



Technical Package Cover Page

This file contains the following documents:

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



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

PLAIN LANGUAGE SUMMARY FOR TPDES OR TLAP PERMIT APPLICATIONS

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

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

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

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

ENGLISH TEMPLATE FOR TPDES or TLAP NEW/RENEWAL/AMENDMENT APPLICATIONS DOMESTIC WASTEWATER/STORMWATER

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

The City of Big Spring (CN600668693) operates the City of Big Spring Water Reclamation Plant (RN101721249), a tertiary treatment system. The facility is located at 3607 11th Pl Ext, in Big Spring, Howard County, Texas 79720.

This application is for a renewal to discharge treated domestic wastewater at an annual average flow of 3.8 million gallons per day.

Discharges from the facility are expected to contain five-day carbonaceous biochemical oxygen demand (CBOD₅), total suspended solids (TSS), ammonia nitrogen (NH₃-N), and *Escherichia coli*. Additional potential pollutants are included in the Domestic Technical Report 1.0, Section 7. Pollutant Analysis of Treated Effluent and Domestic Worksheet 4.0 in the permit application package. Domestic wastewater is treated by the following treatment units: primary clarifier, trickling filters, digesters, aeration basins, secondary clarifiers, chlorine contact basin, filtration basin, de-chlorination basin, and cascade aeration.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



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

PERMIT NO. WQ0010069003

APPLICATION. City of Big Spring, 310 Nolan Street, Big Spring, Texas 79720, has applied to the Texas Commission on Environmental Quality (TCEQ) to renew Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0010069003 (EPA I.D. No. TX0047023) to authorize the discharge of treated wastewater at a volume not to exceed an annual average flow of 3,800,000 gallons per day. The domestic wastewater treatment facility is located at 3607 11th Place EXT., in the city of Big Spring, in Howard County, Texas 79720. The discharge route is from the plant site to a ditch; thence to Beals Creek; thence to the Colorado River Below Lake J.B. Thomas. TCEQ received this application on August 5, 2024. The permit application will be available for viewing and copying at City Hall of Big Spring, 310 Nolan Street, Big Spring, in Howard 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/tpdes-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=-101.428,32.255&level=18>

ADDITIONAL NOTICE. TCEQ's Executive Director has determined the application is administratively complete and will conduct a technical review of the application. After technical review of the application is complete, the Executive Director may prepare a draft permit and will issue a preliminary decision on the application. **Notice of the Application and Preliminary Decision will be published and mailed to those who are on the 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.

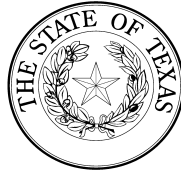
AGENCY CONTACTS AND INFORMATION. All public comments and requests must be submitted either electronically at <https://www14.tceq.texas.gov/epic/eComment/>, or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105,

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 the City of Big Spring at the address stated above or by calling Mr. Chad Tidwell, Water/Wastewater Treatment Manager, at 432-264-2389.

Issuance Date: August 22, 2024

Texas Commission on Environmental Quality



NOTICE OF APPLICATION AND PRELIMINARY DECISION FOR TPDES PERMIT FOR MUNICIPAL WASTEWATER

RENEWAL

PERMIT NO. WQ0010069003

APPLICATION AND PRELIMINARY DECISION. City of Big Spring, 310 Nolan Street, Big Spring, Texas 79720, has applied to the Texas Commission on Environmental Quality (TCEQ) for a renewal of Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0010069003, which authorizes the discharge of treated domestic wastewater at an annual average flow not to exceed 3,800,000 gallons per day. TCEQ received this application on August 5, 2024.

The facility is located at 3607 11th Place, in the City of Big Spring, Howard County, Texas 79720. The treated effluent is discharged to a ditch, thence to Beals Creek, thence to Colorado River Below Lake J. B. Thomas in Segment No. 1412 of the Colorado River Basin. The unclassified receiving water uses are minimal aquatic life use for the ditch and limited aquatic life use for Beals Creek. The designated uses for Segment No. 1412 are primary contact recreation and high aquatic life use. This link to an electronic map of the site or facility's general location is provided as a public courtesy and is not part of the application or notice. For the exact location, refer to the application.

The TCEQ Executive Director has completed the technical review of the application and prepared a draft permit. The draft permit, if approved, would establish the conditions under which the facility must operate. The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The permit application, Executive Director's preliminary decision, and draft permit are available for viewing and copying at City Hall of Big Spring, 310 Nolan Street, Big Spring, in Howard County, Texas. The application, including any updates, and associated notices are available electronically at the following webpage: <https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications>.

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

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

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

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

The Commission may only grant a request for a contested case hearing on issues the requestor submitted in their timely comments that were not subsequently withdrawn. **If a hearing is granted, the subject of a hearing will be limited to disputed issues of fact or mixed questions of fact and law relating to relevant and material water quality concerns submitted during the comment period. TCEQ may act on an application to renew a permit for discharge of wastewater without providing an opportunity for a contested case hearing if certain criteria are met.**

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

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

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

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

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

Further information may also be obtained from City of Big Spring at the address stated above or by calling Mr. Chad Tidwell, Water/Wastewater Treatment Manager, at 432-264-2389.

Issuance Date: September 30, 2025



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST

Complete and submit this checklist with the application.

APPLICANT NAME: City of Big Spring

PERMIT NUMBER (If new, leave blank): WQ00 10069003

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: 9866
Check/Money Order Amount: \$2,015.00
Name Printed on Check: City of Big Spring
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 <u>with</u> Renewal | ☐ Minor Amendment <u>with</u> Renewal |
| ☐ Major Amendment <u>without</u> Renewal | ☐ Minor Amendment <u>without</u> Renewal |
| ☒ Renewal without changes | ☐ Minor Modification of permit |

e. For amendments or modifications, describe the proposed changes: N/A

f. **For existing permits:**

Permit Number: WQ00 10069003

EPA I.D. (TPDES only): TX 0047023

Expiration Date: February 10, 2025

Section 3. Facility Owner (Applicant) and Co-Applcant 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 Big Spring

(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: 600668693

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: Bowles, Shane

Title: Public Works Director

Credential: P.E.

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?

N/A

(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: N/A

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: N/A

Last Name, First Name: N/A

Title: N/A

Credential: N/A

Provide a brief description of the need for a co-permittee: N/A

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. **AR-1**

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: Bowles, Shane

Title: Public Works Director

Credential: P.E.

Organization Name: City of Big Spring

Mailing Address: 310 Nolan Street

City, State, Zip Code: Big Spring, TX 79720

Phone No.: 432-264-2392

E-mail Address: sbowles@mybigspring.com

Check one or both: ☒ Administrative Contact ☒ Technical Contact

B. Prefix: Mrs.

Last Name, First Name: Villarreal, Cassandra

Title: Environmental Scientist

Credential: M.S.

Organization Name: Freese and Nichols, Inc

Mailing Address: 801 Cherry Street, Suite 2800

City, State, Zip Code: Fort Worth, TX 76102

Phone No.: 817-735-7294

E-mail Address: cassandra.villarreal@freese.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: Bowles, Shane

Title: Public Works Director

Credential: P.E.

Organization Name: City of Big Spring

Mailing Address: 310 Nolan Street

City, State, Zip Code: Big Spring, TX 79720

Phone No.: 432-264-2392

E-mail Address: sbowles@mybigspring.com

B. Prefix: Mr. Last Name, First Name: Tidwell, Chad
Title: Water/Wastewater Treatment Manager Credential: N/A
Organization Name: City of Big Spring
Mailing Address: 310 Nolan Street City, State, Zip Code: Big Spring, TX 79720
Phone No.: 432-264-2389 E-mail Address: ctidwell@mybigspring.com

Section 6. Billing Contact Information (Instructions Page 27)

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

Prefix: Mr. Last Name, First Name: Tidwell, Chad
Title: Water/Wastewater Treatment Manager Credential: N/A
Organization Name: City of Big Spring
Mailing Address: 310 Nolan Street City, State, Zip Code: Big Spring, TX 79720
Phone No.: 432-264-2389 E-mail Address: ctidwell@mybigspring.com

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: Tidwell, Chad
Title: Water/Wastewater Treatment Manager Credential: N/A
Organization Name: City of Big Spring
Mailing Address: 310 Nolan Street City, State, Zip Code: Big Spring, TX 79720
Phone No.: 432-264-2389 E-mail Address: ctidwell@mybigspring.com

Section 8. Public Notice Information (Instructions Page 27)

A. Individual Publishing the Notices

Prefix: Mr. Last Name, First Name: Bowles, Shane
Title: Public Works Director Credential: P.E.
Organization Name: City of Big Spring
Mailing Address: 310 Nolan Street City, State, Zip Code: Big Spring, TX 79720
Phone No.: 432-264-2392 E-mail Address: sbowles@mybigspring.com

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

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

☒ E-mail Address

☐ Fax

☒ Regular Mail

C. Contact permit to be listed in the Notices

Prefix: Mr. Last Name, First Name: Tidwell, Chad

Title: Water/Wastewater Treatment Manager Credential: N/A

Organization Name: City of Big Spring

Mailing Address: 310 Nolan Street City, State, Zip Code: Big Spring, TX 79720

Phone No.: 432-264-2389 E-mail Address: ctidwell@mybigspring.com

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: Foyer

Physical Address of Building: 310 Nolan Street

City: Big Spring County: Howard

Contact (Last Name, First Name): Chad Tidwell

Phone No.: 432-264-2389 Ext.: N/A

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: [AR-2](#)

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 [101721249](#)

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 Big Spring Water Reclamation Plant](#)

C. Owner of treatment facility: [City of Big Spring](#)

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

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

Prefix: [N/A](#) Last Name, First Name: [N/A](#)

Title: [N/A](#) Credential: [N/A](#)

Organization Name: [City of Big Spring](#)

Mailing Address: [310 Nolan Street](#) City, State, Zip Code: [Big Spring, TX 79720](#)

Phone No.: [432-264-2514](#) E-mail Address: ctidwell@mybigspring.com

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: N/A

Last Name, First Name: N/A

Title: N/A

Credential: N/A

Organization Name: N/A

Mailing Address: N/A

City, State, Zip Code: N/A

Phone No.: N/A

E-mail Address: N/A

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: N/A

Last Name, First Name: N/A

Title: N/A

Credential: N/A

Organization Name: N/A

Mailing Address: N/A

City, State, Zip Code: N/A

Phone No.: N/A

E-mail Address: N/A

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:

N/A

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:

N/A

City nearest the outfall(s): Big Spring

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

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: N/A

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:

N/A

- B. City nearest the disposal site: N/A

- C. County in which the disposal site is located: N/A

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

N/A

- E. For **TLAPs**, please identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: N/A

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.

N/A

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: N/A

D. Do you owe any fees to the TCEQ?

☐ Yes ☒ No

If yes, provide the following information:

Account number: N/A

Amount past due: N/A

E. Do you owe any penalties to the TCEQ?

☐ Yes ☒ No

If yes, please provide the following information:

Enforcement order number: N/A

Amount past due: N/A

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: AR-1 (Core Data Form), AR-2 (PLS), AR-3 (USGS Topo)

Section 14. Signature Page (Instructions Page 34)

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

Permit Number: WQ0010069003

Applicant: City of Big Spring

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): Shane Bowles

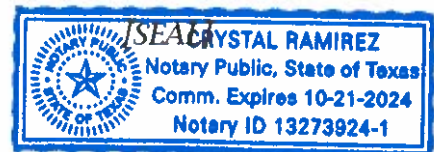
Signatory title: Public Works Director

Signature:  Date: 7/10/24
(Use blue ink)

Subscribed and Sworn to before me by the said Shane Bowles
on this 10th day of July, 2024.
My commission expires on the 21st day of October, 2024.


Notary Public

Howard
County, Texas



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: SPIF-1

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): 3.8

2-Hr Peak Flow (MGD): 11.4

Estimated construction start date: 1992

Estimated waste disposal start date: 1992

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: Existing/Interim - 1992

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 facility consists of a tertiary treatment system. Wastewater is screened and de-gritted then undergoes primary treatment via a primary clarifier and trickling filters. Secondary treatment consists of an aeration basin followed by two secondary clarifiers. Tertiary treatment consists of cloth media filters and chlorination, followed by de-chlorination and cascading aeration.

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)
Primary Clarifier	1	110' Dia. X 16'H
Trickling Filters	2	100' Dia. X (3-6)'H
Digesters	2	25' Dia. X 30'H
Aeration Basin	1	130' L x 52' W x 21' D
Secondary Clarifiers	2	100' Dia. X 14'H
Chlorine Contact Basin	1	72' L x 54' W x 9.583' D
Filtration Basin	1	71' L x 43' W x 6.5' D
De-chlorination Basin	1	40' L x 14' W x 10.5' D
Cascade Aeration	1	60' L x 25' W x 3.5' D

C. Process Flow Diagram

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

Attachment: [TR-1](#)

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

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

- Latitude: 32.256196
- Longitude: -101.427025

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

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

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: **TR-2**

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

Big Spring city limits

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
City of Big Spring Water Reclamation Plant	City of Big Spring	Publicly Owned	22,318

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.**

N/A

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.

N/A

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: 1992

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.**

N/A

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.

N/A

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*.

N/A

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.

N/A

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.

N/A

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.

N/A

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:

N/A

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.

N/A

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.

N/A

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.

N/A

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.
N/A

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

1. Acceptance of sludge from other WWTPs

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

☐ Yes ☒ No

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

In addition, provide the date the plant started or is anticipated to start accepting sludge, an estimate of monthly sludge acceptance (gallons or millions of gallons), an estimate of the BOD₅ concentration of the sludge, and the design BOD₅ concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

N/A

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 BOD₅ concentration of the septic waste, and the

design BOD₅ concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

The facility began accepting septic waste before 1990. A letter requesting acceptance of septic waste was sent on April 15, 2020, from Parkhill, Smith, and Cooper. The estimated monthly septic waste acceptance is between 60,000 and 186,000 gallons per month, and an estimated BOD₅ concentration is 150- 200 mg/L. Influent BOD₅ sampling during average flow conditions resulted in a concentration of 35 mg/L.

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.

N/A

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.

Table 1.0(2) – Pollutant Analysis for Wastewater Treatment Facilities

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
CBOD ₅ , mg/l	<2.14	<2.14	1	Composite	4/25/24 @ 8:42
Total Suspended Solids, mg/l	8.52	8.52	1	Composite	4/25/24 @ 8:42
Ammonia Nitrogen, mg/l	0.0920	0.0920	1	Composite	4/25/24 @ 8:42
Nitrate Nitrogen, mg/l	8.01	8.01	1	Composite	4/25/24 @ 8:42
Total Kjeldahl Nitrogen, mg/l	2.26	2.26	1	Composite	4/25/24 @ 8:42

Sulfate, mg/l	360	360	1	Composite	4/25/24 @ 8:42
Chloride, mg/l	586	586	1	Composite	4/25/24 @ 8:42
Total Phosphorus, mg/l	1.96	1.96	1	Composite	4/25/24 @ 8:42
pH, standard units	6.8	6.8	1	Composite	4/25/24 @ 8:42
Dissolved Oxygen*, mg/l	9.67	9.67	1	Composite	4/25/24 @ 8:42
Chlorine Residual, mg/l	<0.05	<0.05	1	Composite	4/25/24 @ 8:42
<i>E.coli</i> (CFU/100ml) freshwater	<1	<1	1	Grab	4/25/24 @ 8:42
Enterococci (CFU/100ml) saltwater	N/A	N/A	N/A	N/A	N/A
Total Dissolved Solids, mg/l	2070	2070	1	Composite	4/25/24 @ 8:42
Electrical Conductivity, μ mohs/cm, †	2990	2990	1	Composite	4/25/24 @ 8:42
Oil & Grease, mg/l	<1.57	<1.57	1	Grab	4/25/24 @ 8:42
Alkalinity (CaCO ₃)*, mg/l	106	106	1	Grab	4/25/24 @ 8:42

*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: Terrence Chad Tidwell

Facility Operator's License Classification and Level: Class B

Facility Operator's License Number: WW0051245

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

A. WWTP's Biosolids Management Facility Type

Check all that apply. See instructions for guidance

- ☒ Design flow $\geq$ 1 MGD
- ☒ Serves $\geq$ 10,000 people

- ☐ Class I Sludge Management Facility (per 40 CFR § 503.9)
- ☐ Biosolids generator
- ☐ Biosolids end user – land application (onsite)
- ☐ Biosolids end user – surface disposal (onsite)
- ☐ Biosolids end user – incinerator (onsite)

B. WWTP's Biosolids Treatment Process

Check all that apply. See instructions for guidance.

