC JCB-PPO 069

TWDB Use Only
Work No. 320-3702
IAC No. _____

Send Reply To:
Ground Water Unit
Texas Water Development Board
P.O. Box 13231
Austin, Texas 78711

KEY PUNCHED

CityWell #3

Attention: ERIC ADIDAS
State Well Number: 79-03-707
County: KARNES
Date & Time: 05-23-PPO 15:40
Owner: CITY OF RUNGE
☒ Send Copy To Owner
Address: BOX 206 RUNGE TX 78151
Sampled After Pumping: POA Hours
Date Drilled: 01-31-PPP Depth: 211'
Yield: _____ GPM ☐ Measured ☐ Estimated
Collection Point: WELL HEAD pH 7.02
Use: Public S Temperature: 25.3 °C
By: [redacted]
Specific Conductance: 1478

Requested Chemical Analysis

Laboratory No.: [redacted]
Date Received: MAY 25 1990
Date Reported: JUL 31 1990

CODE 5970
ORGANICS SCREENS GC

890091-A

Texas Depart. ent of Health Pesticide Re, rt Form
Nickel 63 Detector

Analyst	Kristin C Bourdon	Lab ID number	EB0-1318
Approved	True	Submitter ID	

Sample type: (water) liquid waste sediment tissue other
(circle one)

Units: (micrograms/liter) micrograms/kilogram other _____

p,p' DDT	<0.15
p,p' DDD	<0.15
p,p' DDE	<0.1
Aldrin	<0.2
Dieldrin	<0.1
Endrin	<0.2
Chlordane	<0.2
Heptachlor	<0.02
Heptachlor epox.	<0.06
Methoxychlor	<0.5
Toxaphene	<5.0
Hexachlorobenzene	<0.02
Malathion	<0.4
Ethyl Parathion	<0.25
Methyl parathion	<0.25
Diazinon	<0.3
Chloropyrifos	<0.6
Endosulfan	<0.2
Endosulfan sulfate	<0.2
Alachlor	<0.1
Dacthal	<0.05
alpha BHC	<0.03
beta BHC	<0.07
delta BHC	<0.03

Lindane	<0.03

Polychlorinated biphenyls

Aroclor 1016	<0.6
Aroclor 1221	<1.0
Aroclor 1232	<0.8
Aroclor 1242	<0.5
Aroclor 1248	<0.5
Aroclor 1254	<0.8
Aroclor 1260	<0.8
Aroclor 1262	<0.8

Acid extractible herbicides

2,4 - D	<20
2,4,5 - T	<5.0
2,4,5 - TP (silvex)	<5.0
Pentachlorphenol	<2.0
Dicamba	<1.0
Picloram	<3.0

Comments:

KEY PUNCHED

Revision 6/26/90

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. 6040

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 128 Karnes
State Well No. 79-03-707
Well No. 3
Date Collected 09-15-83

copy sent 10/20/83 MB

Owner City of Runge ✓ Send copy to owner Sample No. 1 By D.R. Jones
Address Box 206 Runge, Texas 78151 Well Location
Date Drilled 01/31/77 Depth 211 ft. WBF Source (type of well) Turbine
Producing intervals Water level ft. Sample depth ft.
Sampled after pumping P.O.A. hrs. Yield GPM meas. est. Temperature 078 °F °C
Point of collection Faucet at well Appearance ☒ clear ☐ turbid ☐ colored ☐ other
Use Public Supply Remarks

(FOR LABORATORY USE ONLY)
Laboratory No. [redacted]

CHEMICAL ANALYSIS

KEY PUNCHED

Date Received SEP 28 1983 Date Reported OCT 12 1983

128
State Well No. 79-03-707

WATER ANALYSIS
Date: 101283

Sample No: EW4-256

	MG/L	ME/L		MG/L	ME/L
Silica: 00955:	61		Carbonate: 00445:	0	0
Calcium: 00910:	118	5.9	Bicarbonate: 00440:	255	4.18
Magnesium: 00920:	29	2.42	Sulfate: 00945:	36	.75
Sodium: 00929:	129	5.61	Chloride: 00940:	314	8.85
T. Cations		14.16	Fluoride: 00951:	.6	.03
Potassium: 00937:	9	.23	Nitrate: 71850:	5.89	.1
Manganese: 01055:		%Na	T. Anions		13.91
			pH: 00403:	8	
Boron: 01022:		SAR			
			180 deg TDS: 70300:	826	
Total Iron: 01045:		RSC	P. Alk.: 00415:	0	
Other			T. Alk.: 00410:	209	
(Specific Cond.: 00095:		1150	T. Hardness: 00900:	416	

Diluted Conductance (micromhos/cm3)
11 x149 =1639

_ items will be analyzed if checked.

Ammonia-N: 00610:
Nitrite-N: 00615:
Nitrate-N: 00620:
OrganicNitrogen: 00605:

KEY PUNCHED

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. _____
Work No. _____

CHEMICAL WATER ANALYSIS REPORT

County 128 Karnes
State Well No. 79-03-707
Well No. _____
Date Collected 03-14-77

Send report to:

Data Collection and Evaluation Section
Texas Department of Water Resources
P.O. Box 13087
Austin, Texas 78711

Owner _____ ☐ Send copy to owner Sample No. ☐ By _____
Address _____ Well Location _____
Date Drilled _____ Depth 211 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 P Remarks _____

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS KEY PUNCHED

Laboratory No. _____ Date Received _____ Date Reported _____

		MG/L	ME/L
Silica	00955	26	
Calcium	00910	123	
Magnesium	00920	27	
Sodium	00929	126	
	Total		
☐ Potassium	00937		
[3] ☐ Manganese	01055	0.0	%Na _____
☐ Boron	01022		SAR _____
[3] ☐ Total Iron	01045	0.1	RSC _____
☐ (other) _____		MG/L	
Specific Conductance (micromhos/cm³)	00095	1440	
Diluted Conductance (micromhos/cm³)		x	

		MG/L	ME/L
Carbonate	00445	0	
Bicarbonate	00440	303	
Sulfate	00945	0	
Chloride	00940	294	
Fluoride	00951	0.6	
Nitrate	71850	5.6	
pH	00403	7.2	Total
[1] Dissolved Solids (residue at 180°C)	70300		996
Phenolphthalein Alkalinity as $CaCO_3$	00415		0
Total Alkalinity as $CaCO_3$	00410		248
Total Hardness as $CaCO_3$	00900		418
[2] Nitrogen Cycle			
Ammonia - N	00610		
Nitrite - N	00615		
Nitrate - N	00620		
Organic Nitrogen	00605		

" ☐ " 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.

Analyst _____ Checked By _____

TDWR-0148 (Rev. 12-29-82)

TEXAS DEPARTMENT OF WATER RESOURCES

WELL SCHEDULE

Aquifer(s) Jasper Aquifer (Catahoula S.S.) Project No. _____ State Well No. 79-03-706

Field No./Owner's Well No. #3 County [redacted] (128)

1. Location: ___ ¼, ___ ¼, Section ___, Block ___, Survey _____, Lat. 28-52-51 N. Long. 97-42-41 W

2. Owner: City of Runge Address: _____

Tenant (other): _____ Address: _____

Driller: Layne Texas Address: _____

3. Land Surface Elevation: 300 ft. above msl determined by Topo

4. Drilled: ~~5/10~~ 1/31 19 77 ; Dug, Cable Tool, Rotary, Air, _____

5. Depth: Rept. 210 ft. Meas. _____ ft.

6. Borehole Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed

7. Pump: Mfr. _____ Type Turbine

No. Stages _____, Bowls Diam. ___ in., Setting _____ ft.

Column Diam. _____ 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 3-14-77 Laboratory Edna Wood TDS 996 Sp Cond 1440

Date _____ Laboratory _____ TDS ___ Sp Cond ___

12. Other data available (as circled): Pumping Test, Power & Yield Test, Drillers Log, Formation Samples, Geophysical Log(s) _____ (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: D. Jones Source of data: _____ Date: 7/30/81

16. Remarks: _____

17. Location or Sketch: Next Page

CASING, BLANK PIPE & WELL SCREEN Cemented From ___ ft. to ___ ft.

Diam. (in.)	Type	Setting (feet) from	to
12¾	Sur. Csg	+2	145
8⅝	Bl. Liner	+1	155
8⅝	mill slot	155	190
8⅝	Bl. Liner	140	195
8⅝	mill slot	195	200
8⅝	Bl Liner	200	208
8⅝	set BPV in pkr	208	210

RECEIVED

NOV 18 1982

CR/...

TDWR-0308

W/L Obs. Well ___ W/Q Obs. Well ___

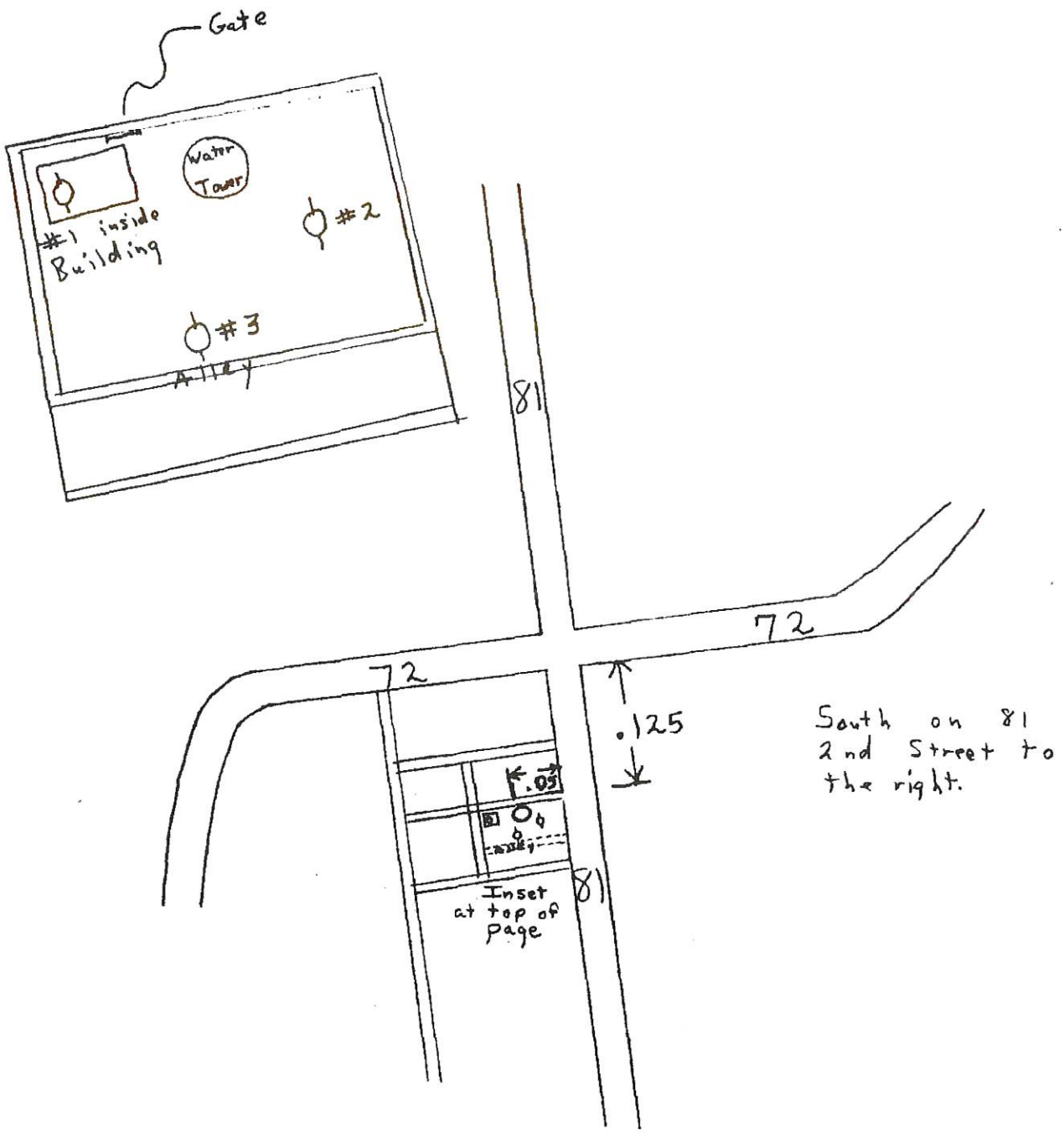
State Well No. 79-03-706

T S DEPARTMENT OF WATER RE RCES

BY_____ DATE_____ DIVISION_____ SHEET NO._____ OF_____

CHKD_____ DATE_____ JOB NAME 128- 79-03-706

JOB NO. # 3 PROG. CODE_____



79-03-706

TEXAS DEPARTMENT OF WATER RESOURCES

WELL SCHEDULE

Aquifer(s)_____ Project No._____ State Well No. 79-03-706

_____ Field No./Owner's Well No. #3 County Karnes (128)

1. Location: ¼, ¼, Section ____, Block ____, Survey _____, Lat 28-52-51N. Long. 97-42-41 W

2. Owner: City of Runge Address:_____

Tenant (other):_____ Address:_____

Driller:_____ Address:_____

3. Land Surface Elevation: 300 ft. above msl determined by Topo

4. Drilled: 5/10/ 19 77 ; Dug, Cable Tool, Rotary, Air, ____

5. Depth: Rept. _____ ft. Meas. _____ ft.

6. Borehole Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed

7. Pump: Mfr._____ Type Turbine

No. Stages _____, Bowls Diam. ____ in., Setting _____ ft.

Column Diam. _____ 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_____ Laboratory_____ TDS____ Sp Cond____

Date_____ Laboratory_____ TDS____ Sp Cond____

12. Other data available (as circled): Pumping Test, Power & Yield Test, Drillers Log, Formation Samples, Geophysical Log(s) _____ (type)

CASING, BLANK PIPE & WELL SCREEN Cemented From ____ ft. to ____ ft.			
Diam. (In.)	Type	Setting (feet) from	to
	AUG 17 1981		
	GR/LOWER		

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: D. Jones Source of data:_____ Date: 7/30/81

16. Remarks:_____

17. Location or Sketch: Next Page

TDWR-0308

W/L Obs. Well ___ W/Q Obs. Well ___

State Well No. 79-03-706

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
Program No. _____ Lab No. 05
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

County 128 KARNES
State Well No. 79-03-706
Well No. _____
Date Collected 03-14-77

Location Lat 28°52' 51"N Long 97° 42' 41" Sample No. _____ By Luyna Texas
Source (type of well) _____ Owner City of Runge
Date Drilled 1-31-77 Depth 210 ft. WBF _____
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 PS Remarks Anal by Edgewood Lab

(FOR LABORATORY USE ONLY) NOT PUNCHED

CHEMICAL ANALYSIS

Laboratory No. _____ Date Received _____ Date Reported _____

	MG/L	ME/L
Silica	26	
Calcium	123	
Magnesium	27	
Sodium	126	
Total		
☐ Potassium		
[3] ☐ Manganese		
☐ Boron		
[3] ☐ Total Iron		
%Na		
SAR		
RSC		
☐ (other) _____	MG/L	
Specific Conductance (micromhos/cm3)	1440	
Diluted Conductance (micromhos/cm3)	_____ X _____	

" ☐ " items will be analyzed if checked.

	MG/L	ME/L
Carbonate		
Bicarbonate	303	
Sulfate	0	
Chloride	294	
Fluoride	0.6	
Nitrate	5.6	
pH	7.2	
Total		
[1] Dissolved Solids (residue at 180° C)		
Phenolphthalein Alkalinity as $CaCO_3$		0
Total Alkalinity as $CaCO_3$		248
Total Hardness as $CaCO_3$		418
[2] Nitrogen Cycle		
Ammonia - N		
Nitrite - N		
Nitrate - N		
Organic Nitrogen		

[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. 7-78)

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 79-03-708

groundwater

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	7903708	**Well Type**	Withdrawal of Water
County	Karnes	**Well Use**	Public Supply
River Basin	San Antonio	**Water Level Observation**	None
Groundwater Management Area	15	**Water Quality Available**	Yes
Regional Water Planning Area	L - South Central Texas	**Pump**	Submersible
Groundwater Conservation District	Evergreen UWCD	**Pump Depth** (feet below land surface)	
Latitude (decimal degrees)	28.881111	**Power Type**	Electric Motor
Latitude (degrees minutes seconds)	28° 52' 52" N	**Annular Seal Method**	
Longitude (decimal degrees)	-97.712501	**Surface Completion**	
Longitude (degrees minutes seconds)	097° 42' 45" W	**Owner**	City of Runge Well #4
Coordinate Source	+/- 1 Second	**Driller**	Cude Drilling Inc.
Aquifer Code	122CTHL - Catahoula Formation	**Other Data Available**	Drillers Log
Aquifer	Gulf Coast	**Well Report Tracking Number**	
Aquifer Pick Method		**Plugging Report Tracking Number**	
Land Surface Elevation (feet above sea level)	310	**U.S. Geological Survey Site Number**	
Land Surface Elevation Method	Interpolated From Topo Map	**Texas Commission on Environmental Quality Source Id**	G1280003D
Well Depth (feet below land surface)	720	**Groundwater Conservation District Well Number**	
Well Depth Source	Driller's Log	**Owner Well Number**	
Drilling Start Date		**Other Well Number**	
Drilling End Date	10/6/1994	**Previous State Well Number**	
Drilling Method	Mud (Hydraulic) Rotary	**Reporting Agency**	Texas Water Development Board
Borehole Completion		**Created Date**	5/20/1997
		Last Update Date	6/6/1997

Remarks Drilled to 1,100 ft. Pluged back to 720 ft.