- ☐ Aerobic Digestion
- ☒ Air Drying (or sludge drying beds)
- ☐ Lower Temperature Composting
- ☐ Lime Stabilization
- ☐ Higher Temperature Composting
- ☐ Heat Drying
- ☐ Thermophilic Aerobic Digestion
- ☐ Beta Ray Irradiation
- ☐ Gamma Ray Irradiation
- ☐ Pasteurization
- ☐ Preliminary Operation (e.g. grinding, de-gritting, blending)
- ☐ Thickening (e.g. gravity thickening, centrifugation, filter press, vacuum filter)
- ☐ Sludge Lagoon
- ☐ Temporary Storage (< 2 years)
- ☐ Long Term Storage (>= 2 years)
- ☐ Methane or Biogas Recovery
- ☐ Other Treatment Process: [Click to enter text.](#)

C. Biosolids Management

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

Biosolids Management

Management Practice	Handler or Preparer Type	Bulk or Bag Container	Amount (dry metric tons)	Pathogen Reduction Options	Vector Attraction Reduction Option
Disposal in Landfill	On-Site Owner or Operator	Not Applicable	104	Class B: PSRP Air Drying	Option 11: Biosolids covered at end of each day

If "Other" is selected for Management Practice, please explain (e.g. monofill or transport to another WWTP): N/A

D. Disposal site

Disposal site name: Big Spring Municipal Solid Waste Landfill

TCEQ permit or registration number: 288-A

County where disposal site is located: Howard

E. Transportation method

Method of transportation (truck, train, pipe, other): Truck

Name of the hauler: City of Big Spring

Hauler registration number: 22238

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: N/A
- USDA Natural Resources Conservation Service Soil Map:
Attachment: N/A
- Federal Emergency Management Map:
Attachment: N/A
- Site map:
Attachment: N/A

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: N/A

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:

N/A

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: N/A

Total Kjeldahl Nitrogen, mg/kg: N/A

Total Nitrogen (=nitrate nitrogen + TKN), mg/kg: N/A

Phosphorus, mg/kg: N/A

Potassium, mg/kg: N/A

pH, standard units: N/A

Ammonia Nitrogen mg/kg: N/A

Arsenic: N/A

Cadmium: N/A

Chromium: N/A

Copper: N/A

Lead: N/A

Mercury: N/A

Molybdenum: N/A

Nickel: N/A

Selenium: N/A

Zinc: N/A

Total PCBs: N/A

Provide the following information:

Volume and frequency of sludge to the lagoon(s): N/A

Total dry tons stored in the lagoons(s) per 365-day period: N/A

Total dry tons stored in the lagoons(s) over the life of the unit: N/A

C. Liner information

Does the active/proposed sludge lagoon(s) have a liner with a maximum hydraulic conductivity of 1×10^{-7} cm/sec?

☐ Yes ☐ No

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

N/A

D. Site development plan

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

N/A

Attach the following documents to the application.

- Plan view and cross-section of the sludge lagoon(s)
Attachment: N/A
- Copy of the closure plan
Attachment: N/A
- Copy of deed recordation for the site
Attachment: N/A
- Size of the sludge lagoon(s) in surface acres and capacity in cubic feet and gallons
Attachment: N/A
- Description of the method of controlling infiltration of groundwater and surface water from entering the site
Attachment: N/A
- Procedures to prevent the occurrence of nuisance conditions
Attachment: N/A

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: N/A

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:

Authorization No. R10069-003 Type II reclaimed water from the facility is to be used for industrial process water (treated effluent to be used as source water).

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:

N/A

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: Shane Bowles

Title: Public Works Director

Signature: 

Date: 7/10/24

DOMESTIC WASTEWATER PERMIT APPLICATION

WORKSHEET 2.0: RECEIVING WATERS

The following information is required for all TPDES permit applications.

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

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

☐ Yes ☒ No

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

Owner of the drinking water supply: N/A

Distance and direction to the intake: N/A

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

Attachment: N/A

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

Does the facility discharge into tidally affected waters?

☐ Yes ☒ No

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

A. Receiving water outfall

Width of the receiving water at the outfall, in feet: N/A

B. Oyster waters

Are there oyster waters in the vicinity of the discharge?

☐ Yes ☐ No

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

N/A

C. Sea grasses

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

☐ Yes ☐ No

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

N/A

Section 3. Classified Segments (Instructions Page 64)

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

☐ Yes ☒ No

If **yes**, this Worksheet is complete.

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

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

Name of the immediate receiving waters: Beals Creek

A. Receiving water type

Identify the appropriate description of the receiving waters.

- ☒ Stream
- ☐ Freshwater Swamp or Marsh
- ☐ Lake or Pond

Surface area, in acres: Click to enter text.

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

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

- ☐ Man-made Channel or Ditch
- ☐ Open Bay
- ☐ Tidal Stream, Bayou, or Marsh
- ☐ Other, specify: Click to enter text.

B. Flow characteristics

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

- ☐ Intermittent - dry for at least one week during most years
- ☒ Intermittent with Perennial Pools - enduring pools with sufficient habitat to maintain significant aquatic life uses
- ☐ Perennial - normally flowing

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

- ☐ USGS flow records
- ☐ Historical observation by adjacent landowners
- ☒ Personal observation
- ☐ Other, specify: Click to enter text.

C. Downstream perennial confluences

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

None within 3 miles

D. Downstream characteristics

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

☐ Yes ☒ No

If yes, discuss how.

N/A

E. Normal dry weather characteristics

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

The effluent flows via a cascade and under a facility road to the creek, which is lined with trees and shrubs. During the observation, the immediate area near the outfall consists of a pool mesohabitat.

Date and time of observation: 6/14/24 @ 2:25 PM

Was the water body influenced by stormwater runoff during observations?

☐ Yes ☒ No

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

A. Upstream influences

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

- | | |
|---|---|
| ☐ Oil field activities | ☒ Urban runoff |
| ☐ Upstream discharges | ☒ Agricultural runoff |
| ☐ Septic tanks | ☐ Other(s), specify: <u>Click to enter text.</u> |

B. Waterbody uses

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

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

C. Waterbody aesthetics

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

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

DOMESTIC WASTEWATER PERMIT APPLICATION

WORKSHEET 4.0: POLLUTANT ANALYSIS REQUIREMENTS

The following **is required** for facilities with a permitted or proposed flow of **1.0 MGD or greater**, facilities with an approved **pretreatment** program, or facilities classified as a **major** facility. See instructions for further details.

This worksheet is not required minor amendments without renewal.

Section 1. Toxic Pollutants (Instructions Page 78)

For pollutants identified in Table 4.0(1), indicate the type of sample.

Grab ☒

Composite ☒

Date and time sample(s) collected: 4-25-24 @ 8:42 / 6-19-24 @ 8:45

Table 4.0(1) – Toxics Analysis

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acrylonitrile	<50.0	<50.0	1	50
Aldrin	<0.01	<0.01	1	0.01
Aluminum	22.0	22.0	1	2.5
Anthracene	<10.0	<10.0	1	10
Antimony	<5.0	<5.0	1	5
Arsenic	3.81	3.81	1	0.5
Barium	120.0	120.0	1	3
Benzene	<10.0	<10.0	1	10
Benzidine	<50.0	<50.0	1	50
Benzo(a)anthracene	<5.0	<5.0	1	5
Benzo(a)pyrene	<5.0	<5.0	1	5
Bis(2-chloroethyl)ether	<10.0	<10.0	1	10
Bis(2-ethylhexyl)phthalate	<10.0	<10.0	1	10
Bromodichloromethane	23.9	23.9	1	10
Bromoform	136.0	136.0	1	10
Cadmium	<1.0	<1.0	1	1
Carbon Tetrachloride	<2.0	<2.0	1	2
Carbaryl	<5.0	<5.0	1	5
Chlordane*	<0.2	<0.2	1	0.2
Chlorobenzene	<10.0	<10.0	1	10
Chlorodibromomethane	105	105	1	10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Chloroform	<10.0	<10.0	1	10
Chlorpyrifos	3.137	6.27	2	0.05
Chromium (Total)	<3.0	<3.0	1	3
Chromium (Tri) (*1)	<3.45	<3.45	1	N/A
Chromium (Hex)	<3.0	<3.0	1	3
Copper	3.48	3.48	1	2
Chrysene	<5.0	<5.0	1	5
p-Chloro-m-Cresol	<10.0	<10.0	1	10
4,6-Dinitro-o-Cresol	<50.0	<50.0	1	50
p-Cresol	<10.0	<10.0	1	10
Cyanide (*2)	<10.0	<10.0	1	10
4,4'- DDD	<0.1	<0.1	1	0.1
4,4'- DDE	<0.1	<0.1	1	0.1
4,4'- DDT	<0.02	<0.02	1	0.02
2,4-D	<0.7	<0.7	1	0.7
Demeton (O and S)	0.151	0.201	2	0.20
Diazinon	0.106	0.141	2	0.5/0.1
1,2-Dibromoethane	<10.0	<10.0	1	10
m-Dichlorobenzene	<10.0	<10.0	1	10
o-Dichlorobenzene	<10.0	<10.0	1	10
p-Dichlorobenzene	<10.0	<10.0	1	10
3,3'-Dichlorobenzidine	<5.0	<5.0	1	5
1,2-Dichloroethane	<10.0	<10.0	1	10
1,1-Dichloroethylene	<10.0	<10.0	1	10
Dichloromethane	<20.0	<20.0	1	20
1,2-Dichloropropane	<10.0	<10.0	1	10
1,3-Dichloropropene	<10.0	<10.0	1	10
Dicofol	<1.0	<1.0	1	1
Dieldrin	<0.02	<0.02	1	0.02
2,4-Dimethylphenol	<10.0	<10.0	1	10
Di-n-Butyl Phthalate	<10.0	<10.0	1	10
Diuron	0.334	0.334	1	0.09
Endosulfan I (alpha)	<0.01	<0.01	1	0.01

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Endosulfan II (beta)	<0.02	<0.02	1	0.02
Endosulfan Sulfate	<0.1	<0.1	1	0.1
Endrin	<0.02	<0.02	1	0.02
Ethylbenzene	<10.0	<10.0	1	10
Fluoride	<500	<500	1	500
Guthion	0.256	0.34	2	0.1
Heptachlor	<0.01	<0.01	1	0.01
Heptachlor Epoxide	<0.01	<0.01	1	0.01
Hexachlorobenzene	<5.0	<5.0	1	5
Hexachlorobutadiene	<10.0	<10.0	1	10
Hexachlorocyclohexane (alpha)	<0.05	<0.05	1	0.05
Hexachlorocyclohexane (beta)	<0.05	<0.05	1	0.05
gamma-Hexachlorocyclohexane (Lindane)	<0.05	<0.05	1	0.05
Hexachlorocyclopentadiene	<10.0	<10.0	1	10
Hexachloroethane	<20.0	<20.0	1	20
Hexachlorophene	10.0	10.0	1	10
Lead	<0.5	<0.5	1	0.5
Malathion	0.096	0.128	2	0.1
Mercury	<0.005	<0.005	1	0.005
Methoxychlor	<2.0	<2.0	1	2
Methyl Ethyl Ketone	<50.0	<50.0	1	50
Mirex	<0.02	<0.02	1	0.02
Nickel	3.74	3.74	1	2
Nitrate-Nitrogen	8010	8010	1	100
Nitrobenzene	<10.0	<10.0	1	10
N-Nitrosodiethylamine	<20.0	<20.0	1	20
N-Nitroso-di-n-Butylamine	<20.0	<20.0	1	20
Nonylphenol	<333	<333	1	333
Parathion (ethyl)	0.105	0.139	2	0.1
Pentachlorobenzene	<20.0	<20.0	1	20
Pentachlorophenol	<5.0	<5.0	1	5
Phenanthrene	<10.0	<10.0	1	10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Polychlorinated Biphenyls (PCB's) (*3)	<0.2	<0.2	1	0.2
Pyridine	<20.0	<20.0	1	20
Selenium	5.18	7.16	2	5
Silver	<0.5	<0.5	1	0.5
1,2,4,5-Tetrachlorobenzene	<20.0	<20.0	1	20
1,1,2,2-Tetrachloroethane	<10.0	<10.0	1	10
Tetrachloroethylene	<10.0	<10.0	1	10
Thallium	<0.5	<0.5	1	0.5
Toluene	<10.0	<10.0	1	10
Toxaphene	<0.3	<0.3	1	0.3
2,4,5-TP (Silvex)	<0.3	<0.3	1	0.3
Tributyltin (see instructions for explanation)	<0.01	<0.01	1	0.01
1,1,1-Trichloroethane	<10.0	<10.0	1	10
1,1,2-Trichloroethane	<10.0	<10.0	1	10
Trichloroethylene	<10.0	<10.0	1	10
2,4,5-Trichlorophenol	<50.0	<50.0	1	50
TTHM (Total Trihalomethanes)	261	261	1	10
Vinyl Chloride	<10.0	<10.0	1	10
Zinc	19.9	19.9	1	5

(*1) Determined by subtracting hexavalent Cr from total Cr.

(*2) Cyanide, amenable to chlorination or weak-acid dissociable.

(*3) The sum of seven PCB congeners 1242, 1254, 1221, 1232, 1248, 1260, and 1016.

Section 2. Priority Pollutants

For pollutants identified in Tables 4.0(2)A-E, indicate type of sample.

Grab ☒

Composite ☒

Date and time sample(s) collected: 4-25-24 @ 8:42 / 6-19-24 @ 8:45

Table 4.0(2)A – Metals, Cyanide, and Phenols

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Antimony	<5.0	<5.0	1	5
Arsenic	3.81	3.81	1	0.5
Beryllium	<0.5	<0.5	1	0.5
Cadmium	<1.0	<1.0	1	1
Chromium (Total)	<3.0	<3.0	1	3
Chromium (Hex)	<3.0	<3.0	1	3
Chromium (Tri) (*1)	<0.00345	<0.00345	1	N/A
Copper	3.48	3.48	1	2
Lead	<0.5	<0.5	1	0.5
Mercury	<0.005	<0.005	1	0.005
Nickel	3.74	3.74	1	2
Selenium	5.18	7.16	2	5
Silver	<0.5	<0.5	1	0.5
Thallium	<0.5	<0.5	1	0.5
Zinc	19.9	19.9	1	5
Cyanide (*2)	<10.0	<10.0	1	10
Phenols, Total	<10.0	<10.0	1	10

(*1) Determined by subtracting hexavalent Cr from total Cr.

(*2) Cyanide, amenable to chlorination or weak-acid dissociable

Table 4.0(2)B – Volatile Compounds

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acrolein	<50.0	<50.0	1	50
Acrylonitrile	<50.0	<50.0	1	50
Benzene	<10.0	<10.0	1	10
Bromoform	136	136	1	10
Carbon Tetrachloride	<2.0	<2.0	1	2
Chlorobenzene	<10	<10	1	10
Chlorodibromomethane	105	105	1	10
Chloroethane	<50.0	<50.0	1	50
2-Chloroethylvinyl Ether	<10.0	<10.0	1	10
Chloroform	<10.0	<10.0	1	10
Dichlorobromomethane [Bromodichloromethane]	23.9	23.9	1	10
1,1-Dichloroethane	<10.0	<10.0	1	10
1,2-Dichloroethane	<10.0	<10.0	1	10
1,1-Dichloroethylene	<10.0	<10.0	1	10
1,2-Dichloropropane	<10.0	<10.0	1	10
1,3-Dichloropropylene [1,3-Dichloropropene]	<10.0	<10.0	1	10
1,2-Trans-Dichloroethylene	<10.0	<10.0	1	10
Ethylbenzene	<10.0	<10.0	1	10
Methyl Bromide	<50.0	<50.0	1	50
Methyl Chloride	<50.0	<50.0	1	50
Methylene Chloride	<20.0	<20.0	1	20
1,1,2,2-Tetrachloroethane	<10.0	<10.0	1	10
Tetrachloroethylene	<10.0	<10.0	1	10
Toluene	<10.0	<10.0	1	10
1,1,1-Trichloroethane	<10.0	<10.0	1	10
1,1,2-Trichloroethane	<10.0	<10.0	1	10
Trichloroethylene	<10.0	<10.0	1	10
Vinyl Chloride	<10.0	<10.0	1	10

Table 4.0(2)C – Acid Compounds

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
2-Chlorophenol	<10.0	<10.0	1	10
2,4-Dichlorophenol	<10.0	<10.0	1	10
2,4-Dimethylphenol	<10.0	<10.0	1	10
4,6-Dinitro-o-Cresol	<50.0	<50.0	1	50
2,4-Dinitrophenol	<50.0	<50.0	1	50
2-Nitrophenol	<20.0	<20.0	1	20
4-Nitrophenol	<50.0	<50.0	1	50
P-Chloro-m-Cresol	<10.0	<10.0	1	10
Pentalchlorophenol	<5.0	<5.0	1	5
Phenol	<10.0	<10.0	1	10
2,4,6-Trichlorophenol	<10.0	<10.0	1	10

Table 4.0(2)D – Base/Neutral Compounds

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acenaphthene	<10.0	<10.0	1	10
Acenaphthylene	<10.0	<10.0	1	10
Anthracene	<10.0	<10.0	1	10
Benzidine	<50.0	<50.0	1	50
Benzo(a)Anthracene	<5.0	<5.0	1	5
Benzo(a)Pyrene	<5.0	<5.0	1	5
3,4-Benzofluoranthene	<10.0	<10.0	1	10
Benzo(ghi)Perylene	<20.0	<20.0	1	20
Benzo(k)Fluoranthene	<5.0	<5.0	1	5
Bis(2-Chloroethoxy)Methane	<10.0	<10.0	1	10
Bis(2-Chloroethyl)Ether	<10.0	<10.0	1	10
Bis(2-Chloroisopropyl)Ether	<10.0	<10.0	1	10
Bis(2-Ethylhexyl)Phthalate	<10.0	<10.0	1	10
4-Bromophenyl Phenyl Ether	<10.0	<10.0	1	10
Butyl benzyl Phthalate	<10.0	<10.0	1	10
2-Chloronaphthalene	<10.0	<10.0	1	10
4-Chlorophenyl phenyl ether	<10.0	<10.0	1	10
Chrysene	<5.0	<5.0	1	5
Dibenzo(a,h)Anthracene	<5.0	<5.0	1	5
1,2-(o)Dichlorobenzene	<10.0	<10.0	1	10
1,3-(m)Dichlorobenzene	<10.0	<10.0	1	10
1,4-(p)Dichlorobenzene	<10.0	<10.0	1	10
3,3-Dichlorobenzidine	<5.0	<5.0	1	5
Diethyl Phthalate	<10.0	<10.0	1	10
Dimethyl Phthalate	<10.0	<10.0	1	10
Di-n-Butyl Phthalate	<10.0	<10.0	1	10
2,4-Dinitrotoluene	<10.0	<10.0	1	10
2,6-Dinitrotoluene	<10.0	<10.0	1	10
Di-n-Octyl Phthalate	<10.0	<10.0	1	10
1,2-Diphenylhydrazine (as Azo-benzene)	<20.0	<20.0	1	20
Fluoranthene	<10.0	<10.0	1	10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Fluorene	<10.0	<10.0	1	10
Hexachlorobenzene	<5.0	<5.0	1	5
Hexachlorobutadiene	<10.0	<10.0	1	10
Hexachlorocyclo-pentadiene	<10.0	<10.0	1	10
Hexachloroethane	<20.0	<20.0	1	20
Indeno(1,2,3-cd)pyrene	<5.0	<5.0	1	5
Isophorone	<10.0	<10.0	1	10
Naphthalene	<10.0	<10.0	1	10
Nitrobenzene	<10.0	<10.0	1	10
N-Nitrosodimethylamine	<50.0	<50.0	1	50
N-Nitrosodi-n-Propylamine	<20.0	<20.0	1	20
N-Nitrosodiphenylamine	<20.0	<20.0	1	20
Phenanthrene	<10.0	<10.0	1	10
Pyrene	<10.0	<10.0	1	10
1,2,4-Trichlorobenzene	<10.0	<10.0	1	10

Table 4.0(2)E - Pesticides

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Aldrin	<0.01	<0.01	1	0.01
alpha-BHC (Hexachlorocyclohexane)	<0.05	<0.05	1	0.05
beta-BHC (Hexachlorocyclohexane)	<0.05	<0.05	1	0.05
gamma-BHC (Hexachlorocyclohexane)	<0.05	<0.05	1	0.05
delta-BHC (Hexachlorocyclohexane)	<0.05	<0.05	1	0.05
Chlordane	<0.2	<0.2	1	0.2
4,4-DDT	<0.02	<0.02	1	0.02
4,4-DDE	<0.1	<0.1	1	0.1
4,4,-DDD	<0.1	<0.1	1	0.1
Dieldrin	<0.02	<0.02	1	0.02
Endosulfan I (alpha)	<0.01	<0.01	1	0.01
Endosulfan II (beta)	<0.02	<0.02	1	0.02
Endosulfan Sulfate	<0.1	<0.1	1	0.1
Endrin	<0.02	<0.02	1	0.02
Endrin Aldehyde	<0.1	<0.1	1	0.1
Heptachlor	<0.01	<0.01	1	0.01
Heptachlor Epoxide	<0.01	<0.01	1	0.01
PCB-1242	<0.2	<0.2	1	0.2
PCB-1254	<0.2	<0.2	1	0.2
PCB-1221	<0.2	<0.2	1	0.2
PCB-1232	<0.2	<0.2	1	0.2
PCB-1248	<0.2	<0.2	1	0.2
PCB-1260	<0.2	<0.2	1	0.2
PCB-1016	<0.2	<0.2	1	0.2
Toxaphene	<0.3	<0.3	1	0.3

* For PCBs, if all are non-detects, enter the highest non-detect preceded by a "<".

Section 3. Dioxin/Furan Compounds

A. Indicate which of the following compounds from may be present in the influent from a contributing industrial user or significant industrial user. Check all that apply.

- ☐ 2,4,5-trichlorophenoxy acetic acid
Common Name 2,4,5-T, CASRN 93-76-5
- ☐ 2-(2,4,5-trichlorophenoxy) propanoic acid
Common Name Silvex or 2,4,5-TP, CASRN 93-72-1
- ☐ 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate
Common Name Erbon, CASRN 136-25-4
- ☐ 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate
Common Name Ronnel, CASRN 299-84-3
- ☐ 2,4,5-trichlorophenol
Common Name TCP, CASRN 95-95-4
- ☐ hexachlorophene
Common Name HCP, CASRN 70-30-4

For each compound identified, provide a brief description of the conditions of its/their presence at the facility.

N/A

B. Do you know or have any reason to believe that 2,3,7,8 Tetrachlorodibenzo-P-Dioxin (TCDD) or any congeners of TCDD may be present in your effluent?

☐ Yes ☒ No

If **yes**, provide a brief description of the conditions for its presence.

N/A

C. If any of the compounds in Subsection A **or** B are present, complete Table 4.0(2)F.

For pollutants identified in Table 4.0(2)F, indicate the type of sample.

Grab ☐ Composite ☐

Date and time sample(s) collected: N/A

Table 4.0(2)F – Dioxin/Furan Compounds

Compound	Toxic Equivalenc y Factors	Wastewater Concentration (ppq)	Wastewater Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Equivalents (ppt)	MAL (ppq)
2,3,7,8 TCDD	1					10
1,2,3,7,8 PeCDD	0.5					50
2,3,7,8 HxCDDs	0.1					50
1,2,3,4,6,7,8 HpCDD	0.01					50
2,3,7,8 TCDF	0.1					10
1,2,3,7,8 PeCDF	0.05					50
2,3,4,7,8 PeCDF	0.5					50
2,3,7,8 HxCDFs	0.1					50
2,3,4,7,8 HpCDFs	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					0.5
PCB 81	0.0003					0.5
PCB 126	0.1					0.5
PCB 169	0.03					0.5
Total						

DOMESTIC WASTEWATER PERMIT APPLICATION

WORKSHEET 5.0: TOXICITY TESTING REQUIREMENTS

The following **is required** for facilities with a current operating design flow of **1.0 MGD or greater**, with an EPA-approved **pretreatment** program (or those required to have one under 40 CFR Part 403), or are required to perform Whole Effluent Toxicity testing. See instructions for further details.

This worksheet is not required minor amendments without renewal.

Section 1. Required Tests (Instructions Page 88)

Indicate the number of 7-day chronic or 48-hour acute Whole Effluent Toxicity (WET) tests performed in the four and one-half years prior to submission of the application.

7-day Chronic: 18

48-hour Acute: 8

Section 2. Toxicity Reduction Evaluations (TREs)

Has this facility completed a TRE in the past four and a half years? Or is the facility currently performing a TRE?

☐ Yes ☒ No

If **yes**, describe the progress to date, if applicable, in identifying and confirming the toxicant.

N/A

Section 3. Summary of WET Tests

If the required biomonitoring test information has not been previously submitted via both the Discharge Monitoring Reports (DMRs) and the Table 1 (as found in the permit), provide a summary of the testing results for all valid and invalid tests performed over the past four and one-half years. Make additional copies of this table as needed.

Table 5.0(1) Summary of WET Tests

Test Date	Test Species	NOEC Survival	NOEC Sub-lethal
	Submitted via DMRs		

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.

N/A

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.

N/A

D. Pretreatment program

Does your POTW have an approved pretreatment program?

☐ Yes ☒ No

If **yes**, complete Section 2 only of this Worksheet.

Is your POTW required to develop an approved pretreatment program?

☐ Yes ☒ No

If **yes**, complete Section 2.c. and 2.d. only, and skip Section 3.

If **no to either question above**, skip Section 2 and complete Section 3 for each significant industrial user and categorical industrial user.

E. Service Area Map

Attach a map indicating the service area of the POTW. The map should include the applicant's service area boundaries and the location of any known industrial users discharging to the POTW. Please see the instructions for guidance.

Attachment: **TR-2**

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

A. Substantial modifications

Have there been any **substantial modifications** to the approved pretreatment program that have not been submitted to the TCEQ for approval according to *40 CFR §403.18*?

☐ Yes ☐ No

If **yes**, identify the modifications that have not been submitted to TCEQ, including the purpose of the modification.

N/A

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.

N/A

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
N/A				

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.

N/A

Section 3. Significant Industrial User (SIU) Information and Categorical Industrial User (CIU) (Instructions Page 90)

A. General information

Company Name: N/A

SIC Code: N/A

Contact name: N/A

Address: N/A

City, State, and Zip Code: N/A

Telephone number: N/A

Email address: N/A

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).

N/A

C. Product and service information

Provide a description of the principal product(s) or services performed.

N/A

D. Flow rate information

See the Instructions for definitions of “process” and “non-process wastewater.”

Process Wastewater:

Discharge, in gallons/day: N/A

Discharge Type: ☐ Continuous ☐ Batch ☐ Intermittent

Non-Process Wastewater:

Discharge, in gallons/day: N/A

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: N/A

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.

N/A

ATTACHMENT AR-1

Core Data Form



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 600668693		RN 101721249

SECTION II: Customer Information

4. General Customer Information		5. Effective Date for Customer Information Updates (mm/dd/yyyy)		7/8/2024	
☐ New Customer ☒ Update to Customer Information ☐ Change in Regulated Entity Ownership					
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)					
<i>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).</i>					
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)				<i>If new Customer, enter previous Customer below:</i>	
City of Big Spring					
7. TX SOS/CPA Filing Number		8. TX State Tax ID (11 digits)		9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)
11. Type of Customer:		☐ Corporation		☐ Individual	Partnership: ☐ General ☐ Limited
Government: ☒ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other		☐ Sole Proprietorship		☐ Other:	
12. Number of Employees				13. Independently Owned and Operated?	
☐ 0-20 ☐ 21-100 ☐ 101-250 ☒ 251-500 ☐ 501 and higher				☒ Yes ☐ No	
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following					
☐ Owner ☐ Operator ☒ Owner & Operator ☐ Other:					
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant					
15. Mailing Address:	310 Nolan Street				
	City	Big Spring	State	TX	ZIP 79720 ZIP + 4
16. Country Mailing Information (if outside USA)				17. E-Mail Address (if applicable)	
N/A					
18. Telephone Number			19. Extension or Code		20. Fax Number (if applicable)

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							
<i>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).</i>							
22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)							
City of Big Spring Water Reclamation Plant							
23. Street Address of the Regulated Entity: (No PO Boxes)	3607 11 th Place Ext						
	City	Big Spring	State	TX	ZIP	79720	ZIP + 4
24. County	Howard						

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

25. Description to Physical Location:	N/A						
26. Nearest City					State	Nearest ZIP Code	
Big Spring					TX	79720	
<i>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).</i>							
27. Latitude (N) In Decimal:		32.255528			28. Longitude (W) In Decimal:		-101.428306
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		
32	15	19.9	101	24	41.9		
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)		
4952	4941		221320		221310		
33. What is the Primary Business of this entity? (Do not repeat the SIC or NAICS description.)							
Domestic wastewater treatment							
34. Mailing Address:	310 Nolan Street						
	City	Big Spring	State	TX	ZIP	79720	ZIP + 4
35. E-Mail Address:	sbowles@mybigspring.com						
36. Telephone Number	37. Extension or Code		38. Fax Number (if applicable)				
(432) 264-2392			() -				

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.

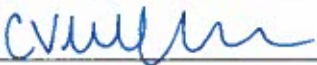
☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☒ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:
	WQ0010069003			

SECTION IV: Preparer Information

40. Name:	Cassandra Villarreal	41. Title:	Environmental Scientist
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(817) 735-7294		() -	cassandra.villarreal@freese.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:	Freese and Nichols, Inc	Job Title:	Environmental Scientist
Name (In Print):	Cassandra Villarreal	Phone:	(817) 735- 7294
Signature:		Date:	7/17/2024

ATTACHMENT AR-2

Plain Language Summary



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

PLAIN LANGUAGE SUMMARY FOR TPDES OR TLAP PERMIT APPLICATIONS

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

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

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

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

ENGLISH TEMPLATE FOR TPDES or TLAP NEW/RENEWAL/AMENDMENT APPLICATIONS DOMESTIC WASTEWATER/STORMWATER

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

The City of Big Spring (CN600668693) operates the City of Big Spring Water Reclamation Plant (RN101721249), a tertiary treatment system. The facility is located at 3607 11th Pl Ext, in Big Spring, Howard County, Texas 79720.

This application is for a renewal to discharge treated domestic wastewater at an annual average flow of 3.8 million gallons per day.

Discharges from the facility are expected to contain five-day carbonaceous biochemical oxygen demand (CBOD₅), total suspended solids (TSS), ammonia nitrogen (NH₃-N), and *Escherichia coli*. Additional potential pollutants are included in the Domestic Technical Report 1.0, Section 7. Pollutant Analysis of Treated Effluent and Domestic Worksheet 4.0 in the permit application package. Domestic wastewater is treated by the following treatment units: primary clarifier, trickling filters, digesters, aeration basins, secondary clarifiers, chlorine contact basin, filtration basin, de-chlorination basin, and cascade aeration.

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

AGUAS RESIDUALES Introduzca 'INDUSTRIALES' o 'DOMÉSTICAS' aquí /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.

N/A – Spanish PLS not required.

INSTRUCTIONS

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

17. Enter a description of the wastewater treatment used at your facility. Include a description of each process, starting with initial treatment and finishing with the outfall/point of disposal. Use additional lines for individual discharge types if necessary.

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

ATTACHMENT AR-3

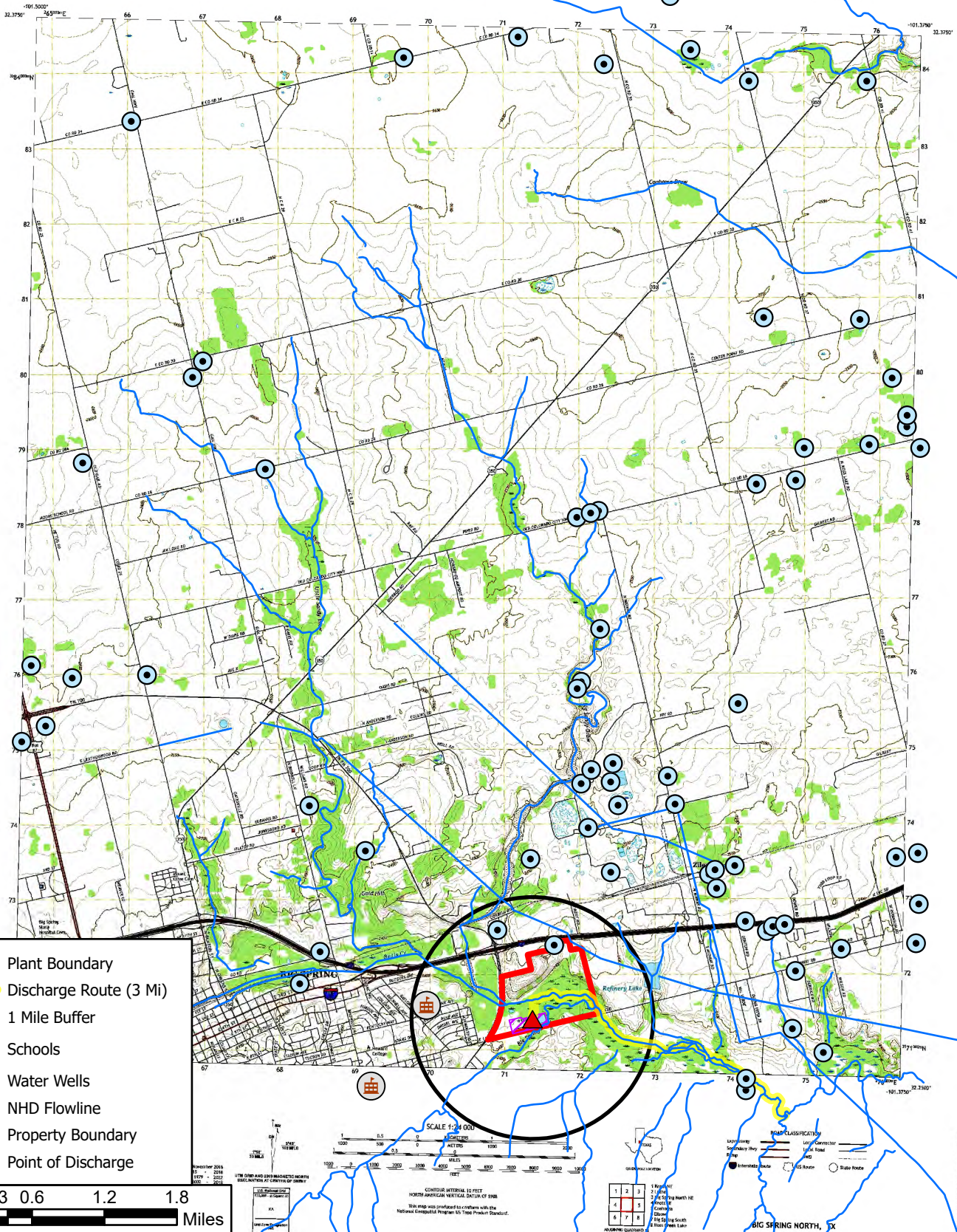
USGS Topographic Map



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



BIG SPRING NORTH QUADRANGLE
TEXAS - HOWARD COUNTY
7.5-MINUTE SERIES



- Plant Boundary
- Discharge Route (3 Mi)
- 1 Mile Buffer
- Schools
- Water Wells
- NHD Flowline
- Property Boundary
- Point of Discharge

0 0.3 0.6 1.2 1.8
Miles

SCALE 1:24,000
CONTOUR INTERVAL 10 FEET
NORTH ARROW
This map was prepared to conform with the
National Map Accuracy Program 60 Topographic Standard.