Casing

Diameter (in.)	Casing Type	Casing Material	Schedule	Gauge	Top Depth (ft.)	Bottom Depth (ft.)
12	Blank	Steel			0	315
8	Blank	Steel			315	340
8	Screen	Steel			340	400
8	Blank	Steel			400	620
8	Screen	Steel			620	700
8	Blank	Steel			700	710

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

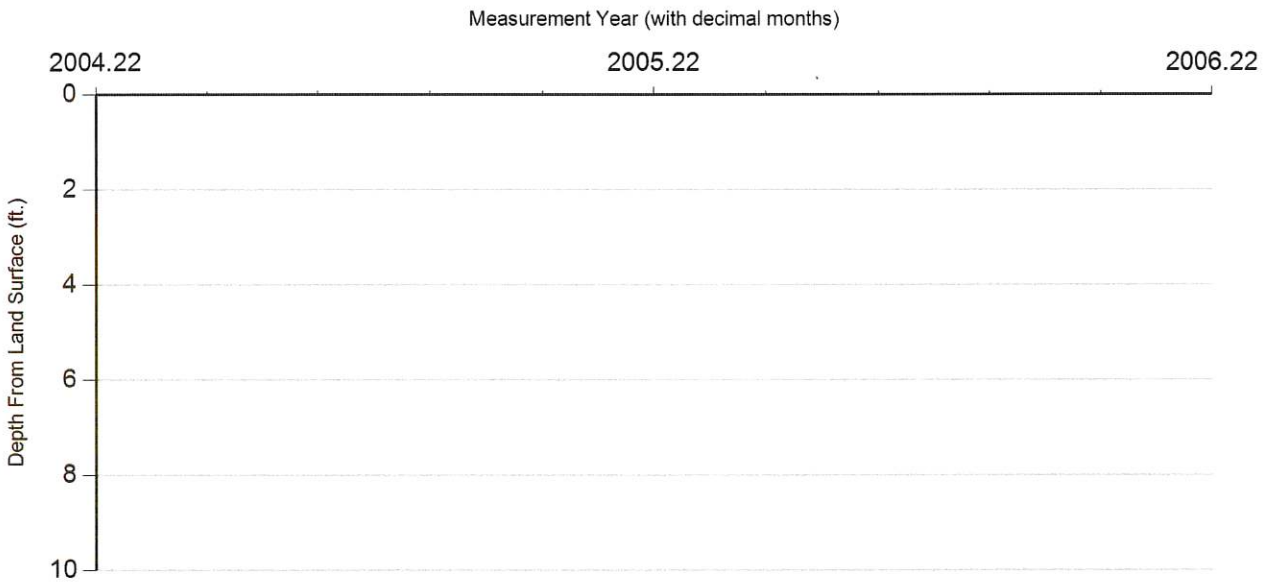
Borehole - No Data

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
X	3/22/2005					1	Texas Water Development Board		20	

Code Descriptions

Status Code	Status Description
X	No Measurement

Remark ID	Remark Description
20	Unable to insert tape into well

Water Quality Analysis

Sample Date: 1/29/1997 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Texas Commission on Environmental Quality

Sampled Aquifer: Catahoula Formation

Analyzed Lab: Texas Department of Health **Reliability:** By TCEQ staff with their QA-QC procedures

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)		289	mg/L as CACO3	
01105	ALUMINUM, TOTAL (UG/L AS AL)	<	40	ug/L	
01097	ANTIMONY, TOTAL (UG/L AS SB)	<	2	ug/L	
01002	ARSENIC, TOTAL (UG/L AS AS)		13.6	ug/L	
01007	BARIUM, TOTAL (UG/L AS BA)		86.99	ug/L	
01012	BERYLLIUM, TOTAL (UG/L AS BE)	<	1	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		352.68	mg/L	
01027	CADMIUM, TOTAL (UG/L)	<	0.2	ug/L	
00910	CALCIUM (MG/L)		40	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		104	mg/L	
01034	CHROMIUM, TOTAL (UG/L AS CR)		20	ug/L	
01042	COPPER, TOTAL (UG/L AS CU)	<	6	ug/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.5	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		149	mg/L as CACO3	
01045	IRON, TOTAL (UG/L AS FE)	<	10	ug/L	
01051	LEAD, TOTAL (UG/L AS PB)	<	1	ug/L	
00920	MAGNESIUM (MG/L)		12	mg/L	
01055	MANGANESE, TOTAL (UG/L AS MN)	<	8	ug/L	
71900	MERCURY, TOTAL (UG/L AS HG)	<	0.27	ug/L	
01067	NICKEL, TOTAL (UG/L AS NI)	<	20	ug/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		4.12	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		7.9	SU	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		2.79		
01147	SELENIUM, TOTAL (UG/L)		5.4	ug/L	
01077	SILVER, TOTAL (UG/L AS AG)	<	10	ug/L	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		5.24		
00932	SODIUM, CALCULATED, PERCENT		68	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)		147	mg/L	

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		994	MICR	
00945	SULFATE, TOTAL (MG/L AS SO4)		44	mg/L as SO4	
01059	THALLIUM, TOTAL (UG/L AS TL)	<	1	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		525	mg/L	
01092	ZINC, TOTAL (UG/L AS ZN)	<	20	ug/L	

Water Quality Analysis

Sample Date: 5/20/1997 **Sample Time:** 1550 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Catahoula Formation

Analyzed Lab: LCRA - Lower Colorado River Authority **Reliability:** Sampled using TWDB protocols

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
39086	ALKALINITY FIELD DISSOLVED AS CACO3		296	mg/L as CACO3	
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		296	mg/L as CACO3	
01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	1.5	ug/L	
01095	ANTIMONY, DISSOLVED (UG/L AS SB)	<	1	ug/L	
01000	ARSENIC, DISSOLVED (UG/L AS AS)		10.2	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		91	ug/L	
01010	BERYLLIUM, DISSOLVED (UG/L AS BE)	<	1	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		361.22	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)		412	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.58	mg/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		34.6	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		99.2	mg/L	
01035	COBALT, DISSOLVED (UG/L AS CO)	<	1	ug/L	
01040	COPPER, DISSOLVED (UG/L AS CU)	<	1	ug/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.46	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		126	mg/L as CACO3	
71865	IODIDE (MG/L AS I)	<	0.15	mg/L	
01046	IRON, DISSOLVED (UG/L AS FE)	<	15	ug/L	
01049	LEAD, DISSOLVED (UG/L AS PB)	<	1	ug/L	
01130	LITHIUM, DISSOLVED (UG/L AS LI)		51.7	ug/L	
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		9.5	mg/L	
01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	1	ug/L	
01060	MOLYBDENUM, DISSOLVED (UG/L AS MO)		1.9	ug/L	
01065	NICKEL, DISSOLVED (UG/L AS NI)	<	1	ug/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		4.17	mg/L as NO3	
00631	NITRITE PLUS NITRATE, DISSOLVED (MG/L AS N)		0.942	mg/L as N	

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)	<	0.1	mg/L as N	
00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)	<	0.5	mg/L as N	
00090	OXIDATION REDUCTION POTENTIAL (ORP), MILLIVOLTS		73.3	MV	
00400	PH (STANDARD UNITS), FIELD		7.27	SU	
00935	POTASSIUM, DISSOLVED (MG/L AS K)		7.23	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		3.41		
01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	6	ug/L	
00955	SILICA, DISSOLVED (MG/L AS SI02)		48.7	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		5.87		
00932	SODIUM, CALCULATED, PERCENT		72	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		151	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		863	MICR	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		920	ug/L	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		40.4	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		26.6	C	
01057	THALLIUM, DISSOLVED (UG/L AS TL)	<	1	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		573	mg/L	
01085	VANADIUM, DISSOLVED (UG/L AS V)		31.5	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)		38.7	ug/L	

Water Quality Analysis

Sample Date: 3/22/2005 **Sample Time:** 1442 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Catahoula Formation

Analyzed Lab: LCRA - Lower Colorado River Authority **Reliability:** Sampled using TWDB protocols

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
39086	ALKALINITY FIELD DISSOLVED AS CACO3		304	mg/L as CACO3	
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		292	mg/L as CACO3	
01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	4.08	ug/L	
01095	ANTIMONY, DISSOLVED (UG/L AS SB)	<	1.02	ug/L	
01000	ARSENIC, DISSOLVED (UG/L AS AS)		12.7	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		79.3	ug/L	
01010	BERYLLIUM, DISSOLVED (UG/L AS BE)	<	1.02	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		356.34	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)		697	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.4	mg/L	
01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	1.02	ug/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		38.1	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		109	mg/L	
01030	CHROMIUM, DISSOLVED (UG/L AS CR)		13	ug/L	
01035	COBALT, DISSOLVED (UG/L AS CO)	<	1.02	ug/L	
01040	COPPER, DISSOLVED (UG/L AS CU)		4.5	ug/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.64	mg/L	
04241	GROSS ALPHA RADIATION,TOTAL, PRODUCED WATER(pCi/L)		16	pCi/L	4
04242	GROSS BETA RADIATION, TOTAL, PRODUCED WATER(pCi/L)		15	pCi/L	2
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		139	mg/L as CACO3	
01046	IRON, DISSOLVED (UG/L AS FE)	<	51	ug/L	
01049	LEAD, DISSOLVED (UG/L AS PB)	<	1.02	ug/L	
01130	LITHIUM, DISSOLVED (UG/L AS LI)		54.3	ug/L	
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		10.4	mg/L	
01056	MANGANESE, DISSOLVED (UG/L AS MN)		2.29	ug/L	
01060	MOLYBDENUM, DISSOLVED (UG/L AS MO)		3.36	ug/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		3.82	mg/L as NO3	

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00631	NITRITE PLUS NITRATE, DISSOLVED (MG/L AS N)		0.8626	mg/L as N	
00400	PH (STANDARD UNITS), FIELD		7.51	SU	
00935	POTASSIUM, DISSOLVED (MG/L AS K)		9.09	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		3.08		
01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	4.08	ug/L	
00955	SILICA, DISSOLVED (MG/L AS SI02)		50.8	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		6.18		
00932	SODIUM, CALCULATED, PERCENT		72	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		167	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		1012	MICR	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		1180	ug/L	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		56.4	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		26.5	C	
01057	THALLIUM, DISSOLVED (UG/L AS TL)	<	1.02	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		622	mg/L	
01085	VANADIUM, DISSOLVED (UG/L AS V)		27.3	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)		10.2	ug/L	

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 79-03-708

groundwater division

Water Quality Analysis

Sample Date: 3/22/2005 **Sample Time:** **Sample Number:** 1 **Collection Entity:** Texas Commission on Environmental Quality

Sampled Aquifer: Catahoula Formation

Analyzed Lab: Immunoassay at TCEQ **Reliability:** Sampled using TWDB protocols, but NOT filtered

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
39033	ATRAZINE, TOTAL, UG/L	<	0.05	ug/L	
82612	METOLACHLOR, WHOLE WATER, TOTAL RECOVERABLE, UG/L	<	0.05	ug/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

Texas Water Development Board
Well Schedule

State Well No. 29 03 708 Previous Well No. _____ County Karnes 255

River Basin San Antonio 09 Zone 2 Lat. 28 52 51 Long. 097 42 44 Source of Coord. 1

Owner's Well No. #4 Location ____ 1/4, ____ 1.4, Section ____, Block ____, Survey ____

Owner City of Runge Driller Cude Drilling Inc

Address 306 N. Helena St Runge Tx 78151 Tenant/Oper. _____

Date Drilled 08 06 1994 Depth 1100 720 Source of Depth Datum D Altitude 310 Source of Alt. Datum M

Aquifer Catahoula Tuff 122CTHKL Well Type W User 253800

Well Construction: Const. Method Mud Rotary H; Casing Material Steel S

Completion Screened S; Screen Material Steel S

Lift Data: Pump Mfr. _____ Type Subm S No. Stages ____

Bowls Diam. ____ in. Setting ____ ft. Column Diam. ____ in.

Motor Mfr. _____ Fuel or Power Elec E Horsepower ____

Yield: Flow ____ GPM Pump ____ GPM Meas.,Repr.,Est. ____ Date ____

Performance Test: Date ____ Length of Test ____ Production ____ GPM

Static Level ____ ft. Pumping Level ____ ft. Drawdown ____ ft. Sp.Cap. ____ GPM/ft.

Quality (Remarks _____

Water Use: Primary Public P; Secondary ____ ; Tertiary ____

Other Data Available: Water Level M; Water Quality Y; Logs D; Other Data ____

Water Levels: Date 09 23 1994 Meas. 91.00 Below Lsd. By Driller

Date ____ Meas. ____

Date ____ Meas. ____

Casing or Blank Pipe (C)
Well Screen or Slotted Zone (S)
Open Hole (O)
Cemented from 0 to 315 Setting (feet)

	Diam. (in.)	From	To
1	C 08	0	315
2	C 08	315	340
3	S 08	340	400
4	C 08	400	620
5	S 08	620	700
6	C 08	700	710
7	Plug	720	850
8			
9			
10			
11			
12			
13			
14			
15			
16			

Recorded By Ron Mohr Date Record Collected or Updated 05 20 1997 (20 max) Reporting Agency 01

Remarks: Drilled to 1100 ft Plugged back to 720 ft.

Aquifer Catahoula

Well No. 29-03-708

93-0384
2/9/93

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

ATTENTION OWNER: Confidentiality / Privilege Notice on Reverse Side

State of Texas
WELL REPORT

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

1) OWNER City of Runge (Name) ADDRESS 306 N. Helena St., Runge, Texas 78151 (Street or RFD) (City) (State) (Zip)

2) LOCATION OF WELL:
County Karnes . 0 miles in – (NE, SW, etc.) direction from Runge (Town)

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

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

☒ SEE ATTACHED MAP

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

4) PROPOSED USE (Check):
☐ Domestic ☐ Industrial ☐ Monitor ☒ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

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

6) WELL LOG:
Date Drilling: Started 8-08 1994 Completed 10-06 1994

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
18"	Surface	320
13"	320	720

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

From (ft.)	To (ft.)	Description and color of formation material
0	6	Top Soil
6	101	Clay & Sand
101	122	Clay & Rocks
122	241	Sand & Shale
241	250	Sand
250	328	Sand & Shale
328	398	Sand
398	460	Sand & Shale
460	611	Shale W/ Sand Streaks

(Over)
(Use reverse side if necessary)

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

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
2 3/4	N	Steel	0	315	
8	N	Steel	315	340	
8	N	Screen	340	400	.025
8	N	Steel	400	620	
8	N	Screen	620	700	.018
8	N	Steel	700	710	

9) CEMENTING DATA [Rule 287.44(1)]
Cemented from 315 ft. to 0 ft. No. of Sacks Used 195
Plug: 850 ft. to 725 ft. No. of Sacks Used 35
Method used Pressure
Cemented by Halliburton Services-Pleasanton

RECEIVED NOV 18 1994 TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

10) SURFACE COMPLETION
☒ Specified Surface Slab Installed [Rule 287.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 287.44(3)(A)]
☐ Pitless Adapter Used [Rule 287.44(3)(B)]
☐ Approved Alternative Procedure Used [Rule 287.71]

11) WATER LEVEL:
Static level 91 ft. below land surface Date 9-23-94
Artesian flow _____ gpm. Date _____

12) PACKERS:

	Type	Depth
2	Baskets	320
2	Baskets	610

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

14) WELL TESTS:
Type Test: ☒ Pump ☐ Bailer ☐ Jetted ☒ Estimated
Yield: 458 gpm with 187 ft. drawdown after 36 hrs.

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☒ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Good Depth of strata 340 - 400
Was a chemical analysis made? ☒ Yes ☐ No 620 - 700

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Cude Drilling, Inc. (Type or print) WELL DRILLER'S LICENSE NO. 3130 WPKL

ADDRESS P. O. Box 8 (Street or RFD) Pleasanton (City) Texas (State) 78064 (Zip)

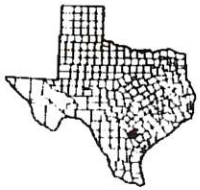
(Signed) _____ (Licensed Well Driller) (Signed) _____ (Registered Driller Trainee)

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

For TWC use only: Well No. 7903-7 Located on map _____

TWC-0199 (Rev. 05-18-90) TEXAS WATER COMMISSION COPY

79-03-708



GENERAL HIGHWAY MAP
KARNES COUNTY
TEXAS

PREPARED BY THE
TEXAS DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION PLANNING
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

1987

1990 CENSUS FIGURES

HIGHWAYS REVISED TO FEBRUARY 1, 1988

NOTICE

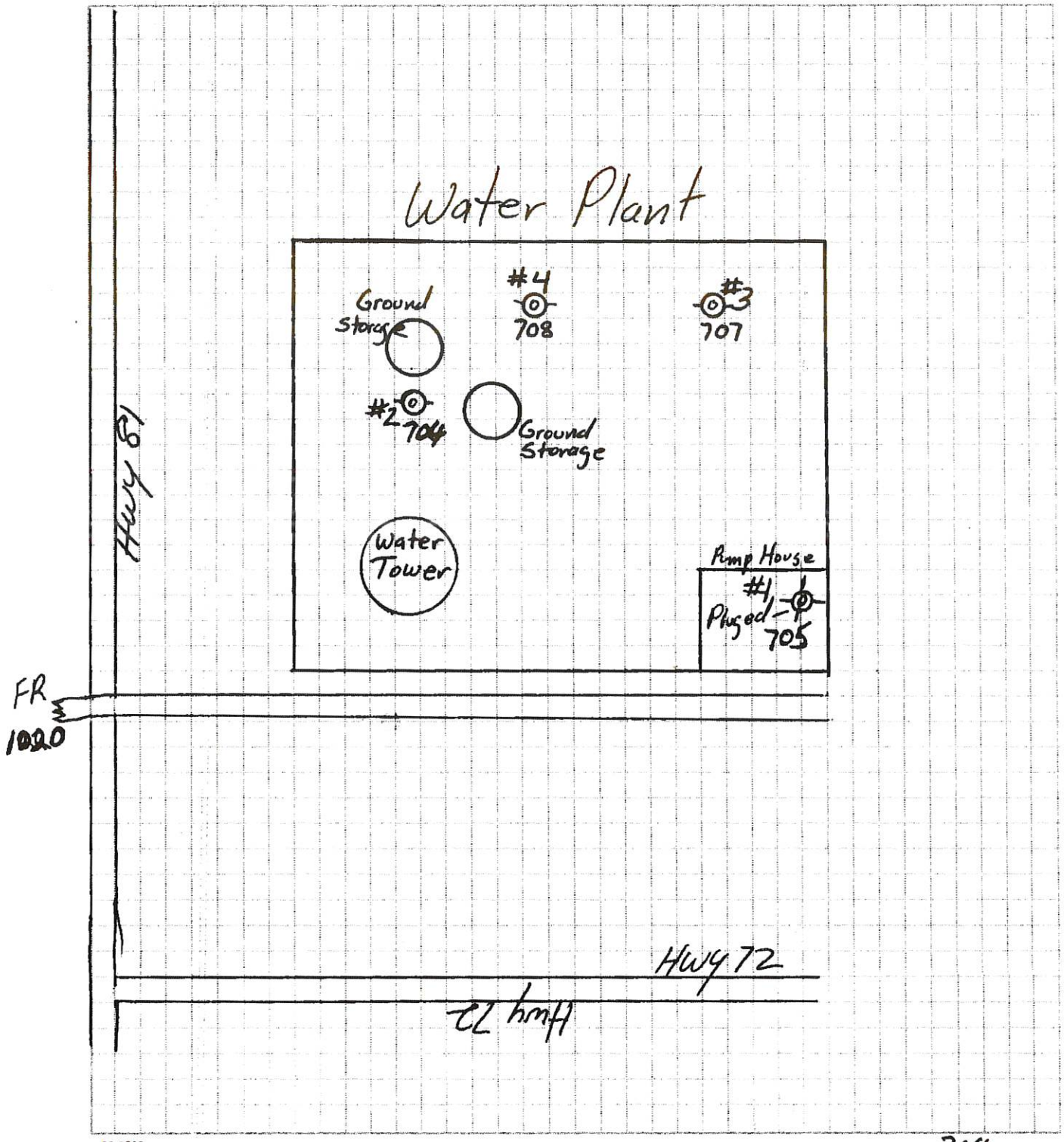
KARNES COUNTY TEXAS 12

Texas Water Development Board

By _____ Date _____ Division _____

Chkd. _____ Date _____ Well Number 79-03-708

County Karnes



98-0502

704
705
707
708

79-03-

Well Number

New Well

Water Quality Field Data

SWN: 79-03-708
County: Karnes
Aquifer(s):

Name: City of Runge
Address: 306 N Helena
Runge Tx 78151
owner's well # 4

Sample No. 581
Date: 5-20-97
By: Ron Mohr

Bottle1	Bottle 2	Bottle 3	Bottle 4	Bottle 5	Bottle 6	Bottle 7	Total SUB-Samples 3
500 ml Anions	1 liter Cations	250 ml Nitrate	1 liter Radioactivity				
	2 ml HNO (Nitric)	0.5 ml H SO (Sulfuric)	2 ml HNO (Nitric)				All filtered unless otherwise stipulated

Water Level _____ LSD Remark _____
Temperature (00010) 26.6 c
Specific Conductance (00094) 863 umhos/cm
pH (00400) 7.27
Eh (00090) 73.3 mv.
Phenol ALK (82244) 0 mg/l
Total ALK (39086) 296 mg/l
Carbonate (00452) 0 meq/l 0 mg/l
Bicarbonate (00453) 5.92 meq/l 361.2 mg/l
Total Cations(+) 0
Total Anions (-)
Total Hardness (00900) 130
Dissolved Solids 575

Time in 1515
Time out 1615 Sample time 1550
Weather Cloudy well use PS
Outside Temp 80°
Sampling point Faucet on WH

Starting pH 7.54
14.8 ml. of 0.02N to
50 ml. of Sample
Ending pH 4.51

Time:	1530	1535	1540	1545	1550	
pH:		7.34	7.27	7.27		
Temp:		26.9	26.8	26.6		
Eh:				+	73.3	
Cond.		863	861	863		

other notes:

ml.	pH	ml.	pH	ml.	pH
2	7.22	13	6.10		
4	7.03	14	5.74		
5	6.93	14.5	5.19		
6	6.86	.6	4.96		
7	6.79	.7	4.60		
8	6.71	.8	4.51		
9	6.64				
10	6.56				
11	6.44				
12	6.29				