1	2	3
4	5	6
7	8	9

ROAD CLASSIFICATION
Major Road
Minor Road
Intersecting Road
US Route
State Route
County Road
Local Road
Other Road

FRESE AND NICHOLS
FRESE AND NICHOLS, INC.
801 Cherry Street, Suite 2800
Fort Worth, TX 76102
Phone - (817) 735 - 7300



CITY OF BIG SPRING
TPDES Permit Renewal
USGS Topographic Map
Quad Name: Big Spring North

FN JOB NO	BSP24064
FILE NAME	Big Spring TPDES Renewal_Updated.aprx
DATE	7/8/2024
DESIGNED	CLV
DRAFTED	CLV

1b
FIGURE

ATTACHMENT SPIF-1

SPIF Form

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

FOR AGENCIES REVIEWING DOMESTIC OR INDUSTRIAL TPDES WASTEWATER PERMIT APPLICATIONS

TCEQ USE ONLY:

Application type: ____Renewal ____Major Amendment ____Minor Amendment ____New

County: _____ Segment Number: _____

Admin Complete Date: _____

Agency Receiving SPIF:

____ Texas Historical Commission

____ U.S. Fish and Wildlife

____ Texas Parks and Wildlife Department

____ U.S. Army Corps of Engineers

This form applies to TPDES permit applications only. (Instructions, Page 53)

Complete this form as a separate document. TCEQ will mail a copy to each agency as required by our agreement with EPA. If any of the items are not completely addressed or further information is needed, we will contact you to provide the information before issuing the permit. Address each item completely.

Do not refer to your response to any item in the permit application form. Provide each attachment for this form separately from the Administrative Report of the application. The application will not be declared administratively complete without this SPIF form being completed in its entirety including all attachments. Questions or comments concerning this form may be directed to the Water Quality Division's Application Review and Processing Team by email at WQ-ARPTeam@tceq.texas.gov or by phone at (512) 239-4671.

The following applies to all applications:

1. Permittee: City of Big Spring

Permit No. WQ00 10069003EPA ID No. TX 0047023

Address of the project (or a location description that includes street/highway, city/vicinity, and county):

3607 11th Pl Ext, Big Spring, Howard County, TX 79720

Provide the name, address, phone and fax number of an individual that can be contacted to answer specific questions about the property.

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

First and Last Name: Chad Tidwell

Credential (P.E, P.G., Ph.D., etc.): N/A

Title: Water/Wastewater Treatment Manager

Mailing Address: 310 Nolan Street

City, State, Zip Code: Big Spring, TX 79720

Phone No.: 432-264-2389 Ext.: N/A Fax No.: 432-264-2581

E-mail Address: ctidwell@mybigspring.com

2. List the county in which the facility is located: Howard
3. If the property is publicly owned and the owner is different than the permittee/applicant, please list the owner of the property.

N/A

4. Provide a description of the effluent discharge route. The discharge route must follow the flow of effluent from the point of discharge to the nearest major watercourse (from the point of discharge to a classified segment as defined in 30 TAC Chapter 307). If known, please identify the classified segment number.

N/A

5. Please provide a separate 7.5-minute USGS quadrangle map with the project boundaries plotted and a general location map showing the project area. Please highlight the discharge route from the point of discharge for a distance of one mile downstream. (This map is required in addition to the map in the administrative report).

Provide original photographs of any structures 50 years or older on the property.

Does your project involve any of the following? Check all that apply.

- ☐ Proposed access roads, utility lines, construction easements
- ☐ Visual effects that could damage or detract from a historic property's integrity
- ☐ Vibration effects during construction or as a result of project design
- ☐ Additional phases of development that are planned for the future
- ☐ Sealing caves, fractures, sinkholes, other karst features

☐ Disturbance of vegetation or wetlands

1. List proposed construction impact (surface acres to be impacted, depth of excavation, sealing of caves, or other karst features):

N/A

2. Describe existing disturbances, vegetation, and land use:

Existing land use consists of wastewater treatment units, access roads, and vegetation on the northern and western side of the facility.

THE FOLLOWING ITEMS APPLY ONLY TO APPLICATIONS FOR NEW TPDES PERMITS AND MAJOR AMENDMENTS TO TPDES PERMITS

3. List construction dates of all buildings and structures on the property:

N/A

4. Provide a brief history of the property, and name of the architect/builder, if known.

N/A

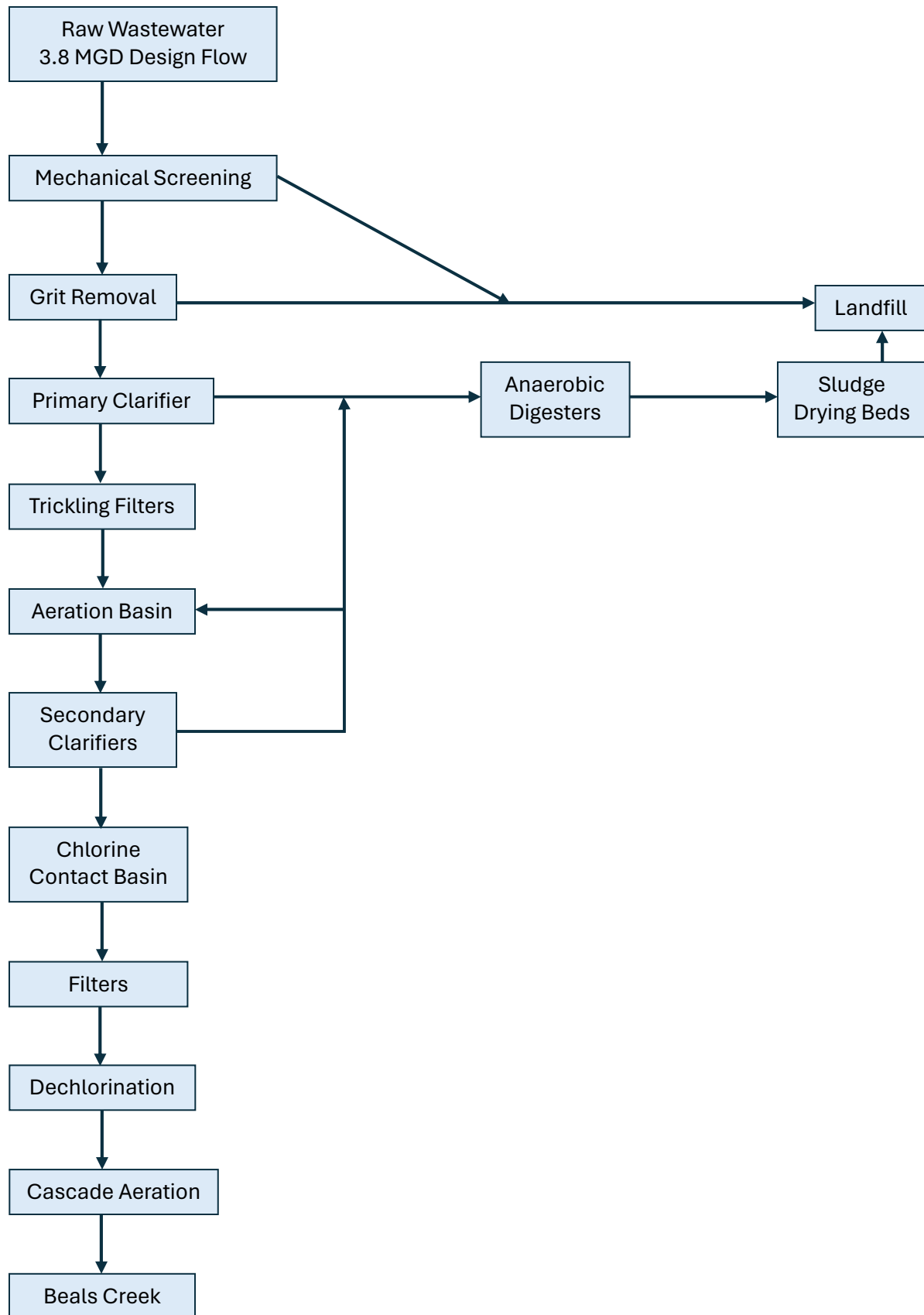
ATTACHMENT SPIF-2

SPIF USGS Map

ATTACHMENT TR-1

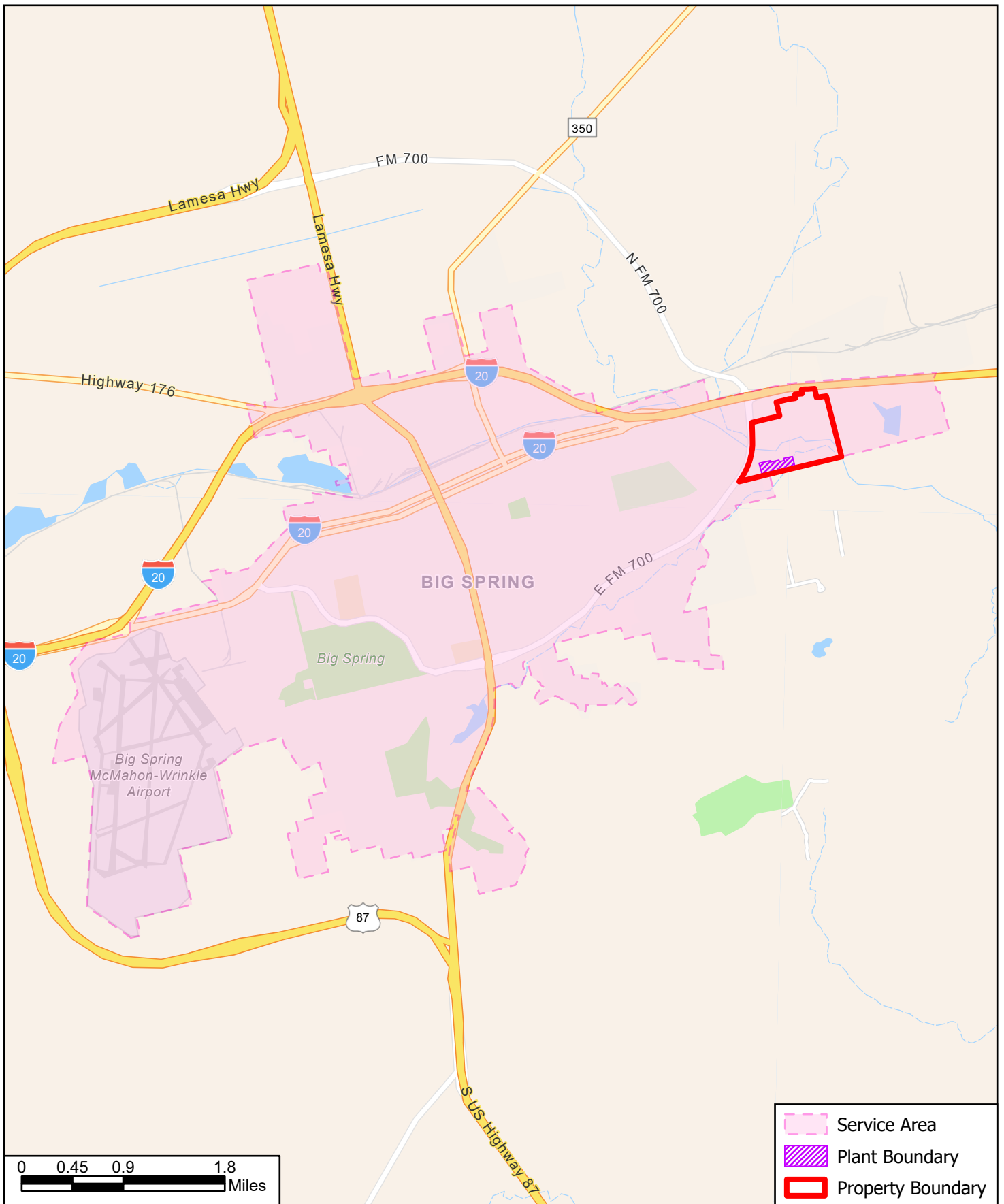
Process Flow Diagrams

City of Big Spring Water Reclamation Plant



ATTACHMENT TR-2

Site Drawing



0 0.45 0.9 1.8
Miles

FRESE AND NICHOLS
FRESE AND NICHOLS, INC.
801 Cherry Street, Suite 2800
Fort Worth, TX 76102
Phone - (817) 735 - 7300



CITY OF BIG SPRING
TPDES Permit Renewal
Site Drawing

FN JOB NO	BSP24064
FILE NAME	Big Spring TPDES Renewal_Updated.aprx
DATE	7/8/2024
DESIGNED	CLV
DRAFTED	CLV

3
FIGURE

ATTACHMENT TR-3

Lab Reports

ANALYTICAL REPORT

PREPARED FOR

Attn: Cassandra Villarreal
Freese and Nichols Inc
801 Cherry St
Ste 2800
Fort Worth, Texas 76102

Generated 5/31/2024 4:33:23 PM

JOB DESCRIPTION

Big Spring TPDES Permit Renewal

JOB NUMBER

880-42711-1

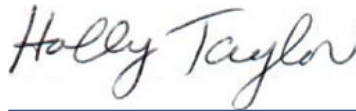
Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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5/31/2024 4:33:23 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

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Definitions/Glossary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Biology

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)

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Definitions/Glossary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Freese and Nichols Inc
Project: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Job ID: 880-42711-1

Eurofins Midland

Job Narrative 880-42711-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 4/25/2024 10:39 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C.

Subcontract Work

Method Enterococci: This method was subcontracted to EMLab P&K. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

GC/MS VOA

Method 624.1: The following sample was analyzed outside of analytical holding time TX 10069-005 (880-42711-1).

Method 624.1: The laboratory control sample (LCS) for analytical batch 860-157986 recovered outside control limits for the following analytes: Hexachlorobutadiene. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 624.1: The following sample was diluted to bring the concentration of target analytes within the calibration range: TX 10069-005 (880-42711-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA

Method 625.1: During the extraction process, heavy emulsion occurred. Sample was filtered through sodium sulfate to remove emulsion.

Method 625.1: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 860-157695 and analytical batch 860-158078 recovered outside control limits for the following analyte(s): Benzidine. Benzidine has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method 625.1: The laboratory control sample (LCS) for preparation batch 860-157695 and analytical batch 860-158078 recovered outside control limits for the following analytes: Di-n-butyl phthalate and 2,4,5-Trichlorophenol. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 625.1: The surrogate recovery for the laboratory control sample and laboratory control sample duplicate with preparation batch 860-157695 and analytical batch 860-158078 was outside the upper control limits.

Method Organotins_SIM: The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch. Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-435885.Organotins-W

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

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Case Narrative

Client: Freese and Nichols Inc
Project: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Job ID: 880-42711-1 (Continued)

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Method 615_MOD: The 2,4-Dichlorophenylacetic acid surrogate recovery for the following samples was outside acceptance limits (high biased) on the primary column: TX 10069-005 (880-42711-1). The recovery is within acceptance limits on the other column, indicating that the extraction process was in control.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

PCBs

Method 608.3_PCB: The surrogate recovery for the blank associated with preparation batch 860-157425 and analytical batch 860-157570 was outside the upper control limits.
(MB 860-157425/1-A)

Method 608.3_PCB: The surrogate recovery for the laboratory control sample duplicate (LCSD) associated with preparation batch 860-157425 and analytical batch 860-157570 was outside the upper control limits.
(LCSD 860-157425/5-A)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Pesticides

Method 608.3_Pest: The DCB (Decachlorobiphenyl) surrogate recovery for the following samples was outside acceptance limits (high biased) on the primary column: (LCS 860-157425/2-A). The recovery is within acceptance limits on the other column, indicating that the extraction process was in control.

Method 614: The following sample TX 10069-005 (880-42711-1) in preparation batch 280-651449 was of color orange. Method 8141

Method 614: The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch. Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 280-651449. method 614/8141

Method 614: Internal Standard (ISTD) retention times for Tributyl phosphate in the following samples in preparation batch 280-651449 and analytical batch 280-651796 were outside the acceptance criteria of +/-0.03 minutes from the CCVIS: (LCS 280-651449/2-A) and (LCSD 280-651449/3-A). The internal standard is not associated with any requested analytes; therefore the data is reported.

Method 614: Internal Standard (ISTD) retention times for Tributyl phosphate in the following sample in analytical batch 280-651796 were outside the acceptance criteria of +/-0.03 minutes from the mid-point of the initial calibration: (CCVIS 280-651796/4). The internal standard is not associated with any requested analytes; therefore the data is reported.

Method 614: The continuing calibration verification (CCV) associated with analytical batch 280-651796 recovered above the upper control limit for Chlormefos (Surr), Demeton, Total and Malathion. The CCV does not bracket client samples; therefore, the data have been reported. The associated sample is impacted: (CCVIS 280-651796/4).

Method 614: The continuing calibration verification (CCV) associated with batch preparation batch 280-651449 and analytical batch 280-651796 recovered above the upper control limit for Chlormefos (Surr), Demeton, Total and Malathion. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: TX 10069-005 (880-42711-1) and (CCV 280-651796/38).

Method 614: The continuing calibration verification (CCV) associated with batch preparation batch 280-651449 and analytical batch 280-651796 recovered above the upper control limit for Chlormefos (Surr), Demeton, Total and Diazinon. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: TX 10069-005 (880-42711-1) and (CCV 280-651796/22).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

Method 300_ORGFM_28D: The instrument blank/CCB for analytical batch 860-157125 contained Chloride greater than the method detection limit (MDL), and were not reanalyzed because associated sample(s) results were greater than 10X the value found in the instrument blank/CCB. The data have been reported.

Method 300_ORGFM_28D: The following sample was diluted to bring the concentration of target analytes within the calibration

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Case Narrative

Client: Freese and Nichols Inc
Project: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Job ID: 880-42711-1 (Continued)

Eurofins Midland

range: TX 10069-005 (880-42711-1). Elevated reporting limits (RLs) are provided.

Method 300_ORGFM_28D: The instrument blank for analytical batch 860-157125 contained Chloride and Sulfate greater than the method detection limit (MDL), and were not reanalyzed because associated sample(s) results were greater than 10X the value found in the instrument blank/CCB. The data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

Method 200.8 - Total Recoverable: The method blank for preparation batch 860-157820 and analytical batch 860-157905 contained Arsenic, Chromium, Magnesium, Selenium and Molybdenum above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

Method 2320B: The instrument blank for analytical batch 860-159563 contained Alkalinity greater than the reporting limit (RL), and were not reanalyzed because of sample holding time. The data have been qualified and reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Biology

Method 9223B_CIQT18_8H: The following sample was received at the analyzing lab outside of holding time, because it was shipped overnight from the receiving lab: TX 10069-005 (880-42711-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Client Sample ID: TX 10069-005

Lab Sample ID: 880-42711-1

Date Collected: 04/25/24 08:42

Matrix: Water

Date Received: 04/25/24 10:39

Method: EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	<0.0111	U H	0.0500	0.0111	mg/L			05/02/24 03:39	1
Acrylonitrile	<0.0143	U H	0.0500	0.0143	mg/L			05/02/24 03:39	1
Benzene	<0.000460	U H	0.00100	0.000460	mg/L			05/02/24 03:39	1
Bromodichloromethane	0.0239	H	0.00100	0.000552	mg/L			05/02/24 03:39	1
Bromomethane	<0.00142	U H	0.00500	0.00142	mg/L			05/02/24 03:39	1
Carbon tetrachloride	<0.000896	U H	0.00500	0.000896	mg/L			05/02/24 03:39	1
Chlorobenzene	<0.000455	U H	0.00100	0.000455	mg/L			05/02/24 03:39	1
Chlorodibromomethane	0.105	H	0.00500	0.000547	mg/L			05/02/24 03:39	1
Chloroethane	<0.00198	U H	0.0100	0.00198	mg/L			05/02/24 03:39	1
2-Chloroethyl vinyl ether	<0.000753	U H	0.00500	0.000753	mg/L			05/02/24 03:39	1
Chloroform	0.00628	H	0.00100	0.000464	mg/L			05/02/24 03:39	1
Chloromethane	<0.00204	U H	0.0100	0.00204	mg/L			05/02/24 03:39	1
cis-1,3-Dichloropropene	<0.00107	U H	0.00500	0.00107	mg/L			05/02/24 03:39	1
1,2-Dibromoethane	<0.000999	U H	0.00500	0.000999	mg/L			05/02/24 03:39	1
1,2-Dichlorobenzene	<0.000429	U H	0.00100	0.000429	mg/L			05/02/24 03:39	1
1,3-Dichlorobenzene	<0.000413	U H	0.00100	0.000413	mg/L			05/02/24 03:39	1
1,4-Dichlorobenzene	<0.000449	U H	0.00100	0.000449	mg/L			05/02/24 03:39	1
1,1-Dichloroethane	<0.000635	U H	0.00100	0.000635	mg/L			05/02/24 03:39	1
1,2-Dichloroethane	<0.000372	U H	0.00100	0.000372	mg/L			05/02/24 03:39	1
1,1-Dichloroethene	<0.000738	U H	0.00100	0.000738	mg/L			05/02/24 03:39	1
1,2-Dichloropropane	<0.000556	U H	0.00500	0.000556	mg/L			05/02/24 03:39	1
1,3-Dichloropropylene	<0.00127	U H	0.00500	0.00127	mg/L			05/02/24 03:39	1
Ethylbenzene	<0.000385	U H	0.00100	0.000385	mg/L			05/02/24 03:39	1
Hexachlorobutadiene	<0.000627	U H *	0.00500	0.000627	mg/L			05/02/24 03:39	1
Methylene Chloride	<0.00173	U H	0.00500	0.00173	mg/L			05/02/24 03:39	1
Methyl ethyl ketone (MEK)	<0.00828	U H	0.0500	0.00828	mg/L			05/02/24 03:39	1
Naphthalene	<0.00135	U H	0.0100	0.00135	mg/L			05/02/24 03:39	1
1,1,2,2-Tetrachloroethane	<0.000470	U H	0.00100	0.000470	mg/L			05/02/24 03:39	1
Tetrachloroethene	<0.000655	U H	0.00100	0.000655	mg/L			05/02/24 03:39	1
Toluene	0.00177	H	0.00100	0.000475	mg/L			05/02/24 03:39	1
trans-1,2-Dichloroethene	<0.000368	U H	0.00100	0.000368	mg/L			05/02/24 03:39	1
1,2,4-Trichlorobenzene	<0.00175	U H	0.00500	0.00175	mg/L			05/02/24 03:39	1
1,1,1-Trichloroethane	<0.000585	U H	0.00500	0.000585	mg/L			05/02/24 03:39	1
1,1,2-Trichloroethane	<0.000411	U H	0.00100	0.000411	mg/L			05/02/24 03:39	1
Trichloroethene	<0.00150	U H	0.00500	0.00150	mg/L			05/02/24 03:39	1
Vinyl chloride	<0.000428	U H	0.00200	0.000428	mg/L			05/02/24 03:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		74 - 124		05/02/24 03:39	1
Dibromofluoromethane (Surr)	115		75 - 131		05/02/24 03:39	1
1,2-Dichloroethane-d4 (Surr)	113		63 - 144		05/02/24 03:39	1
Toluene-d8 (Surr)	101		80 - 120		05/02/24 03:39	1

Method: EPA 624.1 - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	0.136	H	0.0250	0.00317	mg/L			05/02/24 12:39	5
Trihalomethanes, Total	0.261	H	0.0250	0.00317	mg/L			05/02/24 12:39	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		74 - 124		05/02/24 12:39	5

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Client Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Client Sample ID: TX 10069-005

Lab Sample ID: 880-42711-1

Date Collected: 04/25/24 08:42

Matrix: Water

Date Received: 04/25/24 10:39

Method: EPA 624.1 - Volatile Organic Compounds (GC/MS) - DL (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	116		75 - 131		05/02/24 12:39	5
1,2-Dichloroethane-d4 (Surr)	115		63 - 144		05/02/24 12:39	5
Toluene-d8 (Surr)	104		80 - 120		05/02/24 12:39	5

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00139	U	0.00570	0.00139	mg/L		04/30/24 16:14	05/02/24 18:18	1
Acenaphthylene	<0.00141	U	0.0100	0.00141	mg/L		04/30/24 16:14	05/02/24 18:18	1
Anthracene	<0.00150	U	0.00570	0.00150	mg/L		04/30/24 16:14	05/02/24 18:18	1
Benzidine	<0.00480	U *	0.0200	0.00480	mg/L		04/30/24 16:14	05/02/24 18:18	1
Benzo[a]anthracene	<0.000173	U	0.00500	0.000173	mg/L		04/30/24 16:14	05/02/24 18:18	1
Benzo[a]pyrene	<0.000364	U	0.00500	0.000364	mg/L		04/30/24 16:14	05/02/24 18:18	1
Benzo[b]fluoranthene	<0.00204	U	0.0100	0.00204	mg/L		04/30/24 16:14	05/02/24 18:18	1
Benzo[g,h,i]perylene	<0.00268	U	0.0100	0.00268	mg/L		04/30/24 16:14	05/02/24 18:18	1
Benzo[k]fluoranthene	<0.000375	U	0.00500	0.000375	mg/L		04/30/24 16:14	05/02/24 18:18	1
Bis(2-chloroethoxy)methane	<0.00176	U	0.0100	0.00176	mg/L		04/30/24 16:14	05/02/24 18:18	1
Bis(2-chloroethyl)ether	<0.00216	U	0.0100	0.00216	mg/L		04/30/24 16:14	05/02/24 18:18	1
bis (2-chloroisopropyl) ether	<0.00179	U	0.0100	0.00179	mg/L		04/30/24 16:14	05/02/24 18:18	1
Bis(2-ethylhexyl) phthalate	<0.000277	U	0.00500	0.000277	mg/L		04/30/24 16:14	05/02/24 18:18	1
4-Bromophenyl phenyl ether	<0.000256	U	0.00500	0.000256	mg/L		04/30/24 16:14	05/02/24 18:18	1
Butyl benzyl phthalate	<0.000337	U	0.00500	0.000337	mg/L		04/30/24 16:14	05/02/24 18:18	1
2-Chloronaphthalene	<0.000462	U	0.00500	0.000462	mg/L		04/30/24 16:14	05/02/24 18:18	1
2-Chlorophenol	<0.000649	U	0.00500	0.000649	mg/L		04/30/24 16:14	05/02/24 18:18	1
4-Chlorophenyl phenyl ether	<0.00128	U	0.0100	0.00128	mg/L		04/30/24 16:14	05/02/24 18:18	1
Chrysene	<0.000222	U	0.00500	0.000222	mg/L		04/30/24 16:14	05/02/24 18:18	1
Dibenz(a,h)anthracene	<0.000246	U	0.00500	0.000246	mg/L		04/30/24 16:14	05/02/24 18:18	1
3,3'-Dichlorobenzidine	<0.000341	U	0.00500	0.000341	mg/L		04/30/24 16:14	05/02/24 18:18	1
2,4-Dichlorophenol	<0.000314	U	0.00500	0.000314	mg/L		04/30/24 16:14	05/02/24 18:18	1
Diethyl phthalate	<0.00159	U	0.00500	0.00159	mg/L		04/30/24 16:14	05/02/24 18:18	1
2,4-Dimethylphenol	<0.000649	U	0.00500	0.000649	mg/L		04/30/24 16:14	05/02/24 18:18	1
Dimethyl phthalate	<0.000299	U	0.00250	0.000299	mg/L		04/30/24 16:14	05/02/24 18:18	1
Di-n-butyl phthalate	<0.000252	U *	0.00500	0.000252	mg/L		04/30/24 16:14	05/02/24 18:18	1
4,6-Dinitro-o-cresol	<0.00144	U	0.0100	0.00144	mg/L		04/30/24 16:14	05/02/24 18:18	1
2,4-Dinitrophenol	<0.00161	U	0.0100	0.00161	mg/L		04/30/24 16:14	05/02/24 18:18	1
2,4-Dinitrotoluene	<0.00131	U	0.0100	0.00131	mg/L		04/30/24 16:14	05/02/24 18:18	1
2,6-Dinitrotoluene	<0.00161	U	0.00500	0.00161	mg/L		04/30/24 16:14	05/02/24 18:18	1
Di-n-octyl phthalate	<0.000373	U	0.00500	0.000373	mg/L		04/30/24 16:14	05/02/24 18:18	1
1,2-Diphenylhydrazine	<0.00149	U	0.0100	0.00149	mg/L		04/30/24 16:14	05/02/24 18:18	1
Fluoranthene	<0.00159	U	0.00500	0.00159	mg/L		04/30/24 16:14	05/02/24 18:18	1
Fluorene	<0.00163	U	0.00500	0.00163	mg/L		04/30/24 16:14	05/02/24 18:18	1
Hexachlorobenzene	<0.000307	U	0.00500	0.000307	mg/L		04/30/24 16:14	05/02/24 18:18	1
Hexachlorobutadiene	<0.000238	U	0.00100	0.000238	mg/L		04/30/24 16:14	05/02/24 18:18	1
Hexachlorocyclopentadiene	<0.00458	U	0.0100	0.00458	mg/L		04/30/24 16:14	05/02/24 18:18	1
Hexachloroethane	<0.000526	U	0.00480	0.000526	mg/L		04/30/24 16:14	05/02/24 18:18	1
Indeno[1,2,3-cd]pyrene	<0.00229	U	0.0100	0.00229	mg/L		04/30/24 16:14	05/02/24 18:18	1
Isophorone	<0.00164	U	0.00500	0.00164	mg/L		04/30/24 16:14	05/02/24 18:18	1
m & p - Cresol	<0.00262	U	0.0100	0.00262	mg/L		04/30/24 16:14	05/02/24 18:18	1
Naphthalene	<0.000542	U	0.00250	0.000542	mg/L		04/30/24 16:14	05/02/24 18:18	1
Nitrobenzene	<0.00166	U	0.00500	0.00166	mg/L		04/30/24 16:14	05/02/24 18:18	1

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Client Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Client Sample ID: TX 10069-005

Lab Sample ID: 880-42711-1

Date Collected: 04/25/24 08:42

Matrix: Water

Date Received: 04/25/24 10:39

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrophenol	<0.00167	U	0.0100	0.00167	mg/L		04/30/24 16:14	05/02/24 18:18	1
4-Nitrophenol	<0.00491	U	0.00720	0.00491	mg/L		04/30/24 16:14	05/02/24 18:18	1
N-Nitrosodiethylamine	<0.00175	U	0.0100	0.00175	mg/L		04/30/24 16:14	05/02/24 18:18	1
N-Nitrosodimethylamine	<0.00202	U	0.0100	0.00202	mg/L		04/30/24 16:14	05/02/24 18:18	1
N-Nitrosodi-n-butylamine	<0.00149	U	0.0100	0.00149	mg/L		04/30/24 16:14	05/02/24 18:18	1
N-Nitrosodi-n-propylamine	<0.00288	U	0.0100	0.00288	mg/L		04/30/24 16:14	05/02/24 18:18	1
N-Nitrosodiphenylamine	<0.00181	U	0.0100	0.00181	mg/L		04/30/24 16:14	05/02/24 18:18	1
Nonylphenol	<0.0100	U	0.0100	0.0100	mg/L		04/30/24 16:14	05/02/24 18:18	1
o-Cresol	<0.00162	U	0.0100	0.00162	mg/L		04/30/24 16:14	05/02/24 18:18	1
p-Chloro-m-cresol	<0.00157	U	0.00500	0.00157	mg/L		04/30/24 16:14	05/02/24 18:18	1
Pentachlorobenzene	<0.00107	U	0.0100	0.00107	mg/L		04/30/24 16:14	05/02/24 18:18	1
Pentachlorophenol	<0.000234	U	0.0100	0.000234	mg/L		04/30/24 16:14	05/02/24 18:18	1
Phenanthrene	<0.00142	U	0.0100	0.00142	mg/L		04/30/24 16:14	05/02/24 18:18	1
Phenol	<0.000423	U	0.00450	0.000423	mg/L		04/30/24 16:14	05/02/24 18:18	1
Pyrene	<0.000178	U	0.00500	0.000178	mg/L		04/30/24 16:14	05/02/24 18:18	1
Pyridine	<0.00264	U	0.0100	0.00264	mg/L		04/30/24 16:14	05/02/24 18:18	1
1,2,4,5-Tetrachlorobenzene	<0.00132	U	0.0100	0.00132	mg/L		04/30/24 16:14	05/02/24 18:18	1
Total Cresols	<0.00262	U	0.0100	0.00262	mg/L		04/30/24 16:14	05/02/24 18:18	1
1,2,4-Trichlorobenzene	<0.00161	U	0.00500	0.00161	mg/L		04/30/24 16:14	05/02/24 18:18	1
2,4,5-Trichlorophenol	<0.00200	U **	0.0100	0.00200	mg/L		04/30/24 16:14	05/02/24 18:18	1
2,4,6-Trichlorophenol	<0.00142	U	0.00500	0.00142	mg/L		04/30/24 16:14	05/02/24 18:18	1
Hexachlorophene	<0.0100	U	0.100	0.0100	mg/L		04/30/24 16:14	05/02/24 18:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	83		29 - 112	04/30/24 16:14	05/02/24 18:18	1
2-Fluorophenol (Surr)	34		28 - 114	04/30/24 16:14	05/02/24 18:18	1
Nitrobenzene-d5 (Surr)	80		15 - 314	04/30/24 16:14	05/02/24 18:18	1
Phenol-d5 (Surr)	22		8 - 424	04/30/24 16:14	05/02/24 18:18	1
p-Terphenyl-d14 (Surr)	89		20 - 141	04/30/24 16:14	05/02/24 18:18	1
2,4,6-Tribromophenol (Surr)	118		31 - 132	04/30/24 16:14	05/02/24 18:18	1

Method: Lab SOP Organotins SIM - Organotins (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tributyltin	<1.09	U	2.86	1.09	ng/L		04/30/24 16:40	05/07/24 17:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	61		10 - 120				04/30/24 16:40	05/07/24 17:41	1

Method: EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.00000081	U	0.0000100	0.0000008	mg/L		04/29/24 15:17	05/01/24 13:26	1
4,4'-DDE	<0.00000109	U	0.0000100	0.0000010	mg/L		04/29/24 15:17	05/01/24 13:26	1
4,4'-DDT	<0.00000379	U	0.0000200	0.0000037	mg/L		04/29/24 15:17	05/01/24 13:26	1
Chlorpyrifos	<0.00627	U	0.0196	0.00627	ug/L		04/26/24 09:48	04/30/24 23:07	1
Aldrin	<0.00000113	U	0.0000100	0.00000113	mg/L		04/29/24 15:17	05/01/24 13:26	1
alpha-BHC	<0.00000142	U	0.0000090	0.0000014	mg/L		04/29/24 15:17	05/01/24 13:26	1
alpha-Chlordane	<0.00000181	U	0.0000100	0.0000018	mg/L		04/29/24 15:17	05/01/24 13:26	1

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Client Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Client Sample ID: TX 10069-005