FINAL ANALYSIS REPORT

LAB ID: 9704777 SAMPLE DESCRIPTION: Groundwater
FACILITY: TWDB SAMPLE DATE: 05/20/97
ACCT NO: TWDB SAMPLE TIME: 1550
TX WATER DEV. BOARD
DATE RECEIVED: 05/23/97
REPORT DATE: 08/19/97

LOCATION ID: 79-03-708

PARAMETER	RESULTS	UNITS	STORET #	PQL in WATER	DATE ANALYZED
Alkalinity, Phenol.	<1	mg/L	00415	1	05/29/97
Alkalinity, Total	268	mg/L	00410	1	05/29/97
Bromide	0.58	mg/L	71870	0.05	05/28/97
Chloride	99.2	mg/L	00941	0.1	05/28/97
Fluoride	0.46	mg/L	00950	0.02	05/28/97
Iodide, Laboratory	<0.15	mg/L	71965	0.05	05/27/97
Nit.,Nitrate/Nitrite	0.942	mg/L	00630	0.020	06/06/97
Nitrogen, Kjeldahl	<0.500	mg/L	00623	0.010	06/05/97
Nitrogen, ammonia	<0.100	mg/L	00608	0.010	06/09/97
Silica	48.70	mg/L	00955	0.01	06/02/97
Sulfate	40.40	mg/L	00946	0.10	05/28/97
Aluminum, Dis. ICPMS	<1.5	ug/L	01106	1.0	07/15/97
Antimony, Dis. ICPMS	<1.0	ug/L	01095	1.0	07/15/97
Arsenic, Diss. ICPMS	10.2	ug/L	01000	1.0	07/15/97
Barium, Diss. ICPMS	91.0	ug/L	01005	1.0	07/15/97
Beryllium, Dis ICPMS	<1.0	ug/L	01010	1.0	07/15/97
Boron, Diss. ICPMS	412.0	ug/L	01020	1.0	07/15/97
Calcium, Dissolved	34.60	mg/L	00915	0.50	06/11/97
Cobalt, Diss. ICPMS	<1.0	ug/L	01035	1.0	07/15/97
Copper, Diss. ICPMS	<1.0	ug/L	01040	1.0	07/15/97
Iron-AA, Dissolved	<15.00	ug/L	01046	15.00	06/19/97
Lead, Diss. ICPMS	<1.0	ug/L	01049	1.0	07/15/97
Lithium, Diss. ICPMS	51.7	ug/L	01130	1.0	07/15/97
Magnesium, Dissolved	9.50	mg/L	00925	0.05	06/11/97
Manganese, Dis ICPMS	<1.0	ug/L	01056	1.0	07/15/97
Molybdenum Dis ICPMS	1.9	ug/L	01060	1.0	07/15/97
Nickel, Diss. ICPMS	<1.0	ug/L	01065	1.0	07/15/97
Potassium, Dissolved	7.23	mg/L	00935	1.00	06/11/97
Selenium, Dis. ICPMS	<6.0	ug/L	01145	4.0	07/15/97

FINAL ANALYSIS REPORT

LAB ID: 9704777 SAMPLE DESCRIPTION: Groundwater
FACILITY: TWDB SAMPLE DATE: 05/20/97
ACCT NO: TWDB SAMPLE TIME: 1550
TX WATER DEV. BOARD
DATE RECEIVED: 05/23/97
REPORT DATE: 08/19/97

LOCATION ID: 79-03-708

PARAMETER	RESULTS	UNITS	STORET #	PQL in WATER	DATE ANALYZED
Sodium, Dissolved	151.00	mg/L	00930	0.10	06/11/97
Strontium, Dis ICPMS	920.0	ug/L	01080	1.0	07/15/97
Thallium, Diss ICPMS	<1.0	ug/L	01057	1.0	07/15/97
Vanadium, Diss ICPMS	31.5	ug/L	01085	1.0	07/15/97
Zinc, Diss. ICPMS	38.7	ug/L	01090	1.0	07/15/97

COMMENTS: Silica, NH3, TKN, NO3/NO2 subcontracted.

TWDB Water Quality Field Data Sheet

Newly Inventoried Well: NO

State Well Number: 79-03-708
County: KARNES
County Code: 255
Aquifer Code: 122CTHL
Aquifer Id: 15

Name: City of Runge
Address: P.O Box 206
Runge Tx. 78151
Phone Number: (830) 239-4121
Attention:
Well Name or #: 4

Sample ID Number: 927
Date: 3/22/05
Sampler(s): D. Wuerch

Calibration Verification Readings		
pH	7 =	7.03
	4 or 10 =	10.07
SLP = 97.2	7.38 =	
Conductivity	500 =	506
	1000 =	1007
	2000 =	1970
	5000 =	5000

CIRCLE EACH SAMPLE FRACTION COLLECTED:

(1)	(2)	(3)	(4)	5	(6)
500ml (filtered)	500ml (filtered)	250ml (filtered)	40 ml (unfiltered)	1 L (unfiltered)	1 L (unfiltered)
Anions / Total Alk.	**Cations**	**Nutrient**	**Atrazine**	**Tritium**	**Alpha & Beta**
Ice	Nitric (HNO3)	Ice + H2SO4	Ice and in dark	None	Nitric (HNO3)

Proper Cation, Nutrient, and Alpha/Beta preservation requires adding enough of the correct acid to each sample fraction to bring the pH below 2.0

Time In: 14:02
Time Out: 14:50

W. L. depth from LSD (ft.): —
W.L. remark: 42
M.P. =

Pumping Since: 14:08
Sampling Point: FAW (installed)

Well Use: P
Lift: S
Power: E

FIELD G.P.S. readings
Latitude: 28°52'52."
Longitude: 97°42'46."

Casing Type:
Casing Size: "

Sample Time: 14:42
Filter pressure: hand pump / (line)

Field Alkalinity Titration:

7.57 Start pH 4.50 End pH
50.0 mL Sample Size
— mL Acid added for Phenol (> 8.3)
15.2 mL Acid added for Total (to pH 4.5)

Items below calculated from: mL acid added x 20 = Alkalinity
Phenol Alkalinity (82244): — mg/L
Total Alkalinity (39086): 304 mg/L

Items Below Calculated Later From Results:
Dissolved Solids (mg/L): 622
Hardness (as CaCO3): 139
Balanced: yes

Water Quality Stabilization Parameters Table (at least 3 readings at five minute intervals)

Time:	14:18	14:23	14:28				
pH:	7.51	7.51	7.51				
Celsius Temp. (00010)	26.4	26.5	26.5				
Conductivity (uS/cm):	997	1011	1012				

Notes:

Data Entered By Sampler Into Database: (yes) / no

LCRA Environmental Laboratory Services

Date: *14-Apr-05*

CLIENT: Texas Water Development Board
Client Sample ID: 79-03-708
Lab Order: 0503486 **File No:** 36899
Project: TWDB FY05
Collection Date: 3/22/2005 2:42:00 PM
Lab ID: 0503486-006
Matrix: GROUNDWATER

Analyses	Storet	Result	Qual	PQL	Units	DF	Batch ID	Date Analyzed
ICP METALS DISSOLVED			**E200.7**					Analyst: **TH**
Calcium		38.1		0.204	mg/L	1	32938	4/11/2005 4:25:35 PM
Magnesium		10.4		0.204	mg/L	1	32938	4/11/2005 4:25:35 PM
Potassium		9.09		0.204	mg/L	1	32938	4/11/2005 4:25:35 PM
Sodium		167		0.714	mg/L	1	32938	4/11/2005 4:25:35 PM
ICP METALS DISSOLVED			**E200.7**					Analyst: **TH**
Boron		697		51	µg/L	1	32939	4/11/2005 4:25:35 PM
Iron		ND		51	µg/L	1	32939	4/11/2005 4:25:35 PM
Strontium		1180		20	µg/L	1	32939	4/11/2005 4:25:35 PM
ICPMS DISSOLVED METALS			**E200.8**					Analyst: **SW**
Aluminum		ND		4.08	µg/L	1	32738	3/30/2005
Antimony		ND		1.02	µg/L	1	32738	3/30/2005
Arsenic		12.7		2.04	µg/L	1	32738	3/30/2005
Barium		79.3		1.02	µg/L	1	32738	3/30/2005
Beryllium		ND		1.02	µg/L	1	32738	3/30/2005
Cadmium		ND		1.02	µg/L	1	32738	3/30/2005
Chromium		13.0		1.02	µg/L	1	32738	3/30/2005
Cobalt		ND		1.02	µg/L	1	32738	3/30/2005
Copper		4.50		1.02	µg/L	1	32738	3/30/2005
Lead		ND		1.02	µg/L	1	32738	3/30/2005
Lithium		54.3		2.04	µg/L	1	32738	3/30/2005
Manganese		2.29		1.02	µg/L	1	32738	3/30/2005
Molybdenum		3.36		1.02	µg/L	1	32738	3/30/2005
Selenium		ND		4.08	µg/L	1	32738	3/30/2005
Thallium		ND		1.02	µg/L	1	32738	3/30/2005
Vanadium		27.3		1.02	µg/L	1	32738	3/30/2005
Zinc		10.2		4.08	µg/L	1	32738	3/30/2005
CATION/ANION BALANCES			**CALCULATION**					Analyst: **AMJ**
Cation/Anion Balance		Balanced		0	Date	1	32978	4/13/2005
ANIONS BY ION CHROMATOGRAPHY, DISSOLVE			**E300**					Analyst: **WR**
Bromide Dissolved		0.40		0.10	mg/L	5	32861	4/7/2005 1:06:00 AM
Chloride Dissolved		109		5.00	mg/L	5	32861	4/7/2005 1:06:00 AM
Fluoride Dissolved		0.64		0.05	mg/L	5	32861	4/7/2005 1:06:00 AM
Sulfate Dissolved		56.4		5.00	mg/L	5	32861	4/7/2005 1:06:00 AM
ALKALINITY			**M2320 B**					Analyst: **WR**
Alkalinity, Phenolphthalein		ND		0	mg/L CaCO3	1	32774	4/1/2005
Alkalinity, Total (As CaCO3)		292		2	mg/L CaCO3	1	32774	4/1/2005
NITRATE AND NITRITE			**E353.2**					Analyst: **LW**

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

LCRA Environmental Laboratory Services

Date: *14-Apr-05*

CLIENT: Texas Water Development Board
Client Sample ID: 79-03-708
Lab Order: 0503486 **File No:** 36899
Project: TWDB FY05
Collection Date: 3/22/2005 2:42:00 PM
Lab ID: 0503486-006
Matrix: GROUNDWATER

Analyses	Storet	Result	Qual	PQL	Units	DF	Batch ID	Date Analyzed
NITRATE AND NITRITE			**E353.2**					Analyst: **LW**
Nitrogen, Nitrate & Nitrite		0.8626		0.0200	mg/L	1	32719	3/31/2005
SILICA			**E370.1**					Analyst: **LW**
Silica, Dissolved (as SiO2)		50.8		0.50	mg/L	1	32714	3/30/2005

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

LCRA Environmental Laboratory Services

Date: *13-Apr-05*

CLIENT:	Texas Water Development Board	**Client Sample ID:**	79-03-708
Lab Order:	0503497 **File No:** 36910		
Project:	TWDB FY05	**Collection Date:**	3/22/2005 2:42:00 PM
Lab ID:	0503497-006	**Matrix:**	GROUNDWATER

Analyses	Storet	Result Qual	PQL	Units	DF	Batch ID	Date Analyzed
RADIOLOGICALS		**RADIOCHEM**					Analyst: **SB**
ALPHA, Gross		Subcontracted	0	pci/L	1	32946	3/31/2005
BETA, Gross		Subcontracted	0	pci/L	1	32946	3/31/2005

Qualifiers:	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside accepted recovery limits		

KARNES

7903708

LCRA Environmental Laboratory Services

Date: *13-Apr-05*

CLIENT: Texas Water Development Board
Project: TWDB FY05
Lab Order: 0503497

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
0503497-001A	79-10-408		3/21/2005 1:32:00 PM	3/25/2005
0503497-002A	78-16-609		3/21/2005 2:52:00 PM	3/25/2005
0503497-003A	66-33-510		3/22/2005 9:56:00 AM	3/25/2005
0503497-004A	67-47-607		3/22/2005 11:09:00 AM	3/25/2005
0503497-005A	67-54-204		3/22/2005 12:50:00 PM	3/25/2005
0503497-006A	79-03-708		3/22/2005 2:42:00 PM	3/25/2005
0503497-007A	67-40-503		3/23/2005 9:46:00 AM	3/25/2005
0503497-008A	67-39-517		3/23/2005 11:22:00 AM	3/25/2005
0503497-009A	67-31-602		3/23/2005 1:38:00 PM	3/25/2005
0503497-010A	67-32-704		3/23/2005 2:40:00 PM	3/25/2005
0503497-011A	67-40-301		3/23/2005 3:51:00 PM	3/25/2005
0503497-012A	66-43-812		3/24/2005 10:22:00 AM	3/25/2005
0503497-013A	66-34-207		3/24/2005 11:42:00 AM	3/25/2005
0503497-014A	66-25-103		3/24/2005 2:11:00 PM	3/25/2005

79 03 708

TEL. 361-884-0371 PO BOX 2552 78403

JORDAN LABORATORIES, INCORPORATED
ANALYTICAL & ENVIRONMENTAL CHEMISTS
CORPUS CHRISTI, TEXAS
April 05, 2005

LCRA ENVIRONMENTAL LAB
3505 Montopolis, EL 101
Austin, Texas 78744-1417

STORET

Report of Analysis

Lab. No.	Identification	Time	Date (05)	*Gross Alpha Activity pci/L	*Gross Beta Activity pci/L
7910408	M43-1176	0503497-001A	1:32 PM 3-21	25 +/- 8	28 +/- 5
7816609	M43-1177	0503497-002A	2:52 PM 3-21	24 +/- 6	28 +/- 3
6633510	M43-1178	0503497-003A	9:56 AM 3-22	3.0 +/- 4.0	4.8 +/- 2.5
6747607	M43-1179	0503497-004A	11:09 AM 3-22	6.1 +/- 3.7	8.8 +/- 2.4
6754204	M43-1180	0503497-005A	12:50 PM 3-22	4.5 +/- 3.1	11 +/- 2
7903708	M43-1181	0503497-006A	2:42 PM 3-22	16 +/- 4	15 +/- 2
6740503	M43-1182	0503497-007A	9:46 AM 3-23	1.2 +/- 2.6	7.2 +/- 2.1
6739517	M43-1183	0503497-008A	11:20 AM 3-23	4.7 +/- 4.1	12 +/- 3
6731602	M43-1184	0503497-009A	1:38 PM 3-23	6.9 +/- 3.6	16 +/- 3
6732704	M43-1185	0503497-010A	2:40 PM 3-23	10 +/- 5	11 +/- 2
6740301	M43-1186	0503497-011A	3:51 PM 3-23	17 +/- 4	5.5 +/- 1.7
6643812	M43-1187	0503497-012A	10:22 AM 3-24	4.6 +/- 2.1	3.3 +/- 1.1
6634207	M43-1188	0503497-013A	11:42 AM 3-24	6.6 +/- 3.8	4.6 +/- 2.8
6625103	M43-1189	0503497-014A	2:11 PM 3-24	9.0 +/- 3.4	5.3 +/- 1.7

04241 04242

Analysts: Nixon/Moore
Analysis Date: 3-30-05, 3-31-05
Method: 900.0 Calibration: Alpha - Th230 Beta - Cs137

*Note: EPA Method 900.0 is a drinking water screening procedure. Its application to waters of high total dissolved solids may result in unacceptably high counting errors due to limitation on sample size. Recommended max is 500 mg/L.

Alternate method for determining activity may be considered.

Respectfully Submitted,

CFC

Carl F. Crownover, Pres.

form: S1-50

7903708

Texas Water Development Board

Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 79-11-204

groundwater

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	7911204
County	Karnes
River Basin	San Antonio
Groundwater Management Area	15
Regional Water Planning Area	L - South Central Texas
Groundwater Conservation District	Evergreen UWCD
Latitude (decimal degrees)	28.8725
Latitude (degrees minutes seconds)	28° 52' 21" N
Longitude (decimal degrees)	-97.705834
Longitude (degrees minutes seconds)	097° 42' 21" W
Coordinate Source	+/- 10 Seconds
Aquifer Code	122OKVL - Oakville Sandstone
Aquifer	Gulf Coast
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	300
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	57
Well Depth Source	Another Government Agency
Drilling Start Date	
Drilling End Date	
Drilling Method	
Borehole Completion	

Well Type	Withdrawal of Water
Well Use	Domestic
Water Level Observation	Miscellaneous Measurements
Water Quality Available	Yes
Pump	Piston
Pump Depth (feet below land surface)	
Power Type	Windmill
Annular Seal Method	
Surface Completion	
Owner	Paul Natho
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	U.S. Geological Survey
Created Date	9/9/1999
Last Update Date	9/9/1999

Remarks

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

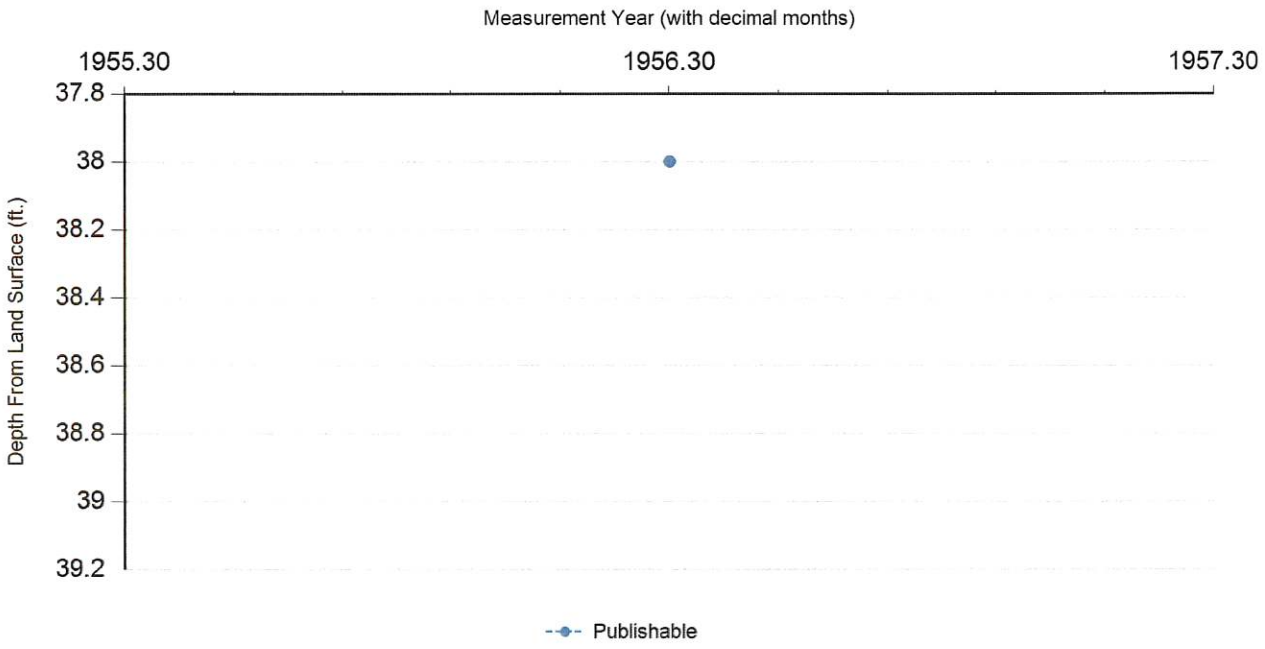
Borehole - No Data

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	4/21/1956		38		262	1	U.S. Geological Survey	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 79-11-204

groundwater

Water Quality Analysis

Sample Date: 4/6/1937 **Sample Time:** 0000 **Sample Number:** 1 **Collection Entity:** Other Federal Agencies

Sampled Aquifer: Oakville Sandstone

Analyzed Lab: WPA **Reliability:** From a report; unknown sample collection & preservation

Collection Remarks: Analysis taken from M-151

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		299.91	mg/L as CACO3	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		366	mg/L	
00910	CALCIUM (MG/L)		121	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		250	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		380	mg/L as CACO3	
00920	MAGNESIUM (MG/L)		19	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		3.35		
00932	SODIUM, CALCULATED, PERCENT		46	PCT	
00929	SODIUM, TOTAL (MG/L AS NA)	calculated	150	mg/L	
00945	SULFATE, TOTAL (MG/L AS SO4)		54	mg/L as SO4	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		773	mg/L	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*

Texas Water Development Board
Well Schedule

State Well No. 79 11 204 Previous Well No. E-37 396 County Karnes 255

River Basin San Antonio 19 Zone 2 Lat. 28 52 20 Long. 097 42 20 Accuracy of Coord. 3

Owner's Well No. ______ Location ____ 1/4, ____ 1/4, Section ____, Block ____, Survey ____

Owner Paul Matho

Driller

Address ______ Tenant/Oper. ______

Date Drilled ______ Depth 57 Source of Depth Datum ___ Altitude 300 Source of Alt. Datum M

Aquifer Oakville SS 122OKVL Well Type W User

Aquifer ID 15

Well Construction Const. Method ______ Casing Material ______

Completion ______ Screen Material ______

Casing or Blank Pipe (C)
Well Screen or Slotted Zone (S)
Open Hole (O)
Cemented from ___ to ___

Diam. (in.)	Setting (feet) From	To
C 06		

Lift Data Pump Mfr. ______ Type windmill P Setting ______

Motor Mfr. ______ Power ______ W Horsepower ______

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.