Lab Sample ID: 880-42711-1

Date Collected: 04/25/24 08:42

Matrix: Water

Date Received: 04/25/24 10:39

Method: EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
beta-BHC	<0.00000389	U	0.0000180	0.00000389	mg/L		04/29/24 15:17	05/01/24 13:26	1
Chlordane	<0.000103	U	0.000250	0.000103	mg/L		04/29/24 15:17	05/01/24 13:26	1
delta-BHC	<0.00000245	U	0.000250	0.00000245	mg/L		04/29/24 15:17	05/01/24 13:26	1
Dicofol	<0.0000500	U	0.000100	0.0000500	mg/L		04/29/24 15:17	05/01/24 13:26	1
Dieldrin	<0.00000095	U	0.0000100	0.00000095	mg/L		04/29/24 15:17	05/01/24 13:26	1
Endosulfan I	<0.00000107	U	0.0000100	0.00000107	mg/L		04/29/24 15:17	05/01/24 13:26	1
Endosulfan II	<0.00000122	U	0.0000100	0.00000122	mg/L		04/29/24 15:17	05/01/24 13:26	1
Endosulfan sulfate	<0.00000112	U	0.0000100	0.00000112	mg/L		04/29/24 15:17	05/01/24 13:26	1
Endrin	<0.00000156	U	0.0000100	0.00000156	mg/L		04/29/24 15:17	05/01/24 13:26	1
Endrin aldehyde	<0.00000118	U	0.0000100	0.00000118	mg/L		04/29/24 15:17	05/01/24 13:26	1
Endrin ketone	<0.00000200	U	0.0000100	0.00000200	mg/L		04/29/24 15:17	05/01/24 13:26	1
gamma-BHC (Lindane)	<0.00000299	U	0.0000100	0.00000299	mg/L		04/29/24 15:17	05/01/24 13:26	1
gamma-Chlordane	<0.00000289	U	0.0000100	0.00000289	mg/L		04/29/24 15:17	05/01/24 13:26	1
Heptachlor	<0.00000446	U	0.0000090	0.00000446	mg/L		04/29/24 15:17	05/01/24 13:26	1
Heptachlor epoxide	<0.00000134	U	0.0000100	0.00000134	mg/L		04/29/24 15:17	05/01/24 13:26	1
Methoxychlor	<0.00000390	U	0.0000200	0.00000390	mg/L		04/29/24 15:17	05/01/24 13:26	1
Mirex	<0.0000200	U	0.0000200	0.0000200	mg/L		04/29/24 15:17	05/01/24 13:26	1
Toxaphene	<0.0000769	U	0.000200	0.0000769	mg/L		04/29/24 15:17	05/01/24 13:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	34		22 - 117				04/26/24 09:48	04/30/24 23:07	1
DCB Decachlorobiphenyl (Surr)	49		1 - 119				04/26/24 09:48	04/30/24 23:07	1
DCB Decachlorobiphenyl (Surr)	117		15 - 136				04/29/24 15:17	05/01/24 13:26	1
Tetrachloro-m-xylene (Surr)	66	p	18 - 126				04/29/24 15:17	05/01/24 13:26	1

Method: EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.0000125	U	0.000100	0.0000125	mg/L		04/29/24 15:17	04/30/24 17:23	1
PCB-1221	<0.0000125	U	0.000100	0.0000125	mg/L		04/29/24 15:17	04/30/24 17:23	1
PCB-1232	<0.0000125	U	0.000100	0.0000125	mg/L		04/29/24 15:17	04/30/24 17:23	1
PCB-1242	<0.0000125	U	0.000100	0.0000125	mg/L		04/29/24 15:17	04/30/24 17:23	1
PCB-1248	<0.0000125	U	0.000100	0.0000125	mg/L		04/29/24 15:17	04/30/24 17:23	1
PCB-1254	<0.00000780	U	0.000100	0.00000780	mg/L		04/29/24 15:17	04/30/24 17:23	1
PCB-1260	<0.00000780	U	0.000100	0.00000780	mg/L		04/29/24 15:17	04/30/24 17:23	1
Polychlorinated biphenyls, Total	<0.000100	U	0.000100	0.000100	mg/L		04/29/24 15:17	04/30/24 17:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	50	p	18 - 126				04/29/24 15:17	04/30/24 17:23	1
DCB Decachlorobiphenyl (Surr)	90		15 - 136				04/29/24 15:17	04/30/24 17:23	1

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Client Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Client Sample ID: TX 10069-005

Lab Sample ID: 880-42711-1

Date Collected: 04/25/24 08:42

Matrix: Water

Date Received: 04/25/24 10:39

Method: EPA-01 614 - Organophosphorous Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Guthion	<0.340	U	2.41	0.340	ug/L		04/30/24 10:41	05/03/24 07:00	1
Diazinon	<0.141	U	0.481	0.141	ug/L		04/30/24 10:41	05/03/24 07:00	1
Disulfoton	<0.310	U	0.962	0.310	ug/L		04/30/24 10:41	05/03/24 07:00	1
Malathion	<0.128	U	1.92	0.128	ug/L		04/30/24 10:41	05/03/24 07:00	1
Methyl parathion	<0.136	U	3.85	0.136	ug/L		04/30/24 10:41	05/03/24 07:00	1
Ethyl Parathion	<0.139	U	0.962	0.139	ug/L		04/30/24 10:41	05/03/24 07:00	1
Demeton, Total	<0.201	U	2.89	0.201	ug/L		04/30/24 10:41	05/03/24 07:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Chlormephos (Surr)	83		49 - 171	04/30/24 10:41	05/03/24 07:00	1
Triphenylphosphate (Surr)	90		60 - 154	04/30/24 10:41	05/03/24 07:00	1

Method: EPA-01 615 - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	<0.0000522	U	0.000194	0.0000522	mg/L		04/29/24 07:00	04/29/24 22:14	1
Silvex (2,4,5-TP)	<0.0000409	U	0.000194	0.0000409	mg/L		04/29/24 07:00	04/29/24 22:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	145		45 - 150	04/29/24 07:00	04/29/24 22:14	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	8.01		0.100	0.0391	mg/L			04/26/24 23:07	1
Fluoride	<0.100	U	0.500	0.100	mg/L			04/26/24 23:07	1

Method: EPA 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	586		5.00	2.50	mg/L			04/26/24 23:17	10
Sulfate	360		5.00	2.00	mg/L			04/26/24 23:17	10

Method: EPA-01 632 - Carbamate and Urea Pesticides (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbaryl	<1.85	U	5.00	1.85	ug/L		04/30/24 16:17	05/09/24 05:29	1
Diuron	0.344		0.0900	0.0514	ug/L		04/30/24 16:17	05/07/24 23:00	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.47		0.500	0.200	ng/L		05/03/24 15:50	05/06/24 13:10	1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.0220		0.0200	0.00301	mg/L		05/01/24 10:30	05/01/24 17:05	1
Antimony	0.00146	J	0.00200	0.00105	mg/L		05/01/24 10:30	05/01/24 17:05	1
Arsenic	0.00381	J B	0.00400	0.000341	mg/L		05/01/24 10:30	05/01/24 17:05	1
Barium	0.120		0.00400	0.000289	mg/L		05/01/24 10:30	05/01/24 17:05	1
Beryllium	<0.000148	U	0.00200	0.000148	mg/L		05/01/24 10:30	05/01/24 17:05	1
Boron	0.401		0.0100	0.00252	mg/L		05/01/24 10:30	05/01/24 17:05	1
Cadmium	<0.000258	U	0.00200	0.000258	mg/L		05/01/24 10:30	05/01/24 17:05	1
Chromium	0.00242	J B	0.00400	0.000325	mg/L		05/01/24 10:30	05/01/24 17:05	1
Cobalt	0.000809	J	0.00200	0.000264	mg/L		05/01/24 10:30	05/01/24 17:05	1
Copper	0.00348	J	0.00400	0.000690	mg/L		05/01/24 10:30	05/01/24 17:05	1

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Client Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Client Sample ID: TX 10069-005

Lab Sample ID: 880-42711-1

Date Collected: 04/25/24 08:42

Matrix: Water

Date Received: 04/25/24 10:39

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.0721		0.0200	0.00200	mg/L		05/01/24 10:30	05/01/24 17:05	1
Lead	0.000142	J	0.00200	0.000140	mg/L		05/01/24 10:30	05/01/24 17:05	1
Magnesium	60.8	B	5.00	0.458	mg/L		05/01/24 10:30	05/01/24 17:11	50
Manganese	0.110		0.00200	0.000160	mg/L		05/01/24 10:30	05/01/24 17:05	1
Molybdenum	0.0227	B	0.00200	0.000163	mg/L		05/01/24 10:30	05/01/24 17:05	1
Nickel	0.00374		0.00200	0.000486	mg/L		05/01/24 10:30	05/01/24 17:05	1
Selenium	0.00716	B	0.00200	0.000685	mg/L		05/01/24 10:30	05/01/24 17:05	1
Silver	<0.000118	U	0.00200	0.000118	mg/L		05/01/24 10:30	05/01/24 17:05	1
Thallium	<0.000215	U	0.00200	0.000215	mg/L		05/01/24 10:30	05/01/24 17:05	1
Tin	<0.000333	U	0.00200	0.000333	mg/L		05/01/24 10:30	05/01/24 17:05	1
Titanium	<0.000419	U	0.00400	0.000419	mg/L		05/01/24 10:30	05/01/24 17:05	1
Zinc	0.0199		0.00400	0.000885	mg/L		05/01/24 10:30	05/01/24 17:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease) (1664B)	<1.57	U	5.00	1.57	mg/L			05/15/24 10:59	1
Ammonia (EPA 350.1)	0.0920	J	0.100	0.0508	mg/L			05/13/24 15:08	1
Nitrogen, Kjeldahl (EPA 351.2)	2.26		0.200	0.0890	mg/L		05/10/24 01:24	05/13/24 17:33	1
Oxygen, Dissolved (EPA 360.1)	9.67	HF	1.00	1.00	mg/L			05/07/24 19:39	1
Phosphorus Total (EPA 365.1)	1.96		0.200	0.143	mg/L			05/16/24 14:55	10
Phosphorus Pentoxide (EPA 365.1)	5.43		0.0458	0.0329	mg/L			05/09/24 20:54	1
Phenols, Total (EPA 420.4)	<0.00580	U	0.0100	0.00580	mg/L			05/15/24 18:13	1
Cr (VI) (SW846 7196A)	<0.00270	U	0.0100	0.00270	mg/L			04/25/24 18:58	1
Cr (III) (SW846 7196A)	<0.00345	U	0.0100	0.00345	mg/L			05/26/24 09:48	1
Cyanide, Total (EPA Kelada 01)	<0.00198	U	0.00500	0.00198	mg/L			05/08/24 16:50	1
Alkalinity (SM 2320B)	106	^2	4.00	4.00	mg/L			05/09/24 20:40	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	106	^2	4.00	4.00	mg/L			05/09/24 20:40	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00	4.00	mg/L			05/09/24 20:40	1
Hydroxide Alkalinity (SM 2320B)	<4.00	U	4.00	4.00	mg/L			05/09/24 20:40	1
Phenolphthalein Alkalinity (SM 2320B)	<4.00	U	4.00	4.00	mg/L			05/09/24 20:40	1
Specific Conductance (SM 2510B)	2990		10.0	10.0	umho/cm @ 25C			05/08/24 01:20	1
Total Dissolved Solids (SM 2540C)	2070		20.0	20.0	mg/L			05/02/24 13:30	1
Total Suspended Solids (SM 2540D)	8.52		6.96	6.96	mg/L			05/01/24 10:53	1
Chlorine, Total Residual (SM 4500 Cl G)	<0.0500	U HF	0.0500	0.0500	mg/L			04/29/24 18:10	1
pH (SM 4500 H+ B)	6.8	HF			SU			05/08/24 01:20	1
Temperature (SM 4500 H+ B)	16.7	HF			Degrees C			05/08/24 01:20	1
Carbonaceous Biochemical Oxygen Demand (SM5210B CBOD)	<2.14	U	2.14	2.14	mg/L		04/26/24 18:31	04/26/24 18:54	1

Method: SM 9223B - Coliforms, Total, and E.Coli (Colilert - Quanti Tray)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	>2400	H	1.0	1.0	MPN/100mL			04/26/24 16:45	1
Escherichia coli	<1.0	U H	1.0	1.0	MPN/100mL			04/26/24 16:45	1

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Surrogate Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (74-124)	DBFM (75-131)	DCA (63-144)	TOL (80-120)
880-42711-1	TX 10069-005	105	115	113	101
880-42711-1 - DL	TX 10069-005	104	116	115	104
LCS 860-157986/3	Lab Control Sample	98	94	94	96
LCS 860-158022/3	Lab Control Sample	97	97	95	97
LCSD 860-157986/4	Lab Control Sample Dup	99	94	91	98
LCSD 860-158022/4	Lab Control Sample Dup	100	95	93	96
MB 860-157986/9	Method Blank	102	98	101	99
MB 860-158022/10	Method Blank	102	103	102	100

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (29-112)	2FP (28-114)	NBZ (15-314)	PHL (8-424)	TPHd14 (20-141)	TBP (31-132)
880-42711-1	TX 10069-005	83	34	80	22	89	118
LCS 860-157695/2-A	Lab Control Sample	106	58	100	34	108	146 S1+
LCSD 860-157695/3-A	Lab Control Sample Dup	101	50	93	30	109	139 S1+
MB 860-157695/1-A	Method Blank	96	39	96	25	99	120

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Method: Organotins SIM - Organotins (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	TPTT (10-120)					
880-42711-1	TX 10069-005	61					
LCS 570-435885/2-A	Lab Control Sample	67					
LCSD 570-435885/3-A	Lab Control Sample Dup	59					
MB 570-435885/1-A	Method Blank	58					
Surrogate Legend							
TPTT = Triphenyltin							

Surrogate Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 608.3 - Organochlorine Pesticides in Water

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX1 (22-117)	DCBP1 (1-119)
880-42711-1	TX 10069-005	34	49
LCSD 192-16690/3-A	Lab Control Sample Dup	62	78
MB 192-16690/1-A	Method Blank	43	53
Surrogate Legend			
TCX = Tetrachloro-m-xylene (Surr)			
DCBP = DCB Decachlorobiphenyl (Surr)			

Method: 608.3 - Organochlorine Pesticides in Water

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCB1 (15-136)	TCX1 (18-126)
880-42711-1	TX 10069-005	117	66 p
LCSD 860-157425/3-A	Lab Control Sample Dup	133	100
MB 860-157425/1-A	Method Blank	112	117
Surrogate Legend			
DCB = DCB Decachlorobiphenyl (Surr)			
TCX = Tetrachloro-m-xylene (Surr)			

Method: 608.3 - Organochlorine Pesticides in Water

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX1 (22-117)	DCBP2 (1-119)
LCS 192-16690/2-A	Lab Control Sample	61	56 p
Surrogate Legend			
TCX = Tetrachloro-m-xylene (Surr)			
DCBP = DCB Decachlorobiphenyl (Surr)			

Method: 608.3 - Organochlorine Pesticides in Water

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCB2 (15-136)	TCX1 (18-126)
LCS 860-157425/2-A	Lab Control Sample	118	122
Surrogate Legend			
DCB = DCB Decachlorobiphenyl (Surr)			
TCX = Tetrachloro-m-xylene (Surr)			

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX1 (18-126)	DCB1 (15-136)
880-42711-1	TX 10069-005	50 p	90
LCS 860-157425/4-A	Lab Control Sample	104	132

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Surrogate Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX1 (18-126)	DCB1 (15-136)
LCSD 860-157425/5-A	Lab Control Sample Dup	101	138 S1+
MB 860-157425/1-A	Method Blank	101	141 S1+
Surrogate Legend			
TCX = Tetrachloro-m-xylene (Surr)			
DCB = DCB Decachlorobiphenyl (Surr)			

Method: 614 - Organophosphorous Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	CMF1 (49-171)	TPP1 (60-154)
880-42711-1	TX 10069-005	83	90
LCS 280-651449/2-A	Lab Control Sample	120	119
LCSD 280-651449/3-A	Lab Control Sample Dup	122	122
MB 280-651449/1-A	Method Blank	98	104
Surrogate Legend			
CMF = Chlormephos (Surr)			
TPP = Triphenylphosphate (Surr)			

Method: 615 - Herbicides (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DCPAA2 (45-150)
880-42711-1	TX 10069-005	145
Surrogate Legend		
DCPAA = 2,4-Dichlorophenylacetic acid		

Method: 615 - Herbicides (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DCPAA1 (45-150)
LCS 860-157274/2-A	Lab Control Sample	99
LCSD 860-157274/3-A	Lab Control Sample Dup	92
MB 860-157274/1-A	Method Blank	113
Surrogate Legend		
DCPAA = 2,4-Dichlorophenylacetic acid		