Water Use Primary dom. H Secondary stock S Tertiary ______

Quality (Remarks) ______

Other Data Available Water Level M Water Quality Y Logs ______ Other Data ______

Water Levels
Date 04 21 1956 Meas. 38.0 USGS
Date ______ Meas. ______
Date ______ Meas. ______

Recorded By PLN Date Record Collected or Updated 1956 (20 max) Reporting Agency 02

Remarks

Aquifer Oakville
Well No. 7911204

17-0402-(7-77)
Recurrent

ATTACHMENT No. 13

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.0
LAND DISPOSAL OF EFFLUENT

SECTION 7

GROUND WATER QUALITY TECHNICAL REPORT

DOMESTIC WORKSHEET 3.0
SECTION 7

GROUND WATER QUALITY TECHNICAL REPORT

The nearby private water wells are outside the 250' buffer zone required by 30 TAC Section 309.13(c). The nearest well is +/-550' from the land disposal site; however, the land disposal site does not drain to the well. The storage pond liner consists of two feet of clay meeting liner permeability requirements in 30 TAC 217.203(d). Therefore, the impact of the waste disposal site on the groundwater is negligible.

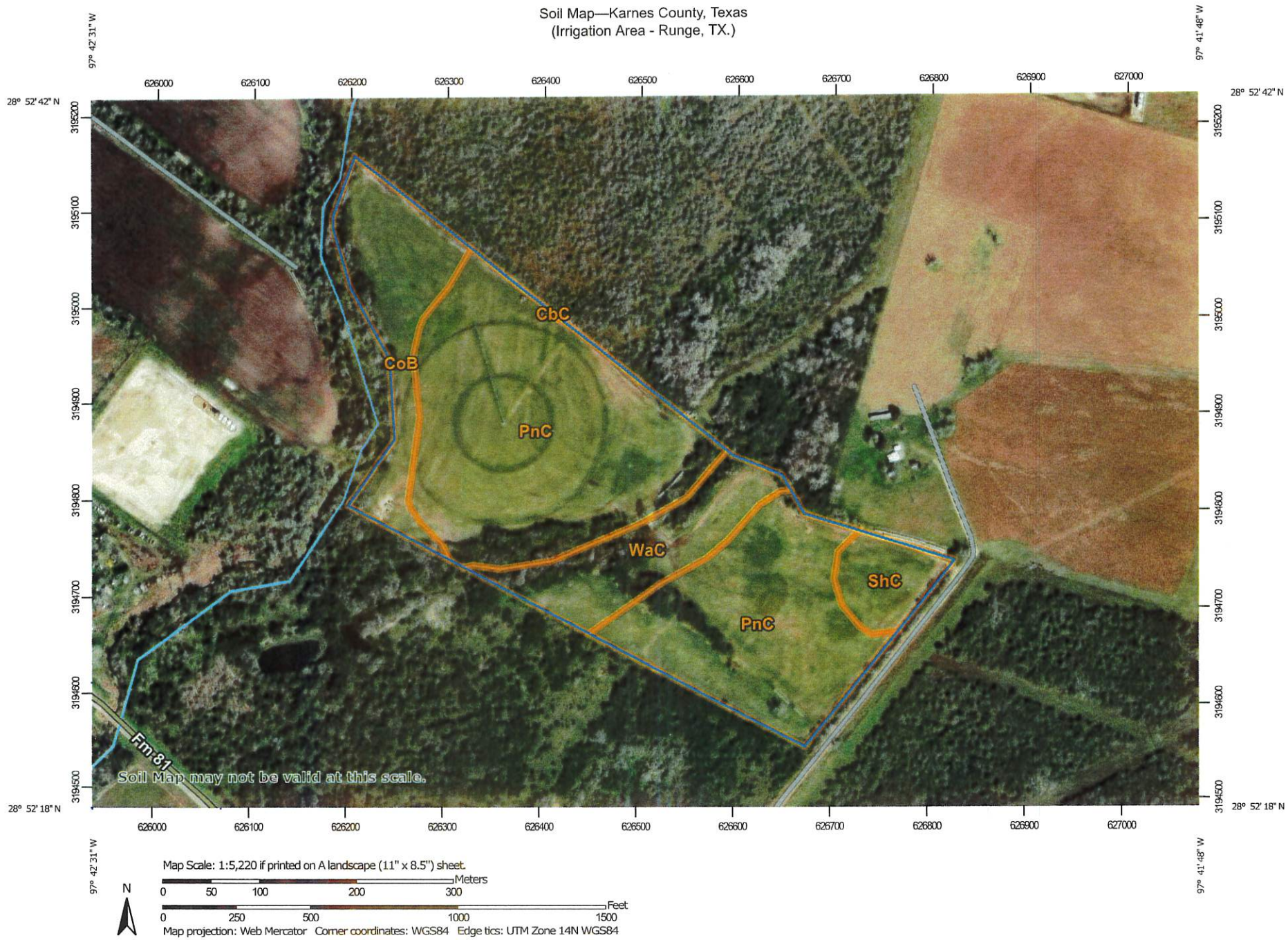
ATTACHMENT No. 14

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.0
LAND DISPOSAL OF EFFLUENT

SECTION 8

USDA SOIL SURVEY MAP

Soil Map—Karnes County, Texas
(Irrigation Area - Runge, TX.)



Map Scale: 1:5,220 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Karnes County, Texas
Survey Area Data: Version 21, Aug 30, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 28, 2010—Oct 17, 2017

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CbC	Colibro sandy clay loam, 3 to 5 percent slopes	0.0	0.0%
CoB	Coy clay loam, 1 to 3 percent slopes	5.8	14.7%
PnC	Pernitas sandy clay loam, 2 to 5 percent slopes	26.4	67.5%
ShC	Schattel clay loam, 2 to 5 percent slopes	2.0	5.2%
WaC	Weesatche fine sandy loam, 2 to 5 percent slopes	4.9	12.5%
Totals for Area of Interest		**39.1**	**100.0%**

ATTACHMENT No. 15

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.0
LAND DISPOSAL OF EFFLUENT

SECTION 8

SOIL ANALYSIS

SAN ANTONIO TESTING LABORATORY

October 11, 2024

Brian Cope
Klein & Cope Engineering
8611 Botts Lane, Ste. 101
San Antonio, TX 78217

SATL Report No.: 2410011

RE: City of Runge Irrigation Site

Dear Brian Cope

SATL received 9 Sample(s) on 10/01/2024 for analyses identified on the chain of custody. The analyses were performed using methods indicated on the laboratory report. Any deviations observed at sample receiving are notated on the Sample Receipt Checklist and/or Chain of Custody documents attached as part of this analytical report.

Sincerely,

For San Antonio Testing Laboratory, Inc.

Marcela G. Hawk,
President

Klein & Cope Engineering
8611 Botts Lane, Ste. 101
San Antonio TX, 78217

Project Manager: Brian Cope
Project: City of Runge Irrigation Site

Reported:
10/11/24 14:30
Received:

SAMPLE SUMMARY

Total Samples received in this work order: 9

The following samples were requested for analysis as per the CoC. Any re-runs or re-analyses requested are identified as such.

Sample ID	Laboratory ID	Matrix	Sampling Method	Date Sampled	Date Received
Schattel Clay Shc 0-6"	2410011-01	Solid	Grab	10/01/24 08:00	10/01/24 11:24
Schattel Clay Shc 6-18"	2410011-02	Solid	Grab	10/01/24 08:05	10/01/24 11:24
Schattel Clay Shc 18-30"	2410011-03	Solid	Grab	10/01/24 08:10	10/01/24 11:24
Pernitas Sandy Clay 0-6"	2410011-04	Solid	Grab	10/01/24 08:15	10/01/24 11:24
Pernitas Sandy Clay 6-18"	2410011-05	Solid	Grab	10/01/24 08:20	10/01/24 11:24
Pernitas Sandy Clay 18-30"	2410011-06	Solid	Grab	10/01/24 08:25	10/01/24 11:24
Coy Clay Loam 0-6"	2410011-07	Solid	Grab	10/01/24 08:30	10/01/24 11:24
Coy Clay Loam 6-18"	2410011-08	Solid	Grab	10/01/24 08:35	10/01/24 11:24
Coy Clay Loam 18-30"	2410011-09	Solid	Grab	10/01/24 08:40	10/01/24 11:24

Notes

All quality control samples and checks are within acceptance limits unless otherwise indicated.
Test results pertain only to those items tested.
All samples were in good condition when received by the laboratory unless otherwise noted.

Project Number: [none]

Additional Notes:

Sample ID #: Schattel Clay Shc 0-6" Sample Matrix: Solid

Analyte	Result	Units	PQL					
General Chemistry								10/01/24 11:24
% Solids	93.7	% by Wt.	0.100	% Calc	B441163	10/08/24 09:35	ASTM D2216	TW
Conductivity (@25C)	521	umhos/cm	1.00	SM2510B	B441263	10/07/24 12:10	USDAHB60	JA
Ammonia-Nitrogen *	50.4	mg/kg	10.0	SM4500NH3B	B441261	10/10/24 13:00	SM4500NH3C	SG
Total Kjeldahl Nitrogen	975	mg/kg	1.00	EPA 351.3	B441275	10/10/24 12:03	EPA 351.3	SG
Total Nitrogen	1040	mg/kg dry	1.20	[CALC]	[CALC]	10/10/24 12:03	CALC	SG
SoilpH measured in H20@ Cbelow	7.46	pH Units	0.10	EPA 9045D	B441167	10/07/24 12:10	EPA 9045D	DD H
pH measured @Temperature >>	20	C	0.10	EPA 9045D	B441167	10/07/24 12:10	EPA 170.1	DD H
Anions by Ion Chromatography								
Nitrite as N *	0.16	mg/kg	0.10	EPA 300.0	B441221	10/08/24 21:11	EPA 300.0	JA
Nitrate as N *	2.53	mg/kg	0.10	EPA 300.0	B441221	10/08/24 21:11	EPA 300.0	JA
Available Metals by Mehlich III Extraction								
Calcium *	20000	mg/kg dry	20.0					
Calcium, Available	20000	mg/kg dry	20.0					
Magnesium *	427	mg/kg dry	20.0					
Magnesium, Available	427	mg/kg dry	20.0					
Phosphorus, Available	<20.0	mg/kg dry	20.0					
Potassium, Available	196	mg/kg dry	100					
Sodium *	433	mg/kg dry	20.0					
Sodium, Available *	433	mg/kg dry	20.0					
Sulfur	204	mg/kg dry	20.0					
Sulfur, Available	204	mg/kg dry	20.0					

Report No. 2410011

Klein & Cope Engineering
8611 Botts Lane, Ste. 101
San Antonio TX, 78217

Project Manager: Brian Cope
Project: City of Runge Irrigation Site

Reported:
10/11/24 14:30
Received:
10/01/24 11:24

Sampling Method: Grab Lab Sample ID #: 2410011-01
Date/Time Collected: 10/01/24 08:00

General Chemistry

Calcium *	21300	mg/kg dry	20.0
Calcium, Available	21300	mg/kg dry	20.0
Magnesium *	443	mg/kg dry	20.0
Magnesium, Available	443	mg/kg dry	20.0
Phosphorus, Available	<20.0	mg/kg dry	20.0
Potassium, Available	186	mg/kg dry	100
Sodium *	524	mg/kg dry	20.0
Sodium, Available *	524	mg/kg dry	20.0
Sulfur	273	mg/kg dry	20.0
Sulfur, Available	273	mg/kg dry	20.0

Report No. 2410011

Prep Method	Batch	Analyzed	Method	Analyst	Notes
Mehlich-III	B441192	10/08/24 16:34	M-III/6010	SJ	
Mehlich-III	B441192	10/08/24 16:34	M-III/6010	SJ	
Mehlich-III	B441192	10/08/24 16:34	M-III/6010	SJ	
Mehlich-III	B441192	10/08/24 16:34	M-III/6010	SJ	
Mehlich-III	B441192	10/08/24 16:34	M-III/6010	SJ	
Mehlich-III	B441192	10/08/24 16:34	M-III/6010	SJ	
Mehlich-III	B441192	10/08/24 16:34	M-III/6010	SJ	
Mehlich-III	B441192	10/08/24 16:34	M-III/6010	SJ	
Mehlich-III	B441192	10/08/24 16:34	M-III/6010	SJ	
Mehlich-III	B441192	10/08/24 16:34	M-III/6010	SJ	

Page 3 of 16

Project Number: [none]

Additional Notes:

Sampling Method: Grab Lab Sample ID #: 2410011-02 Date/Time Collected: 10/01/24 08:05

Sample ID #: Schattel Clay Shc 6-18" Sample Matrix: Solid

Prep Method	Batch	Analyzed	Method	Analyst	Notes
Mehlich-III	B441192	10/08/24 17:07	M-III/6010	SJ	
Mehlich-III	B441192	10/08/24 17:07	M-III/6010	SJ	
Mehlich-III	B441192	10/08/24 17:07	M-III/6010	SJ	
Mehlich-III	B441192	10/08/24 17:07	M-III/6010	SJ	

Analyte	Result	Units	PQL	Prep Method	Batch	Analyzed	Method	Analyst	Notes
% Solids	91.5	% by Wt.	0.100	% Calc	B441163	10/08/24 09:35	ASTM D2216	TW	
Conductivity (@25C)	387	umhos/cm	1.00	SM2510B	B441263	10/07/24 12:11	USDAHB60	JA	
Ammonia-Nitrogen *	44.8	mg/kg	10.0	SM4500NH3B	B441261	10/10/24 13:10	SM4500NH3C	SG	
Total Kjeldahl Nitrogen	846	mg/kg	1.00	EPA 351.3	B441275	10/10/24 12:05	EPA 351.3	SG	
Total Nitrogen	927	mg/kg dry	1.20	[CALC]	[CALC]	10/10/24 12:05	CALC	SG	
SoilpH measured in H20@ Cbelow	8.34	pH Units	0.10	EPA 9045D	B441167	10/07/24 12:11	EPA 9045D	DD	H
pH measured @Temperature >>	21	C	0.10	EPA 9045D	B441167	10/07/24 12:11	EPA 170.1	DD	H
Anions by Ion Chromatography									
Nitrite as N *	0.20	mg/kg	0.10	EPA 300.0	B441221	10/08/24 21:29	EPA 300.0	JA	
Nitrate as N *	2.06	mg/kg	0.10	EPA 300.0	B441221	10/08/24 21:29	EPA 300.0	JA	

Available Metals by M

Klein & Cope Engineering
8611 Botts Lane, Ste. 101
San Antonio TX, 78217

Project Manager: Brian Cope
Project: City of Runge Irrigation Site

Reported:
10/11/24 14:30
Received:

Mehlich-III	B441192	10/08/24 17:07	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:07	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:07	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:07	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:07	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:07	M-III/6010	SJ

Sampling Method: Grab **Lab Sample ID #: 2410011-03 Date/Time Collected: 10/01/24 08:10**

Prep Method	Batch	Analyzed	Method	Analyst	Notes

Project Number: [none]

Additional Notes:

Sample ID #: Schattel Clay Shc 18-30" Sample Matrix: Solid

Analyte	Result	Units	PQL						
General Chemistry									
% Solids	90.6	% by Wt.	0.100	% Calc	B441163	10/08/24 09:35	ASTM D2216	TW	
Conductivity (@25C)	336	umhos/cm	1.00	SM2510B	B441263	10/07/24 12:12	USDAHB60	JA	
Ammonia-Nitrogen *	28.0	mg/kg	10.0	SM4500NH3B	B441261	10/10/24 13:20	SM4500NH3C	SG	
Total Kjeldahl Nitrogen	549	mg/kg	1.00	EPA 351.3	B441275	10/10/24 12:08	EPA 351.3	SG	
Total Nitrogen	607	mg/kg dry	1.20	[CALC]	[CALC]	10/10/24 12:08	CALC	SG	
SoilpH measured in H20@ Cbelow	8.27	pH Units	0.10	EPA 9045D	B441167	10/07/24 12:12	EPA 9045D	DD	H
pH measured @Temperature >>	21	C	0.10	EPA 9045D	B441167	10/07/24 12:12	EPA 170.1	DD	H
Anions by Ion Chromatography									
Nitrite as N *	0.18	mg/kg	0.10	EPA 300.0	B441221	10/08/24 21:47	EPA 300.0	JA	
Nitrate as N *	0.80	mg/kg	0.10	EPA 300.0	B441221	10/08/24 21:47	EPA 300.0	JA	
Available Metals by Mehlich III Extraction									
Calcium *	26200	mg/kg dry	20.0	Mehlich-III	B441192	10/08/24 17:13	M-III/6010	SJ	
Calcium, Available	26200	mg/kg dry	20.0	Mehlich-III	B441192	10/08/24 17:13	M-III/6010	SJ	
Magnesium *	400	mg/kg dry	20.0	Mehlich-III	B441192	10/08/24 17:13	M-III/6010	SJ	
Magnesium, Available 400 mg/kg dry 20.0 Phosphorus, Available <20.0 mg/kg dry 20.0				Mehlich-III	B441192	10/08/24 17:13	M-III/6010	SJ	
				Mehlich-III	B441192	10/08/24 17:13	M-III/6010	SJ	
Potassium, Available	130	mg/kg dry	100	Mehlich-III	B441192	10/08/24 17:13	M-III/6010	SJ	
Sodium *	594	mg/kg dry	20.0	Mehlich-III	B441192	10/08/24 17:13	M-III/6010	SJ	
Sodium, Available *	594	mg/kg dry	20.0	Mehlich-III	B441192	10/08/24 17:13	M-III/6010	SJ	
Sulfur	266	mg/kg dry	20.0	Mehlich-III	B441192	10/08/24 17:13	M-III/6010	SJ	
Sulfur, Available	266	mg/kg dry	20.0	Mehlich-III	B441192	10/08/24 17:13	M-III/6010	SJ	

10/01/24 11:24

Project Number: [none]

Report No. 2410011

Additional Notes:

Klein & Cope Engineering
8611 Botts Lane, Ste. 101
San Antonio TX, 78217

Project Manager: Brian Cope
Project: City of Runge Irrigation Site

Reported:
10/11/24 14:30
Received:

Project Number: [none]

Sample ID #: Pernitas Sandy Clay 0-6" Sample Matrix: Solid

Analyte	Result	Units	PQL						
General Chemistry				Additional Notes:					
% Solids	92.3	% by Wt.	0.100	% Calc	B441163	10/08/24 09:35	ASTM D2216	TW	
Conductivity (@25C)	259	umhos/cm	1.00	SM2510B	B441263	10/07/24 12:13	USDAHB60	JA	
Ammonia-Nitrogen *	50.4	mg/kg	10.0	SM4500NH3B	B441261	10/10/24 13:40	SM4500NH3C	SG	
Total Kjeldahl Nitrogen	1290	mg/kg	1.00	EPA 351.3	B441275	10/10/24 12:09	EPA 351.3	SG	
Total Nitrogen	1400	mg/kg dry	1.20	[CALC]	[CALC]	10/10/24 12:09	CALC	SG	
SoilpH measured in H20@ Cbelow	7.85	pH Units	0.10	EPA 9045D	B441167	10/07/24 12:13	EPA 9045D	DD	H
pH measured @Temperature >>	21	C	0.10	EPA 9045D	B441167	10/07/24 12:13	EPA 170.1	DD	H
Anions by Ion Chromatography									
Nitrite as N *	0.16	mg/kg	0.10	EPA 300.0	B441221	10/08/24 22:04	EPA 300.0	JA	
Nitrate as N *	4.03	mg/kg	0.10	EPA 300.0	B441221	10/08/24 22:04	EPA 300.0	JA	

Available Metals by Mehlich III Extraction

Calcium * 3820 mg/kg dry 20.0

Calcium, Available 3820 mg/kg dry 20.0 Magnesium * 162 mg/kg dry 20.0
Magnesium, Available 162 mg/kg dry 20.0 Phosphorus, Available 46.9 mg/kg dry
20.0

Potassium, Available	364	mg/kg dry	100
Sodium *	352	mg/kg dry	20.0
Sodium, Available *	352	mg/kg dry	20.0
Sulfur	316	mg/kg dry	20.0
Sulfur, Available	316	mg/kg dry	20.0

10/01/24 11:24

Sample ID #: Pernitas Sandy Clay 6-18" Sample Matrix: Solid

Analyte	Result	Units	PQL

Report No. 2410011

Sampling Method: Grab **Lab Sample ID #: 2410011-04**
Date/Time Collected: 10/01/24 08:15

Prep Method Notes	Batch	Analyzed	Method	Analyst
Mehlich-III	B441192	10/08/24 17:19	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:19	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:19	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:19	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:19	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:19	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:19	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:19	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:19	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:19	M-III/6010	SJ

Klein & Cope Engineering
8611 Botts Lane, Ste. 101
San Antonio TX, 78217

Project Manager: Brian Cope
Project: City of Runge Irrigation Site

Reported:
10/11/24 14:30
Received:

General Chemistry Additional Notes:

% Solids	92.5	% by Wt.	0.100	% Calc	B441163	10/08/24 09:35	ASTM D2216	TW	
Conductivity (@25C)	247	umhos/cm	1.00	SM2510B	B441263	10/07/24 12:14	USDAHB60	JA	
Ammonia-Nitrogen *	50.4	mg/kg	10.0	SM4500NH3B	B441261	10/10/24 13:50	SM4500NH3C	SG	
Total Kjeldahl Nitrogen	863	mg/kg	1.00	EPA 351.3	B441275	10/10/24 12:10	EPA 351.3	SG	
Total Nitrogen	936	mg/kg dry	1.20	[CALC]	[CALC]	10/10/24 12:10	CALC	SG	
SoilpH measured in H20@ Cbelow	7.49	pH Units	0.10	EPA 9045D	B441167	10/07/24 12:14	EPA 9045D	DD	H
pH measured @Temperature >>	20	C	0.10	EPA 9045D	B441167	10/07/24 12:14	EPA 170.1	DD	H

Anions by Ion Chromatography

Nitrite as N *	0.17	mg/kg	0.10	EPA 300.0	B441221	10/08/24 22:22	EPA 300.0	JA
Nitrate as N *	2.96	mg/kg	0.10	EPA 300.0	B441221	10/08/24 22:22	EPA 300.0	JA

Available Metals by Mehlich III Extraction

Calcium * 4840 mg/kg dry 20.0

Calcium, Available 4840 mg/kg dry 20.0 Magnesium * 165 mg/kg dry 20.0

Magnesium, Available 165 mg/kg dry 20.0 Phosphorus, Available 34.5 mg/kg dry 20.0

Potassium, Available	380	mg/kg dry	100
Sodium *	346	mg/kg dry	20.0
Sodium, Available *	346	mg/kg dry	20.0
Sulfur	335	mg/kg dry	20.0
Sulfur, Available	335	mg/kg dry	20.0

10/01/24 11:24

Sample ID #: Pernitas Sandy Clay 18-30" Sample Matrix: Solid

Analyte	Result	Units	PQL

Report No. 2410011

Sampling Method: Grab Lab Sample ID #: 2410011-05
Date/Time Collected: 10/01/24 08:20

Prep Method Notes	Batch	Analyzed	Method	Analyst
Mehlich-III	B441192	10/08/24 17:41	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:41	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:41	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:41	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:41	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:41	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:41	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:41	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:41	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:41	M-III/6010	SJ

1610 S. Laredo Street, San Antonio, Texas 78207-7029 (210) 229-9920 Fax (210) 229-9921

www.satestinglab.com

Klein & Cope Engineering
8611 Botts Lane, Ste. 101
San Antonio TX, 78217

Project Manager: Brian Cope
Project: City of Runge Irrigation Site

Reported:
10/11/24 14:30
Received:

General Chemistry Additional Notes:

% Solids	91.2	% by Wt.	0.100	% Calc	B441163	10/08/24 09:35	ASTM D2216	TW	
Conductivity (@25C)	196	umhos/cm	1.00	SM2510B	B441263	10/07/24 12:15	USDAHB60	JA	
Ammonia-Nitrogen *	28.0	mg/kg	10.0	SM4500NH3B	B441261	10/10/24 14:00	SM4500NH3C	SG	
Total Kjeldahl Nitrogen	1140	mg/kg	1.00	EPA 351.3	B441275	10/10/24 12:11	EPA 351.3	SG	
Total Nitrogen	1250	mg/kg dry	1.20	[CALC]	[CALC]	10/10/24 12:11	CALC	SG	
SoilpH measured in H20@ Cbelow	7.97	pH Units	0.10	EPA 9045D	B441167	10/07/24 12:15	EPA 9045D	DD	H
pH measured @Temperature >>	20	C	0.10	EPA 9045D	B441167	10/07/24 12:15	EPA 170.1	DD	H

Anions by Ion Chromatography

Nitrite as N *	0.13	mg/kg	0.10	EPA 300.0	B441221	10/08/24 22:40	EPA 300.0	JA
Nitrate as N *	1.07	mg/kg	0.10	EPA 300.0	B441221	10/08/24 22:40	EPA 300.0	JA

Available Metals by Mehlich III Extraction

Sample ID #: Coy Clay Loam 0-6" Sample Matrix: Solid

Analyte	Result	Units	PQL

Calcium * 5430 mg/kg dry 20.0

Calcium, Available 5430 mg/kg dry 20.0 Magnesium * 155 mg/kg dry 20.0

Magnesium, Available 155 mg/kg dry 20.0 Phosphorus, Available 31.0 mg/kg dry 20.0

Potassium, Available	407	mg/kg dry	100
Sodium *	352	mg/kg dry	20.0
Sodium, Available *	352	mg/kg dry	20.0
Sulfur	473	mg/kg dry	20.0
Sulfur, Available	473	mg/kg dry	20.0

10/01/24 11:24

Report No. 2410011

Sampling Method: Grab Lab Sample ID #: 2410011-06
Date/Time Collected: 10/01/24 08:25

Prep Method Notes	Batch	Analyzed	Method	Analyst
Mehlich-III	B441192	10/08/24 17:46	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:46	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:46	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:46	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:46	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:46	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:46	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:46	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:46	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:46	M-III/6010	SJ

1610 S. Laredo Street, San Antonio, Texas 78207-7029 (210) 229-9920 Fax (210) 229-9921

www.satestinglab.com

Klein & Cope Engineering	Project Manager: Brian Cope	**Reported:**
8611 Botts Lane, Ste. 101	Project: City of Runge Irrigation Site	10/11/24 14:30
San Antonio TX, 78217		**Received:**

General Chemistry Additional Notes:

% Solids	93.6	% by Wt.	0.100	% Calc	B441163	10/08/24 09:35	ASTM D2216	TW	
Conductivity (@25C)	247	umhos/cm	1.00	SM2510B	B441263	10/07/24 12:16	USDAHB60	JA	
Ammonia-Nitrogen *	50.4	mg/kg	10.0	SM4500NH3B	B441261	10/10/24 14:10	SM4500NH3C	SG	
Total Kjeldahl Nitrogen	605	mg/kg	1.00	EPA 351.3	B441275	10/10/24 12:12	EPA 351.3	SG	
Total Nitrogen	648	mg/kg dry	1.20	[CALC]	[CALC]	10/10/24 12:12	CALC	SG	
SoilpH measured in H20@ Cbelow	7.42	pH Units	0.10	EPA 9045D	B441167	10/07/24 12:16	EPA 9045D	DD	H
pH measured @Temperature >>	20	C	0.10	EPA 9045D	B441167	10/07/24 12:16	EPA 170.1	DD	H

Anions by Ion Chromatography

Nitrite as N *	0.19	mg/kg	0.10	EPA 300.0	B441221	10/08/24 22:58	EPA 300.0	JA
Nitrate as N *	0.66	mg/kg	0.10	EPA 300.0	B441221	10/08/24 22:58	EPA 300.0	JA

Available Metals by Mehlich III Extraction

Calcium * 4080 mg/kg dry 20.0

Calcium, Available 4080 mg/kg dry 20.0 Magnesium * 167 mg/kg dry 20.0

Magnesium, Available 167 mg/kg dry 20.0 Phosphorus, Available <20.0 mg/kg dry 20.0

Potassium, Available	232	mg/kg dry	100
Sodium *	338	mg/kg dry	20.0
Sodium, Available *	338	mg/kg dry	20.0
Sulfur	297	mg/kg dry	20.0
Sulfur, Available	297	mg/kg dry	20.0

10/01/24 11:24

Sample ID #: Coy Clay Loam 6-18" Sample Matrix: Solid

Analyte **Result** **Units** **PQL**

Report No. 2410011

Sampling Method: Grab Lab Sample ID #: 2410011-07
Date/Time Collected: 10/01/24 08:30

Prep Method Notes	Batch	Analyzed	Method	Analyst
Mehlich-III	B441192	10/08/24 17:52	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:52	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:52	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:52	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:52	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:52	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:52	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:52	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:52	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:52	M-III/6010	SJ

1610 S. Laredo Street, San Antonio, Texas 78207-7029 (210) 229-9920 Fax (210) 229-9921

www.satestinglab.com

Klein & Cope Engineering	Project Manager: Brian Cope	Reported:
8611 Botts Lane, Ste. 101	Project: City of Runge Irrigation Site	10/11/24 14:30
San Antonio TX, 78217		Received:

General Chemistry Additional Notes:

% Solids	91.0	% by Wt.	0.100	% Calc	B441163	10/08/24 09:35	ASTM D2216	TW	
Conductivity (@25C)	156	umhos/cm	1.00	SM2510B	B441263	10/07/24 12:17	USDAHB60	JA	
Ammonia-Nitrogen *	44.8	mg/kg	10.0	SM4500NH3B	B441261	10/10/24 14:20	SM4500NH3C	SG	
Total Kjeldahl Nitrogen	840	mg/kg	1.00	EPA 351.3	B441275	10/10/24 12:13	EPA 351.3	SG	
Total Nitrogen	924	mg/kg dry	1.20	[CALC]	[CALC]	10/10/24 12:13	CALC	SG	
SoilpH measured in H20@ Cbelow	7.86	pH Units	0.10	EPA 9045D	B441206	10/07/24 12:17	EPA 9045D	DD	H
pH measured @Temperature >>	21	C	0.10	EPA 9045D	B441206	10/07/24 12:17	EPA 170.1	DD	H

Anions by Ion Chromatography

Nitrite as N *	0.14	mg/kg	0.10	EPA 300.0	B441221	10/08/24 23:16	EPA 300.0	JA
Nitrate as N *	0.17	mg/kg	0.10	EPA 300.0	B441221	10/08/24 23:16	EPA 300.0	JA

Available Metals by Mehlich III Extraction

Calcium * 5090 mg/kg dry 20.0

Calcium, Available 5090 mg/kg dry 20.0 Magnesium * 228 mg/kg dry 20.0
Magnesium, Available 228 mg/kg dry 20.0 Phosphorus, Available <20.0 mg/kg dry 20.0

Potassium, Available	238	mg/kg dry	100
Sodium *	351	mg/kg dry	20.0
Sodium, Available *	351	mg/kg dry	20.0
Sulfur	315	mg/kg dry	20.0
Sulfur, Available	315	mg/kg dry	20.0

10/01/24 11:24

Sample ID #: Coy Clay Loam 18-30" Sample Matrix: Solid

Analyte	Result	Units	PQL

Report No. 2410011

Sampling Method: Grab Lab Sample ID #: 2410011-08
Date/Time Collected: 10/01/24 08:35

Prep Method Notes	Batch	Analyzed	Method	Analyst
Mehlich-III	B441192	10/08/24 17:57	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:57	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:57	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:57	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:57	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:57	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:57	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:57	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:57	M-III/6010	SJ
Mehlich-III	B441192	10/08/24 17:57	M-III/6010	SJ

Klein & Cope Engineering
8611 Botts Lane, Ste. 101
San Antonio TX, 78217

Project Manager: Brian Cope
Project: City of Runge Irrigation Site

Reported:
10/11/24 14:30
Received:

General Chemistry				**Sampling Method: Grab**	**Lab Sample ID #: 2410011-09 Date/Time**			
% Solids	90.6	% by Wt.	0.100	% Calc	B441163	10/08/24 09:35	ASTM D2216	TW
Conductivity (@25C)	169	umhos/cm	1.00	SM2510B	B441263	10/07/24 12:19	USDAHB60	JA
Ammonia-Nitrogen *	11.2	mg/kg	10.0	SM4500NH3B	B441261	10/10/24 14:30	SM4500NH3C	SG
Total Kjeldahl Nitrogen	650	mg/kg	1.00	EPA 351.3	B441275	10/10/24 12:14	EPA 351.3	SG
Total Nitrogen	718	mg/kg dry	1.20	[CALC]	[CALC]	10/10/24 12:14	CALC	SG
SoilpH measured in H20@ Cbelow	7.53	pH Units	0.10	EPA 9045D	B441206	10/07/24 12:19	EPA 9045D	DD H
pH measured @Temperature >>	20	C	0.10	EPA 9045D	B441206	10/07/24 12:19	EPA 170.1	DD H
Anions by Ion Chromatography								
Nitrite as N *	0.12	mg/kg	0.10	EPA 300.0	B441221	10/08/24 23:34	EPA 300.0	JA
Nitrate as N *	<0.10	mg/kg	0.10	EPA 300.0	B441221	10/08/24 23:34	EPA 300.0	JA
Available Metals by Mehlich III Extraction								
Calcium *	6820	mg/kg dry	20.0	**Collected: 10/01/24 08:40**				
Calcium, Available 6820 mg/kg dry 20.0 Magnesium * 186 mg/kg dry 20.0 Magnesium, Available 186 mg/kg dry 20.0 Phosphorus, Available <20.0 mg/kg dry 20.0				**Prep Method**	**Batch**	**Analyzed**	**Method**	**Analyst Notes**
				Mehlich-III	B441192	10/08/24 18:03	M-III/6010	SJ
Potassium, Available	156	mg/kg dry	100	Mehlich-III	B441192	10/08/24 18:03	M-III/6010	SJ
Sodium *	358	mg/kg dry	20.0	Mehlich-III	B441192	10/08/24 18:03	M-III/6010	SJ
Sodium, Available *	358	mg/kg dry	20.0	Mehlich-III	B441192	10/08/24 18:03	M-III/6010	SJ
Sulfur	495	mg/kg dry	20.0	Mehlich-III	B441192	10/08/24 18:03	M-III/6010	SJ
Sulfur, Available	495	mg/kg dry	20.0	Mehlich-III	B441192	10/08/24 18:03	M-III/6010	SJ
		10/01/24 11:24		Mehlich-III	B441192	10/08/24 18:03	M-III/6010	SJ
				Mehlich-III	B441192	10/08/24 18:03	M-III/6010	SJ
				Mehlich-III	B441192	10/08/24 18:03	M-III/6010	SJ
				Mehlich-III	B441192	10/08/24 18:03	M-III/6010	SJ

Report No. 2410011

Project Number: [none] Additional Notes: 10/01/24 11:24

Report No. 2410011

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B441167 - EPA 9045D										
					Prepared: 10/07/24 08:45 Analyzed: 10/07/24 08:45					
LCS (B441167-BS1)										
SoilpH measured in H20@ Cbelow	7.05	0.10	pH Units	17.5		40	97.5-102.5			L
pH measured @Temperature >>	20.2	0.10	C				0-200			
Duplicate (B441167-DUP1)			**Source: 2409443-17**		Prepared: 10/07/24 12:00 Analyzed: 10/07/24 12:01					

Klein & Cope Engineering
8611 Botts Lane, Ste. 101
San Antonio TX, 78217

Project Manager: Brian Cope
Project: City of Runge Irrigation Site

Reported:
10/11/24 14:30
Received:

SoilpH measured in H20@ Cbelow	9.70	0.10	pH Units	9.69			0.1	20	H
pH measured @Temperature >>	20.5	0.10	C	20.5			0	30	H

Batch B441206 - EPA 9045D

LCS (B441206-BS1) Prepared: 10/07/24 08:45 Analyzed: 10/07/24 0 :45

SoilpH measured in H20@ Cbelow	7.05	0.10	pH Units	7.00		101	97.5-102.5		
pH measured @Temperature >>	20.2	0.10	C				0-200		

Duplicate (B441206-DUP1) Source: 2410011-08 Prepared: 10/07/24 12:00 Analyzed: 10/07/24 1 :18

SoilpH measured in H20@ Cbelow	7.87	0.10	pH Units		7.86			0.1	20	H
pH measured @Temperature >>	20.6	0.10	C		20.6			0	30	H

Batch B441261 - SM4500NH3B

Blank (B441261-BLK1) Prepared: 10/09/24 10:00 Analyzed: 10/10/24 12:00

Ammonia-Nitrogen	<10.0	10.0	mg/kg						

LCS (B441261-BS1) Prepared: 10/09/24 10:00 Analyzed: 10/10/24 12:30

Ammonia-Nitrogen	202	10.0	mg/kg	200		101	80-120		

LCS Dup (B441261-BSD1) Prepared: 10/09/24 10:00 Analyzed: 10/10/24 12:40

Ammonia-Nitrogen	213	10.0	mg/kg	200		106	80-120	5	20

Duplicate (B441261-DUP1) Source: 2410011-01 Prepared: 10/09/24 10:00 Analyzed: 10/10/24 12:50

Ammonia-Nitrogen	56.0	10.0	mg/kg		50.4			11	20

Matrix Spike (B441261-MS1) Source: 2410011-01 Prepared: 10/09/24 10:00 Analyzed: 10/10/24 14:40

Ammonia-Nitrogen	241	10.0	mg/kg	200	50.4	95	80-120		

Matrix Spike Dup (B441261-MSD1) Source: 2410011-01 Prepared: 10/09/24 10:00 Analyzed: 10/10/24 14:50