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 860-157986/9

Matrix: Water

Analysis Batch: 157986

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	<0.0111	U	0.0500	0.0111	mg/L			05/01/24 22:16	1
Acrylonitrile	<0.0143	U	0.0500	0.0143	mg/L			05/01/24 22:16	1
Benzene	<0.000460	U	0.00100	0.000460	mg/L			05/01/24 22:16	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552	mg/L			05/01/24 22:16	1
Bromoform	<0.000633	U	0.00500	0.000633	mg/L			05/01/24 22:16	1
Bromomethane	<0.00142	U	0.00500	0.00142	mg/L			05/01/24 22:16	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896	mg/L			05/01/24 22:16	1
Chlorobenzene	<0.000455	U	0.00100	0.000455	mg/L			05/01/24 22:16	1
Chlorodibromomethane	<0.000547	U	0.00500	0.000547	mg/L			05/01/24 22:16	1
Chloroethane	<0.00198	U	0.0100	0.00198	mg/L			05/01/24 22:16	1
2-Chloroethyl vinyl ether	<0.000753	U	0.00500	0.000753	mg/L			05/01/24 22:16	1
Chloroform	<0.000464	U	0.00100	0.000464	mg/L			05/01/24 22:16	1
Chloromethane	<0.00204	U	0.0100	0.00204	mg/L			05/01/24 22:16	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107	mg/L			05/01/24 22:16	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999	mg/L			05/01/24 22:16	1
1,2-Dichlorobenzene	<0.000429	U	0.00100	0.000429	mg/L			05/01/24 22:16	1
1,3-Dichlorobenzene	<0.000413	U	0.00100	0.000413	mg/L			05/01/24 22:16	1
1,4-Dichlorobenzene	<0.000449	U	0.00100	0.000449	mg/L			05/01/24 22:16	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635	mg/L			05/01/24 22:16	1
1,2-Dichloroethane	<0.000372	U	0.00100	0.000372	mg/L			05/01/24 22:16	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738	mg/L			05/01/24 22:16	1
1,2-Dichloropropane	<0.000556	U	0.00500	0.000556	mg/L			05/01/24 22:16	1
1,3-Dichloropropylene	<0.00127	U	0.00500	0.00127	mg/L			05/01/24 22:16	1
Ethylbenzene	<0.000385	U	0.00100	0.000385	mg/L			05/01/24 22:16	1
Hexachlorobutadiene	<0.000627	U	0.00500	0.000627	mg/L			05/01/24 22:16	1
Methylene Chloride	<0.00173	U	0.00500	0.00173	mg/L			05/01/24 22:16	1
Methyl ethyl ketone (MEK)	<0.00828	U	0.0500	0.00828	mg/L			05/01/24 22:16	1
Naphthalene	<0.00135	U	0.0100	0.00135	mg/L			05/01/24 22:16	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470	mg/L			05/01/24 22:16	1
Tetrachloroethene	<0.000655	U	0.00100	0.000655	mg/L			05/01/24 22:16	1
Toluene	<0.000475	U	0.00100	0.000475	mg/L			05/01/24 22:16	1
trans-1,2-Dichloroethene	<0.000368	U	0.00100	0.000368	mg/L			05/01/24 22:16	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175	mg/L			05/01/24 22:16	1
1,1,1-Trichloroethane	<0.000585	U	0.00500	0.000585	mg/L			05/01/24 22:16	1
1,1,2-Trichloroethane	<0.000411	U	0.00100	0.000411	mg/L			05/01/24 22:16	1
Trichloroethene	<0.00150	U	0.00500	0.00150	mg/L			05/01/24 22:16	1
Trihalomethanes, Total	<0.000633	U	0.00500	0.000633	mg/L			05/01/24 22:16	1
Vinyl chloride	<0.000428	U	0.00200	0.000428	mg/L			05/01/24 22:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		74 - 124		05/01/24 22:16	1
Dibromofluoromethane (Surr)	98		75 - 131		05/01/24 22:16	1
1,2-Dichloroethane-d4 (Surr)	101		63 - 144		05/01/24 22:16	1
Toluene-d8 (Surr)	99		80 - 120		05/01/24 22:16	1

Eurofins Midland

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-157986/3

Matrix: Water

Analysis Batch: 157986

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acrolein	0.250	0.2438		mg/L		98	60 - 140
Acrylonitrile	0.500	0.4822		mg/L		96	60 - 140
Benzene	0.0500	0.04555		mg/L		91	75 - 125
Bromodichloromethane	0.0500	0.04987		mg/L		100	75 - 125
Bromoform	0.0500	0.05815		mg/L		116	70 - 130
Bromomethane	0.0500	0.04480		mg/L		90	60 - 140
Carbon tetrachloride	0.0500	0.04774		mg/L		95	70 - 125
Chlorobenzene	0.0500	0.04774		mg/L		95	82 - 135
Chlorodibromomethane	0.0500	0.05300		mg/L		106	73 - 125
Chloroethane	0.0500	0.03107		mg/L		62	60 - 140
2-Chloroethyl vinyl ether	0.0500	0.05140		mg/L		103	50 - 150
Chloroform	0.0500	0.04454		mg/L		89	70 - 121
Chloromethane	0.0500	0.03112		mg/L		62	60 - 140
cis-1,3-Dichloropropene	0.0500	0.05461		mg/L		109	74 - 125
1,2-Dibromoethane	0.0500	0.05301		mg/L		106	73 - 125
1,2-Dichlorobenzene	0.0500	0.05047		mg/L		101	75 - 125
1,3-Dichlorobenzene	0.0500	0.04973		mg/L		99	75 - 125
1,4-Dichlorobenzene	0.0500	0.04733		mg/L		95	75 - 125
1,1-Dichloroethane	0.0500	0.04432		mg/L		89	71 - 130
1,2-Dichloroethane	0.0500	0.04689		mg/L		94	72 - 130
1,1-Dichloroethene	0.0500	0.04659		mg/L		93	50 - 150
1,2-Dichloropropane	0.0500	0.04845		mg/L		97	74 - 125
Ethylbenzene	0.0500	0.05103		mg/L		102	75 - 125
Hexachlorobutadiene	0.0500	0.06334	*+	mg/L		127	75 - 125
Methylene Chloride	0.0500	0.04459		mg/L		89	71 - 125
Methyl ethyl ketone (MEK)	0.250	0.2418		mg/L		97	60 - 140
Naphthalene	0.0500	0.05470		mg/L		109	70 - 130
1,1,2,2-Tetrachloroethane	0.0500	0.04808		mg/L		96	74 - 125
Tetrachloroethene	0.0500	0.05052		mg/L		101	71 - 125
Toluene	0.0500	0.04759		mg/L		95	75 - 130
trans-1,2-Dichloroethene	0.0500	0.04697		mg/L		94	75 - 125
1,2,4-Trichlorobenzene	0.0500	0.05566		mg/L		111	75 - 135
1,1,1-Trichloroethane	0.0500	0.04505		mg/L		90	70 - 130
1,1,2-Trichloroethane	0.0500	0.04923		mg/L		98	75 - 130
Trichloroethene	0.0500	0.04976		mg/L		100	75 - 135
Vinyl chloride	0.0500	0.03115		mg/L		62	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		74 - 124
Dibromofluoromethane (Surr)	94		75 - 131
1,2-Dichloroethane-d4 (Surr)	94		63 - 144
Toluene-d8 (Surr)	96		80 - 120

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 860-157986/4

Matrix: Water

Analysis Batch: 157986

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acrolein	0.250	0.2325		mg/L		93	60 - 140	5	25
Acrylonitrile	0.500	0.4655		mg/L		93	60 - 140	4	25
Benzene	0.0500	0.04318		mg/L		86	75 - 125	5	25
Bromodichloromethane	0.0500	0.04772		mg/L		95	75 - 125	4	25
Bromoform	0.0500	0.05664		mg/L		113	70 - 130	3	25
Bromomethane	0.0500	0.04516		mg/L		90	60 - 140	1	25
Carbon tetrachloride	0.0500	0.04550		mg/L		91	70 - 125	5	25
Chlorobenzene	0.0500	0.04735		mg/L		95	82 - 135	1	25
Chlorodibromomethane	0.0500	0.05208		mg/L		104	73 - 125	2	25
Chloroethane	0.0500	0.03071		mg/L		61	60 - 140	1	25
2-Chloroethyl vinyl ether	0.0500	0.04897		mg/L		98	50 - 150	5	25
Chloroform	0.0500	0.04287		mg/L		86	70 - 121	4	25
Chloromethane	0.0500	0.03055		mg/L		61	60 - 140	2	25
cis-1,3-Dichloropropene	0.0500	0.05208		mg/L		104	74 - 125	5	25
1,2-Dibromoethane	0.0500	0.05132		mg/L		103	73 - 125	3	25
1,2-Dichlorobenzene	0.0500	0.05070		mg/L		101	75 - 125	0	25
1,3-Dichlorobenzene	0.0500	0.04929		mg/L		99	75 - 125	1	25
1,4-Dichlorobenzene	0.0500	0.04723		mg/L		94	75 - 125	0	25
1,1-Dichloroethane	0.0500	0.04221		mg/L		84	71 - 130	5	25
1,2-Dichloroethane	0.0500	0.04449		mg/L		89	72 - 130	5	25
1,1-Dichloroethene	0.0500	0.04400		mg/L		88	50 - 150	6	25
1,2-Dichloropropane	0.0500	0.04613		mg/L		92	74 - 125	5	25
Ethylbenzene	0.0500	0.05042		mg/L		101	75 - 125	1	25
Hexachlorobutadiene	0.0500	0.06204		mg/L		124	75 - 125	2	25
Methylene Chloride	0.0500	0.04317		mg/L		86	71 - 125	3	25
Methyl ethyl ketone (MEK)	0.250	0.2354		mg/L		94	60 - 140	3	25
Naphthalene	0.0500	0.05604		mg/L		112	70 - 130	2	25
1,1,2,2-Tetrachloroethane	0.0500	0.04819		mg/L		96	74 - 125	0	25
Tetrachloroethene	0.0500	0.05009		mg/L		100	71 - 125	1	25
Toluene	0.0500	0.04636		mg/L		93	75 - 130	3	25
trans-1,2-Dichloroethene	0.0500	0.04567		mg/L		91	75 - 125	3	25
1,2,4-Trichlorobenzene	0.0500	0.05670		mg/L		113	75 - 135	2	25
1,1,1-Trichloroethane	0.0500	0.04346		mg/L		87	70 - 130	4	25
1,1,2-Trichloroethane	0.0500	0.04837		mg/L		97	75 - 130	2	25
Trichloroethene	0.0500	0.04727		mg/L		95	75 - 135	5	25
Vinyl chloride	0.0500	0.03129		mg/L		63	60 - 140	0	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		74 - 124
Dibromofluoromethane (Surr)	94		75 - 131
1,2-Dichloroethane-d4 (Surr)	91		63 - 144
Toluene-d8 (Surr)	98		80 - 120

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 860-158022/10

Matrix: Water

Analysis Batch: 158022

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	<0.0111	U	0.0500	0.0111	mg/L			05/02/24 09:43	1
Acrylonitrile	<0.0143	U	0.0500	0.0143	mg/L			05/02/24 09:43	1
Benzene	<0.000460	U	0.00100	0.000460	mg/L			05/02/24 09:43	1
Bromodichloromethane	<0.000552	U	0.00100	0.000552	mg/L			05/02/24 09:43	1
Bromoform	<0.000633	U	0.00500	0.000633	mg/L			05/02/24 09:43	1
Bromomethane	<0.00142	U	0.00500	0.00142	mg/L			05/02/24 09:43	1
Carbon tetrachloride	<0.000896	U	0.00500	0.000896	mg/L			05/02/24 09:43	1
Chlorobenzene	<0.000455	U	0.00100	0.000455	mg/L			05/02/24 09:43	1
Chlorodibromomethane	<0.000547	U	0.00500	0.000547	mg/L			05/02/24 09:43	1
Chloroethane	<0.00198	U	0.0100	0.00198	mg/L			05/02/24 09:43	1
2-Chloroethyl vinyl ether	<0.000753	U	0.00500	0.000753	mg/L			05/02/24 09:43	1
Chloroform	<0.000464	U	0.00100	0.000464	mg/L			05/02/24 09:43	1
Chloromethane	<0.00204	U	0.0100	0.00204	mg/L			05/02/24 09:43	1
cis-1,3-Dichloropropene	<0.00107	U	0.00500	0.00107	mg/L			05/02/24 09:43	1
1,2-Dibromoethane	<0.000999	U	0.00500	0.000999	mg/L			05/02/24 09:43	1
1,2-Dichlorobenzene	<0.000429	U	0.00100	0.000429	mg/L			05/02/24 09:43	1
1,3-Dichlorobenzene	<0.000413	U	0.00100	0.000413	mg/L			05/02/24 09:43	1
1,4-Dichlorobenzene	<0.000449	U	0.00100	0.000449	mg/L			05/02/24 09:43	1
1,1-Dichloroethane	<0.000635	U	0.00100	0.000635	mg/L			05/02/24 09:43	1
1,2-Dichloroethane	<0.000372	U	0.00100	0.000372	mg/L			05/02/24 09:43	1
1,1-Dichloroethene	<0.000738	U	0.00100	0.000738	mg/L			05/02/24 09:43	1
1,2-Dichloropropane	<0.000556	U	0.00500	0.000556	mg/L			05/02/24 09:43	1
1,3-Dichloropropylene	<0.00127	U	0.00500	0.00127	mg/L			05/02/24 09:43	1
Ethylbenzene	<0.000385	U	0.00100	0.000385	mg/L			05/02/24 09:43	1
Hexachlorobutadiene	<0.000627	U	0.00500	0.000627	mg/L			05/02/24 09:43	1
Methyl ethyl ketone (MEK)	<0.00828	U	0.0500	0.00828	mg/L			05/02/24 09:43	1
Naphthalene	<0.00135	U	0.0100	0.00135	mg/L			05/02/24 09:43	1
1,1,2,2-Tetrachloroethane	<0.000470	U	0.00100	0.000470	mg/L			05/02/24 09:43	1
Tetrachloroethene	<0.000655	U	0.00100	0.000655	mg/L			05/02/24 09:43	1
Toluene	<0.000475	U	0.00100	0.000475	mg/L			05/02/24 09:43	1
trans-1,2-Dichloroethene	<0.000368	U	0.00100	0.000368	mg/L			05/02/24 09:43	1
1,2,4-Trichlorobenzene	<0.00175	U	0.00500	0.00175	mg/L			05/02/24 09:43	1
1,1,1-Trichloroethane	<0.000585	U	0.00500	0.000585	mg/L			05/02/24 09:43	1
1,1,2-Trichloroethane	<0.000411	U	0.00100	0.000411	mg/L			05/02/24 09:43	1
Trichloroethene	<0.00150	U	0.00500	0.00150	mg/L			05/02/24 09:43	1
Trihalomethanes, Total	<0.000633	U	0.00500	0.000633	mg/L			05/02/24 09:43	1
Vinyl chloride	<0.000428	U	0.00200	0.000428	mg/L			05/02/24 09:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		74 - 124		05/02/24 09:43	1
Dibromofluoromethane (Surr)	103		75 - 131		05/02/24 09:43	1
1,2-Dichloroethane-d4 (Surr)	102		63 - 144		05/02/24 09:43	1
Toluene-d8 (Surr)	100		80 - 120		05/02/24 09:43	1

Eurofins Midland

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-158022/3

Matrix: Water

Analysis Batch: 158022

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acrolein	0.250	0.2150		mg/L		86	60 - 140
Acrylonitrile	0.500	0.4993		mg/L		100	60 - 140
Benzene	0.0500	0.04624		mg/L		92	75 - 125
Bromodichloromethane	0.0500	0.04955		mg/L		99	75 - 125
Bromoform	0.0500	0.05628		mg/L		113	70 - 130
Bromomethane	0.0500	0.04821		mg/L		96	60 - 140
Carbon tetrachloride	0.0500	0.04969		mg/L		99	70 - 125
Chlorobenzene	0.0500	0.04759		mg/L		95	82 - 135
Chlorodibromomethane	0.0500	0.05289		mg/L		106	73 - 125
Chloroethane	0.0500	0.04094		mg/L		82	60 - 140
2-Chloroethyl vinyl ether	0.0500	0.04901		mg/L		98	50 - 150
Chloroform	0.0500	0.04563		mg/L		91	70 - 121
Chloromethane	0.0500	0.04393		mg/L		88	60 - 140
cis-1,3-Dichloropropene	0.0500	0.05362		mg/L		107	74 - 125
1,2-Dibromoethane	0.0500	0.05171		mg/L		103	73 - 125
1,2-Dichlorobenzene	0.0500	0.05003		mg/L		100	75 - 125
1,3-Dichlorobenzene	0.0500	0.04931		mg/L		99	75 - 125
1,4-Dichlorobenzene	0.0500	0.04634		mg/L		93	75 - 125
1,1-Dichloroethane	0.0500	0.04631		mg/L		93	71 - 130
1,2-Dichloroethane	0.0500	0.04635		mg/L		93	72 - 130
1,1-Dichloroethene	0.0500	0.05134		mg/L		103	50 - 150
1,2-Dichloropropane	0.0500	0.04801		mg/L		96	74 - 125
Ethylbenzene	0.0500	0.05096		mg/L		102	75 - 125
Hexachlorobutadiene	0.0500	0.06015		mg/L		120	75 - 125
Methylene Chloride	0.0500	0.04557		mg/L		91	71 - 125
Methyl ethyl ketone (MEK)	0.250	0.2424		mg/L		97	60 - 140
Naphthalene	0.0500	0.05151		mg/L		103	70 - 130
1,1,2,2-Tetrachloroethane	0.0500	0.04834		mg/L		97	74 - 125
Tetrachloroethene	0.0500	0.05156		mg/L		103	71 - 125
Toluene	0.0500	0.04776		mg/L		96	75 - 130
trans-1,2-Dichloroethene	0.0500	0.04861		mg/L		97	75 - 125
1,2,4-Trichlorobenzene	0.0500	0.05184		mg/L		104	75 - 135
1,1,1-Trichloroethane	0.0500	0.04750		mg/L		95	70 - 130
1,1,2-Trichloroethane	0.0500	0.04953		mg/L		99	75 - 130
Trichloroethene	0.0500	0.04986		mg/L		100	75 - 135
Vinyl chloride	0.0500	0.04322		mg/L		86	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		74 - 124
Dibromofluoromethane (Surr)	97		75 - 131
1,2-Dichloroethane-d4 (Surr)	95		63 - 144
Toluene-d8 (Surr)	97		80 - 120