Ammonia-Nitrogen	241	10.0	mg/kg	200	50.4	95	80-120	0	20

Batch B441263 - SM2510B

LCS (B441263-BS1) Prepared: 10/07/24 08:45 Analyzed: 10/07/24 08:45

Project Number: [none] Additional Notes: 10/01/24 11:24

Report No. 2410011

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit

Klein & Cope Engineering
8611 Botts Lane, Ste. 101
San Antonio TX, 78217

Project Manager: Brian Cope
Project: City of Runge Irrigation Site

Reported:
10/11/24 14:30
Received:

Batch B441263 - SM2510B

LCS (B441263-BS1)				Prepared: 10/07/24 08:45 Analyzed: 10/07/24 08:45					
Conductivity (@25C)	1030	1.00	umhos/cm	1000		103	80-120		
Duplicate (B441263-DUP1)		**Source: 2410011-08**		Prepared: 10/07/24 08:45 Analyzed: 10/10/24 12:18					
Conductivity (@25C)	190	1.00	umhos/cm		156			20	20

Batch B441275 - EPA 351.3

Blank (B441275-BLK1)				Prepared: 10/09/24 11:13 Analyzed: 10/10/24 12:00						
Total Kjeldahl Nitrogen	<1.00	1.00	mg/kg							
LCS (B441275-BS1)				Prepared: 10/09/24 11:13 Analyzed: 10/10/24 12:01						
Total Kjeldahl Nitrogen	224	1.00	mg/kg	200		112	80-120			
LCS Dup (B441275-BSD1)				Prepared: 10/09/24 11:13 Analyzed: 10/10/24 12:02						
Total Kjeldahl Nitrogen	224	1.00	mg/kg	200		112	80-120	0	20	
Duplicate (B441275-DUP1)		**Source: 2410011-01**		Prepared: 10/09/24 11:13 Analyzed: 10/10/24 12:04						
Total Kjeldahl Nitrogen	1010	1.00	mg/kg		975			3	20	
Matrix Spike (B441275-MS1)		**Source: 2410011-01**		Prepared: 10/09/24 11:13 Analyzed: 10/10/24 12:06						
Total Kjeldahl Nitrogen	1200	1.00	mg/kg	200	975	112	80-120			
Matrix Spike Dup (B441275-MSD1)		**Source: 2410011-01**		Prepared: 10/09/24 11:13 Analyzed: 10/10/24 12:07						
Total Kjeldahl Nitrogen	1290	1.00	mg/kg	200	975	157	80-120	7	20	M

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B441221 - EPA 300.0										
Blank (B441221-BLK1)				Prepared: 10/08/24 16:00 Analyzed: 10/08/24 17:54						
Nitrite as N	<0.10	0.10	mg/kg							
Nitrate as N	<0.10	0.10	mg/kg							
LCS (B441221-BS1)				Prepared: 10/08/24 16:00 Analyzed: 10/08/24 18:12						
Nitrite as N	46.1	0.10	mg/kg	50.0		92	90-110			
Nitrate as N	48.4	0.10	mg/kg	50.0		97	90-110			

Project Number: [none] Additional Notes: 10/01/24 11:24

Klein & Cope Engineering
8611 Botts Lane, Ste. 101
San Antonio TX, 78217

Project Manager: Brian Cope
Project: City of Runge Irrigation Site

Reported:
10/11/24 14:30
Received:

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B441221 - EPA 300.0									
LCS Dup (B441221-BSD1)				Prepared: 10/08/24 16:00		Analyzed: 10/08/24 18:30			
Nitrite as N	46.7	0.10	mg/kg	50.0		93	90-110	1	30
Nitrate as N	48.5	0.10	mg/kg	50.0		97	90-110	0.3	30
Duplicate (B441221-DUP1)		**Source: 2410170-01**		Prepared: 10/08/24 16:00		Analyzed: 10/08/24 19:06			
Nitrite as N	<5.00	5.00	mg/kg		<5.00				20
Nitrate as N	<5.00	5.00	mg/kg		<5.00				20
Matrix Spike (B441221-MS1)		**Source: 2410170-01**		Prepared: 10/08/24 16:00		Analyzed: 10/08/24 19:24			
Nitrite as N	43.5	0.10	mg/kg	50.0	<0.10	87	80-120		
Nitrate as N	49.3	0.10	mg/kg	50.0	<0.10	99	80-120		
Matrix Spike Dup (B441221-MSD1)		**Source: 2410170-01**		Prepared: 10/08/24 16:00		Analyzed: 10/08/24 19:42			
Nitrite as N	43.9	0.10	mg/kg	50.0	<0.10	88	80-120	0.9	20
Nitrate as N	49.4	0.10	mg/kg	50.0	<0.10	99	80-120	0.1	20

Project Number: [none] Additional Notes: 10/01/24 11:24

Report No. 2410011

SAMPLE QUALIFIERS

H This parameter should be analyzed within 15 minutes of sample collection. Due to transportation, hold time has been exceeded.

DEFINITIONS

* TNI / NELAC accredited analyte

PQL Practical Quantitation Limit MCL
Maximum Contaminant Level

mg/Kg Milligrams per Kilogram (Parts per Million) mg/L
Milligrams per Liter (Parts per Million)

PPM Parts per Million

L LCS recovery is outside QC acceptance limits, the results may have a slight bias.

M MS recovery is outside QC limits, the results may have a slight bias due to possible matrix interferences.

NR Not Recovered due to source sample concentration exceeds spiked concentration.

RMCCL Recommended Maximum Concentration of Contaminants Level Surr L

Surrogate recovery is low outside QC limits.

Surr H Surrogate recovery is high outside QC limits.

HT Sample received past holdtime

IC Improper Container for this analyte(s)

IP Improper preservation for this analyte(s) IT

Improper Temperature

Klein & Cope Engineering
8611 Botts Lane, Ste. 101
San Antonio TX, 78217

Project Manager: Brian Cope
Project: City of Runge Irrigation Site

Reported:
10/11/24 14:30
Received:

V	Inssuficient Volume
B	Sample collected in Bulk
S	RPD is outside QC limits.
AB	VOA Vial contained air bubbles.
OP	ortho-Phosphate was not filtered in the field within 15minutes of collection.
CCV	Continuing Calibration Verification Standard. ICV

Initial Calibration Verification Standard.

Test Methods followed by the laboratory are referenced in the following approved methodology, unless otherwise specified.

Standard Methods for the Examination of Water and Wastewater, 23rd Edition, 2017
Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79-020, Rev. March 1983
EPA SW Test Methods for the Examination of Solid Waste, SW-846, 1996

Project Number: [none] Additional Notes: 10/01/24 11:24

Report No. 2410011

Aimee Landon For Marcela Gracia Hawk, President For

Marcela G. Hawk, President

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Klein & Cope Engineering
8611 Botts Lane, Ste. 101
San Antonio TX, 78217

Project Manager: Brian Cope
Project: City of Runge Irrigation Site

Reported:
10/11/24 14:30
Received:

SAN ANTONIO TESTING LABORATORY, LLC

1610 S. Laredo Street, San Antonio, Texas 78207
Phone (210) 229-9920
Fax (210) 229-9921
www.satestinglab.com

CHAIN-OF-CUSTODY RECORD

REPORT TO:
COMPANY: Klein + Cope Engineering Inc.
ADDRESS: 8611 Botts Lane
CITY: San Antonio STATE: TX ZIP: 78217
ATTN.: Brian Cope (Homer Lott) PHONE #: 210-828-7007

INVOICE TO:
COMPANY: City of Runge Cell
ADDRESS: P.O. Box 206 8302992500
CITY: Runge STATE: TX ZIP: 78151
ATTN: Homer Lott PHONE #: 830-239-4121

P.O. #: 4816
REPORT NUMBER: 2410011
E-MAIL: patronlott@ATT.NET

REQUESTED TURNAROUND TIME IN BUSINESS DAYS & SURCHARGE: [X] 7-10 Days REG ☐ 5 Days +25% ☐ 4 Days +50% ☐ 3 DAYS +75% ☐ 2 DAYS +100% ☐ Next Day +150% ☐ SAME DAY WHEN POSSIBLE +300%

PROJECT NAME/LOCATION/SITE: City Of Runge Irrigation Area

THE TURNAROUND TIME FOR SAMPLES RECEIVED AFTER 3:00 PM SHALL BEGIN AT 8:00 AM THE FOLLOWING BUSINESS DAY / SPECIAL REQ.

DATA TO TCEQ ☐ RRC ☐ Other (Specify) ☐ Field: pH: ____ Temp: ____ °C; LCS/D: ____ Dup: ____

PROJECT NO.: Homer Lott Mayor

SAMPLE TEMPERATURE WITHIN COMPLIANCE (> 0°C ≤ 6°C) ☐ YES [X] NO
PROPER CONTAINERS [X] YES ☐ NO
INSUFFICIENT SAMPLE AMOUNT FOR (TCLP/SPLP/OTHER) IF NO, INITIAL HERE TO AUTHORIZE ANALYSIS: COLL TODAY ☐ YES [X] NO — AUTHORIZE TO PROCEED

SAMPLED BY: JESSE SANDOVAL

OBSERVED TEMP.: 23.6C / CORRECTED TEMP.: 23.6C / TEMP. I.R. GUN #: 7 / SAMPLE ICED: [X] YES ☐ NO

THRP 13 ☐ APPENDIX A ☐ LPST PCLS ☐ LOW LEVEL ☐ PST ☐ SIM ☐ TSDF Class 2 ☐ PERMIT ☐

ANALYSIS REQUESTED: BTEX/MTBE 8260 / TPH TX1005/TX1006; Metals 8 / 11 / 12 / 13 / TCLP / SPLP / Total; PAH / SVOC / 8270 / 625 / TCLP / SPLP / Total; VOC / 8260 / 624 / TCLP / SPLP / Total; Water Quality - Drinking / Livestock / Irrigation; Coli / TC / FC / HPC / EColi / Enterococci / Q-Tray; Br / Cl / F / NO3 / NO2/O-P / SO4; PCB / 608 / 8082A; OC Pest / 608 / 8081A / TCLP / SPLP / Total; See Attached

PRESERVED WITH: HCl; HNO3; H2SO4; NaOH; ZnAc; NONE; PRESERVED IN THE LAB; COMPOSITED IN THE LAB; FILTERED IN THE LAB; FILTERED IN THE FIELD

SAMPLE NUMBER	DATE	TIME	DRINKING WATER	NON-POTABLE WATER	PAINT CHIPS	OIL	ORGANIC LIQUID	SOLID/SLUDGE	WIPE	OTHER	COMPOSITE	GRAB	CORE	OTHER	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	SAMPLE AMOUNT	CONTAINER SIZE	See Attached	NONE	REMARKS
1	10/01/24	8:00 AM						X				X			Schattel Clay Shc 0-6"	1		Plast Bag	X	X	
1	10/01/24	8:05 AM						X				X			Schattel Clay Shc 6-18"	1		Plast Bag	↓	↓	
1	10/01/24	8:10 AM						X				X			Schattel Clay Shc 18-30"	1		Plast Bag	↓	↓	
1	10/01/24	8:15 AM						X				X			Pernitas Sandy Clay 0-6"	1		Plast Bag	↓	↓	
1	10/01/24	8:20 AM						X				X			Pernitas Sandy Clay 6-18"	1		Plast Bag	↓	↓	
1	10/01/24	8:25 AM						X				X			Pernitas Sandy Clay 18-30"	1		Plast Bag	↓	↓	
1	10/01/24	8:30 AM						X				X			Coy Clay Loam 0-6"	1		Plast Bag	↓	↓	
1	10/01/24	8:35 AM						X				X			Coy Clay Loam 6-18"	1		Plast Bag	↓	↓	
1	10/01/24	8:40 AM						X				X			Coy Clay Loam 18-30"	1		Plast Bag	↓	↓	

RELINQUISHED BY (SIGNATURE): [signature] DATE / TIME: 10-01-24 9:00AM	RECEIVED BY (SIGNATURE): Mayor Homer Lott DATE / TIME: 10/01/24 9:00am	RELINQUISHED BY (SIGNATURE): Homer Lott DATE / TIME: 10/01/24 11:24	RECEIVED BY (SIGNATURE): [signature] DATE / TIME: 10-1-24
RELINQUISHED BY (PRINT NAME): Jesse Sandoval DATE / TIME: 10-01-24 9:00AM	RECEIVED BY (PRINT NAME) DATE / TIME	RELINQUISHED BY (PRINT NAME) DATE / TIME	RECEIVED BY (PRINT NAME): Hannah Thorpe DATE / TIME: 1124
RELINQUISHED BY (SIGNATURE) DATE / TIME	RECEIVED BY (SIGNATURE) DATE / TIME	METHOD OF SHIPMENT: Hand	SUBCONTRACTED ☐ YES [X] NO
RELINQUISHED BY (PRINT NAME) DATE / TIME	RECEIVED BY (PRINT NAME) DATE / TIME	BULK ☐ (Initial) 5035 ☐ N/A [X]	CUSTODY SEAL IN PLACE & INTACT [X] YES ☐ NO

FORM: COC REV 04/2022 WHITE - LAB CANARY - CLIENT

1 2 3 4 5 6 7 8

ATTACHMENT No. 16

ADMINISTRATIVE REPORT 1.0

SECTION 7

EFFLUENT ANALYSIS

SAN ANTONIO TESTING LABORATORY

January 23, 2025

Brian Cope
Cope Engineering
8611 Bott Lane
San Antonio, TX 78217

SATL Report No.: 2501201
RE: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Dear Brian Cope

SATL received 8 Sample(s) on 01/14/2025 for analyses identified on the chain of custody. The analyses were performed using methods indicated on the laboratory report. Any deviations observed at sample receiving are notated on the Sample Receipt Checklist and/or Chain of Custody documents attached as part of this analytical report.

Sincerely,

For San Antonio Testing Laboratory, Inc.

Marcela G. Hawk,
President

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

SAMPLE SUMMARY

Total Samples received in this work order: **8**

The following samples were requested for analysis as per the CoC. Any re-runs or re-analyses requested are identified as such.

Sample ID	Laboratory ID	Matrix	Sampling Method	Date Sampled	Date Received
001, TSS	2501201-01	Liquid	Grab	01/14/25 08:30	01/14/25 11:20
002, TDS	2501201-02	Liquid	Grab	01/14/25 08:40	01/14/25 11:20
003, Chem / Metals	2501201-03	Liquid	Grab	01/14/25 08:50	01/14/25 11:20
004, TKN Amm N T Phoph	2501201-04	Liquid	Grab	01/14/25 09:00	01/14/25 11:20
005, Ecoli	2501201-05	Liquid	Grab	01/14/25 09:15	01/14/25 11:20
0-6"	2501201-06	Solid	Grab	01/14/25 09:30	01/14/25 11:20
6"-18"	2501201-07	Solid	Grab	01/14/25 09:45	01/14/25 11:20
18"-30"	2501201-08	Solid	Grab	01/14/25 10:00	01/14/25 11:20

Notes

All quality control samples and checks are within acceptance limits unless otherwise indicated.
Test results pertain only to those items tested.
All samples were in good condition when received by the laboratory unless otherwise noted.

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

Sample ID #: 001, TSS **Sampling Method: Grab** **Lab Sample ID #: 2501201-01**

Sample Matrix: Liquid **Date/Time Collected: 01/14/25 08:30**

Analyte	Result	Units	PQL	Prep Method	Batch	Analyzed	Method	Analyst	Notes
General Chemistry									
Total Suspended Solids *	39.0	mg/L	12.5	SM2540D	B503151	01/14/25 14:30	SM2540D	DD	

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

Sample ID #: 002, TDS **Sampling Method: Grab** **Lab Sample ID #: 2501201-02**

Sample Matrix: Liquid **Date/Time Collected: 01/14/25 08:40**

Analyte	Result	Units	PQL	Prep Method	Batch	Analyzed	Method	Analyst	Notes
General Chemistry									
Total Dissolved Solids *	856	mg/L	5.00	SM2540C	B503203	01/14/25 17:04	SM2540C	DD	

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

Sample ID #: 003, Chem / Metals **Sampling Method: Grab** **Lab Sample ID #: 2501201-03**

Sample Matrix: Liquid **Date/Time Collected: 01/14/25 08:50**

Analyte	Result	Units	PQL	Prep Method	Batch	Analyzed	Method	Analyst	Notes
General Chemistry									
Total Alkalinity *	283	mg/L as CaCO3	20.0	SM2320B	B503275	01/17/25 15:12	SM2320B	DD	
Conductivity (@25C) *	1550	umhos/cm	1.00	SM2510B	B504199	01/15/25 10:12	SM2510B	JA	
CBOD *	14.8	mg/L	2.00	SM5210B	B504174	01/20/25 10:18	SM5210B	JA	
Anions by Ion Chromatography									
Fluoride *	0.294	mg/L	0.020	EPA 300.0	B503274	01/15/25 14:37	EPA 300.0	JA	
Chloride *	276	mg/L	2.50	EPA 300.0	B503274	01/15/25 14:37	EPA 300.0	JA	
Nitrate as N *	0.989	mg/L	0.100	EPA 300.0	B503274	01/15/25 14:37	EPA 300.0	JA	
Sulfate *	43.4	mg/L	2.50	EPA 300.0	B503274	01/15/25 14:37	EPA 300.0	JA	
Total Metals By ICP									P1
Aluminum *	0.147	mg/L	0.050	EPA 200.7	B503226	01/23/25 13:25	EPA 200.7	SJ	
Field Parameters									
pH	7.8	s.u.							

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

Sample ID #: 004, TKN Amm N T Phoph | **Sampling Method: Grab** | **Lab Sample ID #: 2501201-04**

Sample Matrix: Liquid | **Date/Time Collected: 01/14/25 09:00**

Analyte	Result	Units	PQL	Prep Method	Batch	Analyzed	Method	Analyst	Notes
General Chemistry									
Ammonia-Nitrogen *	3.36	mg/L	1.00	SM4500NH3B	B504213	01/23/25 13:36	SM4500NH3C	DD	
Total Kjeldahl Nitrogen *	4.48	mg/L	1.00	EPA 351.3	B504212	01/23/25 16:08	EPA 351.3	DD	
Total Phosphorous *	1.58	mg/L	0.05	EPA 365.3	B504210	01/22/25 15:10	EPA 365.3	JA	

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

Sample ID #: 005, Ecoli **Sampling Method: Grab** **Lab Sample ID #: 2501201-05**

Sample Matrix: Liquid **Date/Time Collected: 01/14/25 09:15**

Analyte	Result	Units	PQL	Prep Method	Batch	Analyzed	Method	Analyst	Notes
Microbiological Parameters									
E. Coli *	770	MPN/100 mL	1.00	Start 01/14/25 12:39/End 01/15/25 13:36			Colilert-QTray	DD	

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

Sample ID #: 0-6" **Sampling Method: Grab** **Lab Sample ID #: 2501201-06**

Sample Matrix: Solid **Date/Time Collected: 01/14/25 09:30**

Analyte	Result	Units	PQL	Prep Method	Batch	Analyzed	Method	Analyst	Notes
General Chemistry									
% Solids	79.5	% by Wt.	0.100	% Calc	B503204	01/16/25 08:27	ASTM D2216	TW	
Conductivity (@25C)	2230	umhos/cm	1.00	USDA60	B504232	01/23/25 11:34	USDAHB60	JA	
Ammonia-Nitrogen *	<10.0	mg/kg	10.0	SM4500NH3B	B504243	01/23/25 16:03	SM4500NH3C	DD	
Total Kjeldahl Nitrogen	314	mg/kg	1.00	EPA 351.3	B504233	01/23/25 13:04	EPA 351.3	DD	
Total Nitrogen	396	mg/kg dry	1.40	[CALC]	[CALC]	01/23/25 13:04	CALC	DD	
SoilpH measured in H20@°Cbelow	7.93	pH Units	0.10	EPA 9045D	B504230	01/23/25 11:34	EPA 9045D	JA	H
pH measured @Temperature >>	20	°C	0.10	EPA 9045D	B504230	01/23/25 11:34	EPA 170.1	JA	H
Anions by Ion Chromatography									
Nitrite as N *	0.44	mg/kg	0.20	EPA 300.0	B504192	01/21/25 14:39	EPA 300.0	JA	
Nitrate as N *	1.05	mg/kg	0.20	EPA 300.0	B504192	01/21/25 14:39	EPA 300.0	JA	
Available Metals by Mehlich III Extraction									
Calcium *	2950	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:27	M-III/6010	SJ	
Calcium, Available	2950	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:27	M-III/6010	SJ	
Magnesium *	144	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:27	M-III/6010	SJ	
Magnesium, Available	144	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:27	M-III/6010	SJ	
Phosphorus, Available	<10.0	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:27	M-III/6010	SJ	
Potassium, Available	90.7	mg/kg dry	50.0	Mehlich-III	B503229	01/17/25 12:27	M-III/6010	SJ	
Sodium *	934	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:27	M-III/6010	SJ	
Sodium, Available *	934	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:27	M-III/6010	SJ	
Sulfur	14.1	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:27	M-III/6010	SJ	
Sulfur, Available	14.1	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:27	M-III/6010	SJ	

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

Sample ID #: 6"-18" **Sampling Method: Grab** **Lab Sample ID #: 2501201-07**

Sample Matrix: Solid **Date/Time Collected: 01/14/25 09:45**

Analyte	Result	Units	PQL	Prep Method	Batch	Analyzed	Method	Analyst	Notes
General Chemistry									
% Solids	80.5	% by Wt.	0.100	% Calc	B503204	01/16/25 08:27	ASTM D2216	TW	
Conductivity (@25C)	1450	umhos/cm	1.00	USDA60	B504232	01/23/25 11:36	USDAHB60	JA	
Ammonia-Nitrogen *	22.4	mg/kg	10.0	SM4500NH3B	B504243	01/23/25 16:06	SM4500NH3C	DD	
Total Kjeldahl Nitrogen	521	mg/kg	1.00	EPA 351.3	B504233	01/23/25 13:06	EPA 351.3	DD	
Total Nitrogen	649	mg/kg dry	1.40	[CALC]	[CALC]	01/23/25 13:06	CALC	DD	
SoilpH measured in H20@°Cbelow	8.11	pH Units	0.10	EPA 9045D	B504230	01/23/25 11:35	EPA 9045D	JA	H
pH measured @Temperature >>	20	°C	0.10	EPA 9045D	B504230	01/23/25 11:35	EPA 170.1	JA	H
Anions by Ion Chromatography									
Nitrite as N *	0.82	mg/kg	0.20	EPA 300.0	B504192	01/21/25 14:56	EPA 300.0	JA	
Nitrate as N *	0.57	mg/kg	0.20	EPA 300.0	B504192	01/21/25 14:56	EPA 300.0	JA	
Available Metals by Mehlich III Extraction									
Calcium *	3950	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:33	M-III/6010	SJ	
Calcium, Available	3950	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:33	M-III/6010	SJ	
Magnesium *	217	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:33	M-III/6010	SJ	
Magnesium, Available	217	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:33	M-III/6010	SJ	
Phosphorus, Available	<10.0	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:33	M-III/6010	SJ	
Potassium, Available	104	mg/kg dry	50.0	Mehlich-III	B503229	01/17/25 12:33	M-III/6010	SJ	
Sodium *	1060	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:33	M-III/6010	SJ	
Sodium, Available *	1060	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:33	M-III/6010	SJ	
Sulfur	12.5	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:33	M-III/6010	SJ	
Sulfur, Available	12.5	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:33	M-III/6010	SJ	

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

Sample ID #: 18"-30" **Sampling Method: Grab** **Lab Sample ID #: 2501201-08**

Sample Matrix: Solid **Date/Time Collected: 01/14/25 10:00**

Analyte	Result	Units	PQL	Prep Method	Batch	Analyzed	Method	Analyst	Notes
General Chemistry									
% Solids	83.5	% by Wt.	0.100	% Calc	B503204	01/16/25 08:27	ASTM D2216	TW	
Conductivity (@25C)	1210	umhos/cm	1.00	USDA60	B504232	01/23/25 11:38	USDAHB60	JA	
Ammonia-Nitrogen *	16.8	mg/kg	10.0	SM4500NH3B	B504243	01/23/25 16:07	SM4500NH3C	DD	
Total Kjeldahl Nitrogen	448	mg/kg	1.00	EPA 351.3	B504233	01/23/25 13:07	EPA 351.3	DD	
Total Nitrogen	540	mg/kg dry	1.40	[CALC]	[CALC]	01/23/25 13:07	CALC	DD	
SoilpH measured in H20@°Cbelow	8.43	pH Units	0.10	EPA 9045D	B504230	01/23/25 11:38	EPA 9045D	JA	H
pH measured @Temperature >>	20	°C	0.10	EPA 9045D	B504230	01/23/25 11:38	EPA 170.1	JA	H
Anions by Ion Chromatography									
Nitrite as N *	1.54	mg/kg	0.20	EPA 300.0	B504192	01/21/25 15:14	EPA 300.0	JA	
Nitrate as N *	1.21	mg/kg	0.20	EPA 300.0	B504192	01/21/25 15:14	EPA 300.0	JA	
Available Metals by Mehlich III Extraction									
Calcium *	829	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:38	M-III/6010	SJ	
Calcium, Available	829	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:38	M-III/6010	SJ	
Magnesium *	129	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:38	M-III/6010	SJ	
Magnesium, Available	129	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:38	M-III/6010	SJ	
Phosphorus, Available	<10.0	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:38	M-III/6010	SJ	
Potassium, Available	<50.0	mg/kg dry	50.0	Mehlich-III	B503229	01/17/25 12:38	M-III/6010	SJ	
Sodium *	795	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:38	M-III/6010	SJ	
Sodium, Available *	795	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:38	M-III/6010	SJ	
Sulfur	15.0	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:38	M-III/6010	SJ	
Sulfur, Available	15.0	mg/kg dry	10.0	Mehlich-III	B503229	01/17/25 12:38	M-III/6010	SJ	

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B503151 - SM2540D									
Blank (B503151-BLK1)				Prepared: 01/13/25 10:45 Analyzed: 01/13/25 12:50					
Total Suspended Solids	<2.50	2.50	mg/L						
LCS (B503151-BS1)				Prepared: 01/13/25 10:45 Analyzed: 01/13/25 12:51					
Total Suspended Solids	86.0	25.0	mg/L	100		86	80-120		
LCS Dup (B503151-BSD1)				Prepared: 01/13/25 10:45 Analyzed: 01/13/25 12:52					
Total Suspended Solids	92.0	25.0	mg/L	100		92	80-120	7	20
Duplicate (B503151-DUP1)		**Source: 2501146-02**		Prepared: 01/13/25 10:45 Analyzed: 01/13/25 12:55					
Total Suspended Solids	160	16.7	mg/L		166			4	20
Batch B503203 - SM2540C									
Blank (B503203-BLK1)				Prepared: 01/13/25 11:00 Analyzed: 01/14/25 14:00					
Total Dissolved Solids	<2.50	2.50	mg/L						
LCS (B503203-BS1)				Prepared: 01/13/25 11:00 Analyzed: 01/14/25 14:01					
Total Dissolved Solids	99.0	2.50	mg/L	100		99	80-120		
LCS Dup (B503203-BSD1)				Prepared: 01/13/25 11:00 Analyzed: 01/14/25 14:02					
Total Dissolved Solids	111	2.50	mg/L	100		111	80-120	11	20
Duplicate (B503203-DUP1)		**Source: 2501193-01**		Prepared: 01/14/25 10:00 Analyzed: 01/14/25 17:05					
Total Dissolved Solids	942	2.50	mg/L		884			6	20
Batch B503275 - SM2320B									
Blank (B503275-BLK1)				Prepared: 01/17/25 12:20 Analyzed: 01/17/25 12:27					
Total Alkalinity	<20.0	20.0	mg/L as CaCO3						
LCS (B503275-BS1)				Prepared: 01/17/25 12:30 Analyzed: 01/17/25 13:10					
Total Alkalinity	108	20.0	mg/L as CaCO3	100		108	80-120		
LCS Dup (B503275-BSD1)				Prepared: 01/17/25 12:30 Analyzed: 01/17/25 13:12					
Total Alkalinity	104	20.0	mg/L as CaCO3	100		104	80-120	4	20
Duplicate (B503275-DUP1)		**Source: 2501201-03**		Prepared: 01/17/25 12:30 Analyzed: 01/17/25 15:14					
Total Alkalinity	260	20.0	mg/L as CaCO3		283			8	20
Batch B504174 - SM5210B									

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B504174 - SM5210B										
Blank (B504174-BLK1)				Prepared: 01/15/25 09:30 Analyzed: 01/20/25 10:00						
CBOD	<2.00	2.00	mg/L							
LCS (B504174-BS1)				Prepared: 01/15/25 09:30 Analyzed: 01/20/25 10:10						
CBOD	195	2.00	mg/L	200		98	80-120			
LCS (B504174-BS2)				Prepared: 01/15/25 09:30 Analyzed: 01/20/25 10:12						
CBOD	188	2.00	mg/L	200		94	80-120			
LCS (B504174-BS3)				Prepared: 01/15/25 09:30 Analyzed: 01/20/25 10:14						
CBOD	198	2.00	mg/L	200		99	80-120			
Duplicate (B504174-DUP1)		**Source: 2501201-03**		Prepared: 01/15/25 09:30 Analyzed: 01/20/25 10:16						
CBOD	12.1	2.00	mg/L		14.8			20	20	
Batch B504199 - SM2510B										
LCS (B504199-BS1)				Prepared: 01/15/25 10:00 Analyzed: 01/15/25 10:00						
Conductivity (@25C)	1030	1.00	umhos/cm	1000		103	80-120			
Duplicate (B504199-DUP1)		**Source: 2501201-03**		Prepared: 01/15/25 10:00 Analyzed: 01/15/25 10:14						
Conductivity (@25C)	1540	1.00	umhos/cm		1550			0.8	20	
Batch B504210 - EPA 365.3										
Blank (B504210-BLK1)				Prepared: 01/22/25 12:00 Analyzed: 01/22/25 15:00						
Total Phosphorous	<0.05	0.05	mg/L							
LCS (B504210-BS1)				Prepared: 01/22/25 12:00 Analyzed: 01/22/25 15:00						
Total Phosphorous	0.478	0.05	mg/L	0.500		96	80-120			
LCS Dup (B504210-BSD1)				Prepared: 01/22/25 12:00 Analyzed: 01/22/25 15:00						
Total Phosphorous	0.476	0.05	mg/L	0.500		95	80-120	0.4	20	
Duplicate (B504210-DUP1)		**Source: 2501201-04**		Prepared: 01/22/25 12:00 Analyzed: 01/22/25 15:20						
Total Phosphorous	1.54	0.05	mg/L		1.58			3	20	
Matrix Spike (B504210-MS1)		**Source: 2501201-04**		Prepared: 01/22/25 12:00 Analyzed: 01/22/25 15:20						
Total Phosphorous	1.20	0.05	mg/L	0.500	1.58	NR	80-120			M
Matrix Spike Dup (B504210-MSD1)		**Source: 2501201-04**		Prepared: 01/22/25 12:00 Analyzed: 01/22/25 15:20						

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B504210 - EPA 365.3										
Matrix Spike Dup (B504210-MSD1)		**Source: 2501201-04**		Prepared: 01/22/25 12:00		Analyzed: 01/22/25 15:20				
Total Phosphorous	1.21	0.05	mg/L	0.500	1.58	NR	80-120	1	20	M
Batch B504212 - EPA 351.3										
Blank (B504212-BLK1)				Prepared: 01/22/25 08:30		Analyzed: 01/22/25 15:00				
Total Kjeldahl Nitrogen	<1.00	1.00	mg/L							
LCS (B504212-BS1)				Prepared: 01/22/25 08:30		Analyzed: 01/22/25 15:02				
Total Kjeldahl Nitrogen	19.1	1.00	mg/L	20.0		95	80-120			
LCS Dup (B504212-BSD1)				Prepared: 01/22/25 08:30		Analyzed: 01/22/25 15:04				
Total Kjeldahl Nitrogen	21.9	1.00	mg/L	20.0		109	80-120	14	20	
Duplicate (B504212-DUP1)		**Source: 2501146-02**		Prepared: 01/22/25 08:30		Analyzed: 01/22/25 15:07				
Total Kjeldahl Nitrogen	9.53	1.00	mg/L		9.53			0	20	
Matrix Spike (B504212-MS1)		**Source: 2501146-02**		Prepared: 01/22/25 08:30		Analyzed: 01/22/25 15:10				
Total Kjeldahl Nitrogen	35.3	1.00	mg/L	20.0	9.53	129	80-120			M
Batch B504213 - SM4500NH3B										
Blank (B504213-BLK1)				Prepared: 01/22/25 08:30		Analyzed: 01/22/25 16:30				
Ammonia-Nitrogen	<1.00	1.00	mg/L							
LCS (B504213-BS1)				Prepared: 01/22/25 08:30		Analyzed: 01/22/25 16:32				
Ammonia-Nitrogen	20.7	1.00	mg/L	20.0		104	80-120			
LCS Dup (B504213-BSD1)				Prepared: 01/22/25 08:30		Analyzed: 01/22/25 16:34				
Ammonia-Nitrogen	20.7	1.00	mg/L	20.0		104	80-120	0	20	
Duplicate (B504213-DUP1)		**Source: 2501144-01**		Prepared: 01/22/25 08:30		Analyzed: 01/22/25 16:36				
Ammonia-Nitrogen	<1.00	1.00	mg/L		<1.00				20	
Matrix Spike (B504213-MS1)		**Source: 2501144-01**		Prepared: 01/22/25 08:30		Analyzed: 01/22/25 16:40				
Ammonia-Nitrogen	20.2	1.00	mg/L	20.0	<1.00	101	80-120			
Batch B504230 - EPA 9045D										
LCS (B504230-BS1)				Prepared: 01/23/25 10:00		Analyzed: 01/23/25 10:00				
SoilpH measured in H20@°Cbelow	7.01	0.10	pH Units	7.00		100	97.5-102.5			

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B504230 - EPA 9045D										
LCS (B504230-BS1)				Prepared: 01/23/25 10:00 Analyzed: 01/23/25 10:00						
pH measured @Temperature >>	17.4	0.10	°C				0-200			
Duplicate (B504230-DUP1)		**Source: 2501201-08**		Prepared: 01/23/25 10:00 Analyzed: 01/23/25 12:00						
SoilpH measured in H20@°Cbelow	8.31	0.10	pH Units		8.43			1	20	H
pH measured @Temperature >>	20.1	0.10	°C		20.1			0	30	H
Batch B504232 - USDA60										
LCS (B504232-BS1)				Prepared: 01/23/25 10:00 Analyzed: 01/23/25 10:00						
Conductivity (@25C)	1040	1.00	umhos/cm	1000		104	80-120			
Duplicate (B504232-DUP1)		**Source: 2501201-08**		Prepared: 01/23/25 10:00 Analyzed: 01/23/25 11:40						
Conductivity (@25C)	1140	1.00	umhos/cm		1210			6	20	
Batch B504233 - EPA 351.3										
Blank (B504233-BLK1)				Prepared: 01/22/25 08:30 Analyzed: 01/23/25 13:00						
Total Kjeldahl Nitrogen	<1.00	1.00	mg/kg							
LCS (B504233-BS1)				Prepared: 01/22/25 08:30 Analyzed: 01/23/25 13:01						
Total Kjeldahl Nitrogen	196	1.00	mg/kg	200		98	80-120			
LCS Dup (B504233-BSD1)				Prepared: 01/22/25 08:30 Analyzed: 01/23/25 13:02						
Total Kjeldahl Nitrogen	219	1.00	mg/kg	200		109	80-120	11	20	
Duplicate (B504233-DUP1)		**Source: 2501201-06**		Prepared: 01/22/25 08:30 Analyzed: 01/23/25 13:03						
Total Kjeldahl Nitrogen	336	1.00	mg/kg		314			7	20	
Matrix Spike (B504233-MS1)		**Source: 2501201-06**		Prepared: 01/22/25 08:30 Analyzed: 01/23/25 13:05						
Total Kjeldahl Nitrogen	560	1.00	mg/kg	200	314	123	80-120			M
Batch B504243 - SM4500NH3B										
Blank (B504243-BLK1)				Prepared: 01/22/25 08:30 Analyzed: 01/23/25 16:00						
Ammonia-Nitrogen	<10.0	10.0	mg/kg							
LCS (B504243-BS1)				Prepared: 01/22/25 08:30 Analyzed: 01/23/25 16:01						
Ammonia-Nitrogen	196	10.0	mg/kg	200		98	80-120			
LCS Dup (B504243-BSD1)				Prepared: 01/22/25 08:30 Analyzed: 01/23/25 16:02						

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B504243 - SM4500NH3B										
LCS Dup (B504243-BSD1)				Prepared: 01/22/25 08:30 Analyzed: 01/23/25 16:02						
Ammonia-Nitrogen	202	10.0	mg/kg	200		101	80-120	3	20	
Duplicate (B504243-DUP1)		**Source: 2501201-06**		Prepared: 01/22/25 08:30 Analyzed: 01/23/25 16:04						
Ammonia-Nitrogen	11.2	10.0	mg/kg		5.60			67	20	S
Matrix Spike (B504243-MS1)		**Source: 2501201-06**		Prepared: 01/22/25 08:30 Analyzed: 01/23/25 16:05						
Ammonia-Nitrogen	224	10.0	mg/kg	200	5.60	109	80-120			

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B503274 - EPA 300.0									
Blank (B503274-BLK1)				Prepared: 01/14/25 16:00 Analyzed: 01/14/25 17:33					
Fluoride	<0.020	0.020	mg/L						
Chloride	<0.100	0.100	mg/L						
Nitrate as N	<0.100	0.100	mg/L						
Sulfate	<0.10	0.10	mg/L						
LCS (B503274-BS1)				Prepared: 01/14/25 16:00 Analyzed: 01/14/25 17:51					
Fluoride	1.01	0.020	mg/L	1.00		101	90-110		
Chloride	4.83	0.100	mg/L	5.00		97	90-110		
Nitrate as N	5.09	0.100	mg/L	5.00		102	90-110		
Sulfate	4.93	0.10	mg/L	5.00		99	90-110		
LCS Dup (B503274-BSD1)				Prepared: 01/14/25 16:00 Analyzed: 01/14/25 18:09					
Fluoride	1.01	0.020	mg/L	1.00		101	90-110	0.02	20
Chloride	4.85	0.100	mg/L	5.00		97	90-110	0.3	20
Nitrate as N	5.11	0.100	mg/L	5.00		102	90-110	0.3	20
Sulfate	4.94	0.10	mg/L	5.00		99	90-110	0.3	20
Duplicate (B503274-DUP1)		**Source: 2501201-03**		Prepared: 01/14/25 16:00 Analyzed: 01/15/25 14:55					
Fluoride	0.281	0.020	mg/L		0.294			4	20
Chloride	278	2.50	mg/L		276			0.6	20
Nitrate as N	0.968	0.100	mg/L		0.989			2	20

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B503274 - EPA 300.0										
Duplicate (B503274-DUP1)		**Source: 2501201-03**		Prepared: 01/14/25 16:00		Analyzed: 01/15/25 14:55				
Sulfate	43.8	2.50	mg/L		43.4			0.9	20	
Matrix Spike (B503274-MS1)		**Source: 2501201-03**		Prepared: 01/14/25 16:00		Analyzed: 01/15/25 15:13				
Fluoride	1.25	0.020	mg/L	1.00	0.294	95	80-120			
Chloride	192	0.100	mg/L	5.00	276	NR	80-120			M
Nitrate as N	6.11	0.100	mg/L	5.00	0.989	102	80-120			
Sulfate	56.4	0.10	mg/L	5.00	43.4	261	80-120			M
Matrix Spike Dup (B503274-MSD1)		**Source: 2501201-03**		Prepared: 01/14/25 16:00		Analyzed: 01/15/25 15:31				
Fluoride	1.25	0.020	mg/L	1.00	0.294	96	80-120	0.4	20	
Chloride	192	0.100	mg/L	5.00	276	NR	80-120	0.1	20	M
Nitrate as N	6.11	0.100	mg/L	5.00	0.989	102	80-120	0.04	20	
Sulfate	56.4	0.10	mg/L	5.00	43.4	260	80-120	0.1	20	M
Batch B504192 - EPA 300.0										
Blank (B504192-BLK1)				Prepared: 01/20/25 16:00		Analyzed: 01/20/25 16:43				
Nitrite as N	<0.10	0.10	mg/kg							
Nitrate as N	<0.10	0.10	mg/kg							
LCS (B504192-BS1)				Prepared: 01/20/25 16:00		Analyzed: 01/20/25 17:01				
Nitrite as N	45.4	0.10	mg/kg	50.0		91	90-110			
Nitrate as N	50.3	0.10	mg/kg	50.0		101	90-110			
LCS Dup (B504192-BSD1)				Prepared: 01/20/25 16:00		Analyzed: 01/20/25 17:19				
Nitrite as N	45.6	0.10	mg/kg	50.0		91	90-110	0.4	30	
Nitrate as N	48.8	0.10	mg/kg	50.0		98	90-110	3	30	
Duplicate (B504192-DUP1)		**Source: 2501281-01**		Prepared: 01/20/25 16:00		Analyzed: 01/20/25 20:35				
Nitrite as N	<2.50	2.50	mg/kg		<2.50				20	
Nitrate as N	6.48	2.50	mg/kg		5.80			11	20	
Matrix Spike (B504192-MS1)		**Source: 2501281-01**		Prepared: 01/20/25 16:00		Analyzed: 01/20/25 21:47				
Nitrite as N	41.7	0.10	mg/kg	50.0	<0.10	83	80-120			
Nitrate as N	53.9	0.10	mg/kg	50.0	5.80	96	80-120			
Matrix Spike Dup (B504192-MSD1)		**Source: 2501281-01**		Prepared: 01/20/25 16:00		Analyzed: 01/20/25 22:05				
Nitrite as N	41.7	0.10	mg/kg	50.0	<0.10	83	80-120	0.01	20	
Nitrate as N	53.8	0.10	mg/kg	50.0	5.80	96	80-120	0.1	20	

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B503226 - EPA 200.7									
Blank (B503226-BLK1)				Prepared: 01/16/25 08:55 Analyzed: 01/17/25 11:37					
Aluminum	<0.050	0.050	mg/L						
LCS (B503226-BS1)				Prepared: 01/16/25 08:55 Analyzed: 01/17/25 11:48					
Aluminum	1.93	0.050	mg/L	2.00		97	85-115		
LCS Dup (B503226-BSD1)				Prepared: 01/16/25 08:55 Analyzed: 01/17/25 11:54					
Aluminum	1.91	0.050	mg/L	2.00		96	85-115	1	20
Duplicate (B503226-DUP1)		**Source: 2501201-03**		Prepared: 01/16/25 08:55 Analyzed: 01/23/25 13:31					
Aluminum	0.153	0.050	mg/L		0.147			4	20
Matrix Spike (B503226-MS1)		**Source: 2501201-03**		Prepared: 01/16/25 08:55 Analyzed: 01/23/25 13:37					
Aluminum	2.44	0.050	mg/L	2.00	0.147	115	75-125		
Matrix Spike Dup (B503226-MSD1)		**Source: 2501201-03**		Prepared: 01/16/25 08:55 Analyzed: 01/23/25 13:43					
Aluminum	2.51	0.050	mg/L	2.00	0.147	118	75-125	3	20

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

SAMPLE QUALIFIERS

P1	Sample was received at a pH of greater 2.0.
H	This parameter should be analyzed within 15 minutes of sample collection. Due to transportation, hold time has been exceeded.

DEFINITIONS

*	TNI / NELAC accredited analyte
PQL	Practical Quantitation Limit
MCL	Maximum Contaminant Level
mg/Kg	Milligrams per Kilogram (Parts per Million)
mg/L	Milligrams per Liter (Parts per Million)
PPM	Parts per Million
L	LCS recovery is outside QC acceptance limits, the results may have a slight bias.
M	MS recovery is outside QC limits, the results may have a slight bias due to possible matrix interferences.
NR	Not Recovered due to source sample concentration exceeds spiked concentration.
RMCCL	Recommended Maximum Concentration of Contaminants Level
Surr L	Surrogate recovery is low outside QC limits.
Surr H	Surrogate recovery is high outside QC limits.
HT	Sample received past holdtime
IC	Improper Container for this analyte(s)
IP	Improper preservation for this analyte(s)
IT	Improper Temperature
V	Inssuficient Volume
B	Sample collected in Bulk
S	RPD is outside QC limits.
AB	VOA Vial contained air bubbles.
OP	ortho-Phosphate was not filtered in the field within 15minutes of collection.
CCV	Continuing Calibration Verification Standard.
ICV	Initial Calibration Verification Standard.

Test Methods followed by the laboratory are referenced in the following approved methodology, unless otherwise specified.

Standard Methods for the Examination of Water and Wastewater, 23rd Edition, 2017
Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79-020, Rev. March 1983
EPA SW Test Methods for the Examination of Solid Waste, SW-846, 1996

SAN ANTONIO TESTING LABORATORY

LABORATORY REPORT

Cope Engineering
8611 Bott Lane
San Antonio TX, 78217

Additional Notes:

Project Manager: Brian Cope
Project: Pollutant Analysis for Wastewater Treatment
Project Number: Facilities

Reported:
01/23/25 17:19
Received:
01/14/25 11:20

Report No. 2501201

Aimee Landon For Marissa Esquivel, Lab Manager For

Marcela G. Hawk, President

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

CHAIN-OF-CUSTODY RECORD

SAN ANTONIO TESTING LABORATORY, LLC

1610 S. Laredo Street, San Antonio, Texas 78207
Phone (210) 229-9920
Fax (210) 229-9921
www.satestinglab.com

REPORT TO:	INVOICE TO:	P.O. #
COMPANY Cope Engineering Inc	COMPANY City Of Runge	REPORT NUMBER 2501201
ADDRESS 8611 Bott Lane	ADDRESS P.O. Box 206	
CITY San Antonio STATE TX ZIP 78217	CITY Runge STATE TX ZIP 78119	E-MAIL
ATTN: Brian Cope PHONE # 210-828-7007	ATTN: Homer Lott PHONE # 830-239-4121	

REQUESTED TURNAROUND TIME IN BUSINESS DAYS & SURCHARGE: [X] 7-10 Days REG ☐ 5 Days +25% ☐ 4 Days +50% ☐ 3 DAYS +75% ☐ 2 DAYS +100% ☐ Next Day +150% ☐ SAME DAY WHEN POSSIBLE +300%

PROJECT NAME/LOCATION/SITE: Pollutant Analysis For Wastewater Treatment Facilites

PROJECT NO.:

SAMPLED BY: Jesse Sandoval

THE TURNAROUND TIME FOR SAMPLES RECEIVED AFTER 3:00 PM SHALL BEGIN AT 8:00 AM THE FOLLOWING BUSINESS DAY / SPECIAL REQ.:

DATA TO TCEQ ☐ RRC ☐ Other (Specify) ☐ Field: pH: 7.8 ; Temp: ____ °C; LCS/D: ____ / ____ ; Dup: ____

SAMPLE TEMPERATURE WITHIN COMPLIANCE (> 0°C ≤ 6°C) [X] YES ☐ NO
PROPER CONTAINERS [X] YES ☐ NO
INSUFFICIENT SAMPLE AMOUNT FOR (TCLP/SPLP/OTHER): IF NO, INITIAL HERE TO AUTHORIZE ANALYSIS ____ ☐ YES ☐ NO AUTHORIZE TO PROCEED ____

OBSERVED TEMP. 1.1°C / CORRECTED TEMP. 1.1°C / TEMP I.R. GUN # 10 / SAMPLE ICED [X] YES ☐ NO
TRRP 13 ☐ APPENDIX A ☐ LPST PCLS ☐ LOW LEVEL ☐ PST ☐ SIM ☐ TSDF Class 2 ☐ PERMIT ☐

ANALYSIS REQUESTED

Analysis columns: BTEX/MTBE 8260 / TPH TX1005/TX1006; Metals 8 / 11 / 12 / 13 / TCLP / SPLP / Total; PAH / SVOC / 8270 / 625 / TCLP / SPLP / Total; VOC / 8260 / 624 / TCLP / SPLP / Total; Water Quality - Drinking / Livestock / Irrigation; Coli / TC / FC / HPC / EColi / Enterococci / Q-Tray; Br / Cl / F / NO3 / NO2/O-P / SO4; PCB / 608 / 8082A; OC Pest / 608 / 8081A / TCLP / SPLP / Total; See Attached Sheet; See list for solids

Preserved with: HCl; HNO3; H2SO4; NaOH; ZnOAc; NaHSO4; None; Preserved in the lab; Composited in the lab; Filtered in the lab; Filtered in the field

SAMPLE NUMBER	DATE	TIME	MATRIX	COMPOSITE / GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	CONTAINER SIZE	ANALYSIS / PRESERVED	REMARKS
001	1/14/25	8:30AM	X (Non-Potable Water)	X	TSS	1	950 cc	X	2 from list divided into individual containers
002	1/14/25	8:40AM	X (Non-Potable Water)		TDS	1	500 cc	X	
003	1/14/25	8:50AM	X (Non-Potable Water)		~~pH Standard unit~~ chem/metals	1	950 cc	X	
004	1/14/25	9:00AM	X (Non-Potable Water)		TKN Amm N T Phaph	1	500 cc	X	
~~005~~	~~1/14/25~~	~~9:15AM~~	~~X~~		~~Chlorine Residual~~	~~1~~	~~120 ML~~		
005	1/14/25	09:15	X (Non-Potable Water)		E Coli	1	120ml	X	
1	1/14/25	9:30PM	X (Sludge)		0-6"	1	1 Bag	X	
2	1/14/25	9:45PM	X (Sludge)		6"-18"	1	1 Bag	X	
3	1/14/25	10:00PM	X (Sludge)		18"-30"	1	1 Bag	X	

RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY (SIGNATURE)	DATE / TIME	RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY (SIGNATURE)	DATE / TIME
[signature]	10:10AM 01-14-2025	[signature]	1/14/25 10:10	[signature]	01/14/25 11:20	[signature]	JAN 14 2025
RELINQUISHED BY (PRINT NAME) Jesse Sandoval	10:10AM 01-14-2025	RECEIVED BY (PRINT NAME) Homer Lott III		RELINQUISHED BY (PRINT NAME) Homer Lott III		RECEIVED BY (PRINT NAME) Aimee Landon	1120
RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY (SIGNATURE)	DATE / TIME	METHOD OF SHIPMENT Hand		SUBCONTRACTED ☐ YES [X] NO	
RELINQUISHED BY (PRINT NAME)	DATE / TIME	RECEIVED BY (PRINT NAME)	DATE / TIME	BULK ☐ (Initial) 5035 ☐ N/A [X]		CUSTODY SEAL IN PLACE & INTACT ☐ YES [X] NO	

FORM: COC REV 04/2022 WHITE - LAB CANARY - CLIENT

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					
Total Suspended Solids, mg/l					
Ammonia Nitrogen, mg/l					
Nitrate Nitrogen, mg/l					
Total Kjeldahl Nitrogen, mg/l					
Sulfate, mg/l					
Chloride, mg/l					
Total Phosphorus, mg/l					
pH, standard units * TAKE IN FIELD					
~~Dissolved Oxygen*~~, mg/l					
Chlorine Residual, mg/l * TAKE IN FIELD					
E.coli (CFU/100ml) freshwater					
~~Entercocci (CFU/100ml) saltwater~~					
Total Dissolved Solids, mg/l					
Electrical Conductivity, µmohs/cm, †					
~~Oil & Grease~~, mg/l					
~~Alkalinity~~ ($CaCO_3$)*, mg/l					

*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					
Total Dissolved Solids, mg/l					
~~pH, standard units~~					
Fluoride, mg/l					
Aluminum, mg/l					
Alkalinity ($CaCO_3$), mg/l					

Section 8. Facility Operator (Instructions Page 50)

Facility Operator Name: Click to enter text.

Facility Operator's License Classification and Level: Click to enter text.

Facility Operator's License Number: Click to enter text.

SAN ANTONIO TESTING LABORATORY

LABORATORY REPORT

Cert. No. T104704360-13-9

Klein & Cope Engineering
8611 Botts Lane, Ste. 101
San Antonio TX. 78217

Project: City of Runge Irrigation Area
Project Number: [none]
Project Manager: Nadia Sanchez

Reported:
04/17/15 17:45
Received:
04/02/15 17:14

Solid Samples like (2410011)

Report No. 1504058

Sample ID #: Schattel Clay 0-6"

Sampling Method: Grab

Lab Sample ID #: 1504058-01

Sample Matrix: Solid

Date/Time Collected: 04/02/15 14:05

Analyte	Result	Units	PQL	Prep Method	Batch	Analyzed	Method	Analyst	Notes
General Chemistry									
% Solids	86.4	% by Weight	1.00	% Solids	B516055	04/14/15 13:19	% Calc	XF	
Ammonia	<10.0	mg/kg	10.0		B515145	04/10/15 17:12	4500NH3CB	SS	
Nitrite as N *	<1.00	mg/kg	1.00	EPA 300.0	B515110	04/09/15 14:33	EPA 300.0	SS	
Nitrate as N *	9.78	mg/kg	1.00	EPA 300.0	B515110	04/09/15 14:33	EPA 300.0	SS	
Specific conductance	730	umhos/cm	1.00		B516037	04/13/15 16:40	SM2510B	JL	
pH *	9.02	pH Units	1.00		B514173	04/03/15 15:00	9045C	SS	H
pH measured @Temperature >>	22	°C	1.0		B514173	04/03/15 15:00	EPA 170.1	SS	H
Total Kjeldahl Nitrogen	11.2	mg/kg	1.00		B515133	04/08/15 16:35	351.3	SS	
Total Nitrogen	21.0	mg/kg	3.00	[CALC]	[CALC]	04/09/15 14:33	T-Nitrogen	SS	
Available Metals by Mehlich III Extraction									
Sodium, Available *	172000	mg/kg dry	2500	3050B	B516063	04/15/15 12:34	M-III/6010	xe	
Potassium, Available	618	mg/kg dry	200	3050B	B516063	04/14/15 16:02	M-III/6010	xe	
Sulfur	83.7	mg/kg dry	20.0	3050B	B516063	04/14/15 16:02	M-III/6010	xe	
Magnesium, Available	<20.0	mg/kg dry	20.0	3050B	B516063	04/14/15 16:02	M-III/6010	xe	
Calcium, Available	1190	mg/kg dry	500	3050B	B516063	04/14/15 16:02	M-III/6010	xe	
Phosphorus, Available	341	mg/kg dry	20.0	3050B	B516063	04/14/15 16:02	M-III/6010	xe	

SAN ANTONIO TESTING LABORATORY

Sample Receipt Checklist

Client: Cope Engineering	**Project Manager: Marissa Esquivel**
Project: Pollutant Analysis for Wastewater Treatment	**Project Number: Facilites**

Report To:
Brian Cope

SATL Report Number: 2501201

Work Order Due by:	01/23/25 17:00 (7 day TAT)		
Received By:	Aimee Landon	Date Received:	01/14/25 11:20
Logged In By:	Aimee Landon	Date Logged In:	01/14/25 12:17

Sample(s) Received on ICE/evidence of Ice (cooler with melted ice,etc):	*Yes*
Sample temperature at receipt *:	*1.1°C*
Custody Seals Present:	*No*
All containers intact:	*Yes*
Sample labels/COC agree:	*Yes*
Samples Received within Holding time :	*Yes*
Samples appropriately preserved **:	*Yes*
Containers received broken/damaged/leaking:	*No*
Air bubbles present in VOA vials for VOC/TPH analyses, if applicable:	*Not Applicable*
TRRP 13 Reporting requested?	*No*
BacT Sample bottles filled to volume (100mL mark), if applicable:	*Not Applicable*
LCR Sample bottles filled to volume (1 Liter mark), if applicable:	*Not Applicable*
Subcontracting required for any analyses:	*No*
RUSH turnaround time requested:	*No*
Requested Turnaround Time:	*No*
Samples delivered via :	*Hand Delivered*
Air bill included if Samples were shipped:	*No*
Other deviations not meeting SATL sample acceptance criteria notated on CoC:	*Notated on CoC, if any*

Notes:
** Samples delivered to the laboratory on the same day that they are collected may not meet thermal preservation criteria (>0°C but <6°C) but are acceptable, if they arrive on ice.*
*** If improperly preserved, notate client authorization on CoC to proceed with analysis.*

Checked By : *Aimee Landon* Date : *01/14/25 11:20*

SATL#FO001
Revised 09/15/2022

Francesca Findlay

From: Kyle Stoner <kyle@copeengineeringtx.com>
Sent: Friday, February 21, 2025 1:58 PM
To: Francesca Findlay
Cc: Brian Cope
Subject: WQ0010266001 City of Runge WWTP Renewal Application
Attachments: Municipal Disposal Renewal Spanish NORI.docx; Plain Language Summary - Spanish.pdf; Comment Response Letter - TCEQ.pdf

Good afternoon,

Per your request, please find attached the completed Spanish NORI in Microsoft Word, a copy of the plain language summary in Spanish and a comment response letter.

Let me know if you have any questions or need anything else.

Thank you,

Kyle Stoner E.I.T.
Graduate Engineer

Cope Engineering, Inc.

Tex. Frm. Reg. # F-16078
8611 Botts Lane
San Antonio, Texas 78217
210.828.7070 (phone)
210.828.7076 (fax)

Cope
Engineering, Inc.
Texas Registration #F-16078

February 21, 2025

Texas Commission on Environmental Quality
Applications Review and Processing Team (MC148)
Water Quality Division
P.O. Box 13087
Austin, Texas 78711-3087

Re: Application to Renew Permit No. WQ0010266001
Issued to City of Runge
CN600737357; RN101917839

Ms. Francesca Findlay:

The following responses have been completed in reference to the TCEQ comment letter dated February 20, 2025:

1. Please provide the Plain Language Summary in Spanish.

   Plain Language Summary in Spanish is attached.

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

   APPLICATION. City of Runge, P.O. Box 206, Runge, Texas 78151, has applied to the Texas Commission on Environmental Quality (TCEQ) to renew Texas Land Application Permit (TLAP) No. WQ0010266001 to authorize the disposal of treated wastewater at a volume not to exceed a daily average flow of 110,000 gallons per day via surface irrigation on 42 acres. The domestic wastewater treatment facility and disposal site is located at 400 West Lyons, in the city of Runge, in Karnes County, Texas 78151. TCEQ received this application on February 14, 2025. The permit application will be available for viewing and copying at Runge City Hall, 109 North Helena Street, Runge, in Karnes County, Texas, prior to the date this notice is published in the newspaper. The application, including any updates, and associated notices are available electronically at the following webpage: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tlap-applications. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For the exact location, refer to the application. https://gisweb.tceq.texas.gov/LocationMapper/?marker=-97.707777,28.881111&level=18

Further information may also be obtained from City of Runge at the address stated above or by calling Mr. Homer Lott, Major, at 830-239-4121.

I found one error and it is highlighted in red. It should read ***Mayor, Homer Lott.***

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

   With the correction made above in red, the NORI has been translated into Spanish and is attached as a Word document.

If you have any further questions and/or comments, please let us know.

Thank You,

Kyle Stoner, E.I.T.
Cope Engineering, Inc.

/attachments