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 860-158022/4

Matrix: Water

Analysis Batch: 158022

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acrolein	0.250	0.2370		mg/L		95	60 - 140	10	25
Acrylonitrile	0.500	0.5114		mg/L		102	60 - 140	2	25
Benzene	0.0500	0.04633		mg/L		93	75 - 125	0	25
Bromodichloromethane	0.0500	0.05060		mg/L		101	75 - 125	2	25
Bromoform	0.0500	0.05864		mg/L		117	70 - 130	4	25
Bromomethane	0.0500	0.04697		mg/L		94	60 - 140	3	25
Carbon tetrachloride	0.0500	0.04878		mg/L		98	70 - 125	2	25
Chlorobenzene	0.0500	0.04777		mg/L		96	82 - 135	0	25
Chlorodibromomethane	0.0500	0.05440		mg/L		109	73 - 125	3	25
Chloroethane	0.0500	0.03816		mg/L		76	60 - 140	7	25
2-Chloroethyl vinyl ether	0.0500	0.05117		mg/L		102	50 - 150	4	25
Chloroform	0.0500	0.04589		mg/L		92	70 - 121	1	25
Chloromethane	0.0500	0.04214		mg/L		84	60 - 140	4	25
cis-1,3-Dichloropropene	0.0500	0.05529		mg/L		111	74 - 125	3	25
1,2-Dibromoethane	0.0500	0.05409		mg/L		108	73 - 125	4	25
1,2-Dichlorobenzene	0.0500	0.05309		mg/L		106	75 - 125	6	25
1,3-Dichlorobenzene	0.0500	0.05161		mg/L		103	75 - 125	5	25
1,4-Dichlorobenzene	0.0500	0.04877		mg/L		98	75 - 125	5	25
1,1-Dichloroethane	0.0500	0.04591		mg/L		92	71 - 130	1	25
1,2-Dichloroethane	0.0500	0.04762		mg/L		95	72 - 130	3	25
1,1-Dichloroethene	0.0500	0.04961		mg/L		99	50 - 150	3	25
1,2-Dichloropropane	0.0500	0.04847		mg/L		97	74 - 125	1	25
Ethylbenzene	0.0500	0.05099		mg/L		102	75 - 125	0	25
Methylene Chloride	0.0500	0.04940		mg/L		99	71 - 125	8	25
Methyl ethyl ketone (MEK)	0.250	0.2624		mg/L		105	60 - 140	8	25
Naphthalene	0.0500	0.05860		mg/L		117	70 - 130	13	25
1,1,2,2-Tetrachloroethane	0.0500	0.05116		mg/L		102	74 - 125	6	25
Tetrachloroethene	0.0500	0.05167		mg/L		103	71 - 125	0	25
Toluene	0.0500	0.04758		mg/L		95	75 - 130	0	25
trans-1,2-Dichloroethene	0.0500	0.04881		mg/L		98	75 - 125	0	25
1,2,4-Trichlorobenzene	0.0500	0.05759		mg/L		115	75 - 135	11	25
1,1,1-Trichloroethane	0.0500	0.04656		mg/L		93	70 - 130	2	25
1,1,2-Trichloroethane	0.0500	0.05036		mg/L		101	75 - 130	2	25
Trichloroethene	0.0500	0.04941		mg/L		99	75 - 135	1	25
Vinyl chloride	0.0500	0.04000		mg/L		80	60 - 140	8	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		74 - 124
Dibromofluoromethane (Surr)	95		75 - 131
1,2-Dichloroethane-d4 (Surr)	93		63 - 144
Toluene-d8 (Surr)	96		80 - 120

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 860-157695/1-A

Matrix: Water

Analysis Batch: 158078

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 157695

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00139	U	0.00570	0.00139	mg/L		04/30/24 16:14	05/02/24 14:43	1
Acenaphthylene	<0.00141	U	0.0100	0.00141	mg/L		04/30/24 16:14	05/02/24 14:43	1
Anthracene	<0.00150	U	0.00570	0.00150	mg/L		04/30/24 16:14	05/02/24 14:43	1
Benzidine	<0.00480	U	0.0200	0.00480	mg/L		04/30/24 16:14	05/02/24 14:43	1
Benzo[a]anthracene	<0.000173	U	0.00500	0.000173	mg/L		04/30/24 16:14	05/02/24 14:43	1
Benzo[a]pyrene	<0.000364	U	0.00500	0.000364	mg/L		04/30/24 16:14	05/02/24 14:43	1
Benzo[b]fluoranthene	<0.00204	U	0.0100	0.00204	mg/L		04/30/24 16:14	05/02/24 14:43	1
Benzo[g,h,i]perylene	<0.00268	U	0.0100	0.00268	mg/L		04/30/24 16:14	05/02/24 14:43	1
Benzo[k]fluoranthene	<0.000375	U	0.00500	0.000375	mg/L		04/30/24 16:14	05/02/24 14:43	1
Bis(2-chloroethoxy)methane	<0.00176	U	0.0100	0.00176	mg/L		04/30/24 16:14	05/02/24 14:43	1
Bis(2-chloroethyl)ether	<0.00216	U	0.0100	0.00216	mg/L		04/30/24 16:14	05/02/24 14:43	1
bis (2-chloroisopropyl) ether	<0.00179	U	0.0100	0.00179	mg/L		04/30/24 16:14	05/02/24 14:43	1
Bis(2-ethylhexyl) phthalate	<0.000277	U	0.00500	0.000277	mg/L		04/30/24 16:14	05/02/24 14:43	1
4-Bromophenyl phenyl ether	<0.000256	U	0.00500	0.000256	mg/L		04/30/24 16:14	05/02/24 14:43	1
Butyl benzyl phthalate	<0.000337	U	0.00500	0.000337	mg/L		04/30/24 16:14	05/02/24 14:43	1
2-Chloronaphthalene	<0.000462	U	0.00500	0.000462	mg/L		04/30/24 16:14	05/02/24 14:43	1
2-Chlorophenol	<0.000649	U	0.00500	0.000649	mg/L		04/30/24 16:14	05/02/24 14:43	1
4-Chlorophenyl phenyl ether	<0.00128	U	0.0100	0.00128	mg/L		04/30/24 16:14	05/02/24 14:43	1
Chrysene	<0.000222	U	0.00500	0.000222	mg/L		04/30/24 16:14	05/02/24 14:43	1
Dibenz(a,h)anthracene	<0.000246	U	0.00500	0.000246	mg/L		04/30/24 16:14	05/02/24 14:43	1
3,3'-Dichlorobenzidine	<0.000341	U	0.00500	0.000341	mg/L		04/30/24 16:14	05/02/24 14:43	1
2,4-Dichlorophenol	<0.000314	U	0.00500	0.000314	mg/L		04/30/24 16:14	05/02/24 14:43	1
Diethyl phthalate	<0.00159	U	0.00500	0.00159	mg/L		04/30/24 16:14	05/02/24 14:43	1
2,4-Dimethylphenol	<0.000649	U	0.00500	0.000649	mg/L		04/30/24 16:14	05/02/24 14:43	1
Dimethyl phthalate	<0.000299	U	0.00250	0.000299	mg/L		04/30/24 16:14	05/02/24 14:43	1
Di-n-butyl phthalate	<0.000252	U	0.00500	0.000252	mg/L		04/30/24 16:14	05/02/24 14:43	1
4,6-Dinitro-o-cresol	<0.00144	U	0.0100	0.00144	mg/L		04/30/24 16:14	05/02/24 14:43	1
2,4-Dinitrophenol	<0.00161	U	0.0100	0.00161	mg/L		04/30/24 16:14	05/02/24 14:43	1
2,4-Dinitrotoluene	<0.00131	U	0.0100	0.00131	mg/L		04/30/24 16:14	05/02/24 14:43	1
2,6-Dinitrotoluene	<0.00161	U	0.00500	0.00161	mg/L		04/30/24 16:14	05/02/24 14:43	1
Di-n-octyl phthalate	<0.000373	U	0.00500	0.000373	mg/L		04/30/24 16:14	05/02/24 14:43	1
1,2-Diphenylhydrazine	<0.00149	U	0.0100	0.00149	mg/L		04/30/24 16:14	05/02/24 14:43	1
Fluoranthene	<0.00159	U	0.00500	0.00159	mg/L		04/30/24 16:14	05/02/24 14:43	1
Fluorene	<0.00163	U	0.00500	0.00163	mg/L		04/30/24 16:14	05/02/24 14:43	1
Hexachlorobenzene	<0.000307	U	0.00500	0.000307	mg/L		04/30/24 16:14	05/02/24 14:43	1
Hexachlorobutadiene	<0.000238	U	0.00100	0.000238	mg/L		04/30/24 16:14	05/02/24 14:43	1
Hexachlorocyclopentadiene	<0.00458	U	0.0100	0.00458	mg/L		04/30/24 16:14	05/02/24 14:43	1
Hexachloroethane	<0.000526	U	0.00480	0.000526	mg/L		04/30/24 16:14	05/02/24 14:43	1
Indeno[1,2,3-cd]pyrene	<0.00229	U	0.0100	0.00229	mg/L		04/30/24 16:14	05/02/24 14:43	1
Isophorone	<0.00164	U	0.00500	0.00164	mg/L		04/30/24 16:14	05/02/24 14:43	1
m & p - Cresol	<0.00262	U	0.0100	0.00262	mg/L		04/30/24 16:14	05/02/24 14:43	1
Naphthalene	<0.000542	U	0.00250	0.000542	mg/L		04/30/24 16:14	05/02/24 14:43	1
Nitrobenzene	<0.00166	U	0.00500	0.00166	mg/L		04/30/24 16:14	05/02/24 14:43	1
2-Nitrophenol	<0.00167	U	0.0100	0.00167	mg/L		04/30/24 16:14	05/02/24 14:43	1
4-Nitrophenol	<0.00491	U	0.00720	0.00491	mg/L		04/30/24 16:14	05/02/24 14:43	1
N-Nitrosodiethylamine	<0.00175	U	0.0100	0.00175	mg/L		04/30/24 16:14	05/02/24 14:43	1
N-Nitrosodimethylamine	<0.00202	U	0.0100	0.00202	mg/L		04/30/24 16:14	05/02/24 14:43	1
N-Nitrosodi-n-butylamine	<0.00149	U	0.0100	0.00149	mg/L		04/30/24 16:14	05/02/24 14:43	1

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QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 860-157695/1-A

Matrix: Water

Analysis Batch: 158078

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 157695

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	<0.00288	U	0.0100	0.00288	mg/L		04/30/24 16:14	05/02/24 14:43	1
N-Nitrosodiphenylamine	<0.00181	U	0.0100	0.00181	mg/L		04/30/24 16:14	05/02/24 14:43	1
Nonylphenol	<0.0100	U	0.0100	0.0100	mg/L		04/30/24 16:14	05/02/24 14:43	1
o-Cresol	<0.00162	U	0.0100	0.00162	mg/L		04/30/24 16:14	05/02/24 14:43	1
p-Chloro-m-cresol	<0.00157	U	0.00500	0.00157	mg/L		04/30/24 16:14	05/02/24 14:43	1
Pentachlorobenzene	<0.00107	U	0.0100	0.00107	mg/L		04/30/24 16:14	05/02/24 14:43	1
Pentachlorophenol	<0.000234	U	0.0100	0.000234	mg/L		04/30/24 16:14	05/02/24 14:43	1
Phenanthrene	<0.00142	U	0.0100	0.00142	mg/L		04/30/24 16:14	05/02/24 14:43	1
Phenol	<0.000423	U	0.00450	0.000423	mg/L		04/30/24 16:14	05/02/24 14:43	1
Pyrene	<0.000178	U	0.00500	0.000178	mg/L		04/30/24 16:14	05/02/24 14:43	1
Pyridine	<0.00264	U	0.0100	0.00264	mg/L		04/30/24 16:14	05/02/24 14:43	1
1,2,4,5-Tetrachlorobenzene	<0.00132	U	0.0100	0.00132	mg/L		04/30/24 16:14	05/02/24 14:43	1
Total Cresols	<0.00262	U	0.0100	0.00262	mg/L		04/30/24 16:14	05/02/24 14:43	1
1,2,4-Trichlorobenzene	<0.00161	U	0.00500	0.00161	mg/L		04/30/24 16:14	05/02/24 14:43	1
2,4,5-Trichlorophenol	<0.00200	U	0.0100	0.00200	mg/L		04/30/24 16:14	05/02/24 14:43	1
2,4,6-Trichlorophenol	<0.00142	U	0.00500	0.00142	mg/L		04/30/24 16:14	05/02/24 14:43	1
Hexachlorophene	<0.0100	U	0.100	0.0100	mg/L		04/30/24 16:14	05/02/24 14:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	96		29 - 112	04/30/24 16:14	05/02/24 14:43	1
2-Fluorophenol (Surr)	39		28 - 114	04/30/24 16:14	05/02/24 14:43	1
Nitrobenzene-d5 (Surr)	96		15 - 314	04/30/24 16:14	05/02/24 14:43	1
Phenol-d5 (Surr)	25		8 - 424	04/30/24 16:14	05/02/24 14:43	1
p-Terphenyl-d14 (Surr)	99		20 - 141	04/30/24 16:14	05/02/24 14:43	1
2,4,6-Tribromophenol (Surr)	120		31 - 132	04/30/24 16:14	05/02/24 14:43	1

Lab Sample ID: LCS 860-157695/2-A

Matrix: Water

Analysis Batch: 158078

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 157695

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	0.0400	0.04294		mg/L		107	60 - 132
Acenaphthylene	0.0400	0.04092		mg/L		102	54 - 126
Anthracene	0.0400	0.04538		mg/L		113	43 - 120
Benzidine	0.0400	0.007446	J *	mg/L		19	25 - 125
Benzo[a]anthracene	0.0400	0.04470		mg/L		112	42 - 133
Benzo[a]pyrene	0.0400	0.04829		mg/L		121	32 - 148
Benzo[b]fluoranthene	0.0400	0.04475		mg/L		112	42 - 140
Benzo[g,h,i]perylene	0.0400	0.05225		mg/L		131	13 - 195
Benzo[k]fluoranthene	0.0400	0.04366		mg/L		109	25 - 146
Bis(2-chloroethoxy)methane	0.0400	0.03973		mg/L		99	49 - 165
Bis(2-chloroethyl)ether	0.0400	0.04377		mg/L		109	43 - 126
bis (2-chloroisopropyl) ether	0.0400	0.04208		mg/L		105	63 - 139
Bis(2-ethylhexyl) phthalate	0.0400	0.04966		mg/L		124	29 - 137
4-Bromophenyl phenyl ether	0.0400	0.04694		mg/L		117	65 - 120
Butyl benzyl phthalate	0.0400	0.04840		mg/L		121	12 - 140
2-Chloronaphthalene	0.0400	0.04181		mg/L		105	65 - 120
2-Chlorophenol	0.0400	0.03670		mg/L		92	36 - 120

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QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-157695/2-A

Matrix: Water

Analysis Batch: 158078

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 157695

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4-Chlorophenyl phenyl ether	0.0400	0.04500		mg/L		112	38 - 145
Chrysene	0.0400	0.04334		mg/L		108	44 - 140
Dibenz(a,h)anthracene	0.0400	0.05230		mg/L		131	16 - 200
3,3'-Dichlorobenzidine	0.0400	0.04612		mg/L		115	18 - 213
2,4-Dichlorophenol	0.0400	0.04499		mg/L		112	53 - 122
Diethyl phthalate	0.0400	0.04448		mg/L		111	17 - 120
2,4-Dimethylphenol	0.0400	0.03917		mg/L		98	42 - 120
Dimethyl phthalate	0.0400	0.04398		mg/L		110	25 - 120
Di-n-butyl phthalate	0.0400	0.04892	*+	mg/L		122	8 - 120
4,6-Dinitro-o-cresol	0.0400	0.05180		mg/L		130	53 - 130
2,4-Dinitrophenol	0.0400	0.05162		mg/L		129	12 - 173
2,4-Dinitrotoluene	0.0400	0.05069		mg/L		127	48 - 127
2,6-Dinitrotoluene	0.0400	0.04787		mg/L		120	68 - 137
Di-n-octyl phthalate	0.0400	0.04433		mg/L		111	19 - 132
1,2-Diphenylhydrazine	0.0400	0.04049		mg/L		101	28 - 136
Fluoranthene	0.0400	0.04721		mg/L		118	43 - 121
Fluorene	0.0400	0.04420		mg/L		110	70 - 120
Hexachlorobenzene	0.0400	0.04749		mg/L		119	8 - 142
Hexachlorobutadiene	0.0400	0.03760		mg/L		94	38 - 120
Hexachlorocyclopentadiene	0.0400	0.04659		mg/L		116	41 - 125
Hexachloroethane	0.0400	0.03180		mg/L		79	55 - 120
Indeno[1,2,3-cd]pyrene	0.0400	0.05011		mg/L		125	13 - 151
Isophorone	0.0400	0.04005		mg/L		100	47 - 180
m & p - Cresol	0.0400	0.02874		mg/L		72	14 - 176
Naphthalene	0.0400	0.04005		mg/L		100	36 - 120
Nitrobenzene	0.0400	0.03938		mg/L		98	54 - 158
2-Nitrophenol	0.0400	0.05035		mg/L		126	45 - 167
4-Nitrophenol	0.0400	0.01986		mg/L		50	13 - 129
N-Nitrosodiethylamine	0.0400	0.04203		mg/L		105	30 - 160
N-Nitrosodimethylamine	0.0400	0.01765		mg/L		44	20 - 125
N-Nitrosodi-n-butylamine	0.0400	0.03868		mg/L		97	33 - 141
N-Nitrosodi-n-propylamine	0.0400	0.03989		mg/L		100	14 - 198
N-Nitrosodiphenylamine	0.0400	0.03478		mg/L		87	2 - 196
o-Cresol	0.0400	0.02871		mg/L		72	14 - 176
p-Chloro-m-cresol	0.0400	0.04115		mg/L		103	41 - 128
Pentachlorobenzene	0.0400	0.04590		mg/L		115	25 - 131
Pentachlorophenol	0.0400	0.04917		mg/L		123	38 - 152
Phenanthrene	0.0400	0.04380		mg/L		110	65 - 120
Phenol	0.0400	0.01596		mg/L		40	17 - 120
Pyrene	0.0400	0.04404		mg/L		110	70 - 120
Pyridine	0.0800	0.01720		mg/L		21	5 - 94
1,2,4,5-Tetrachlorobenzene	0.0400	0.04160		mg/L		104	41 - 125
1,2,4-Trichlorobenzene	0.0400	0.03820		mg/L		95	57 - 130
2,4,5-Trichlorophenol	0.0400	0.04560	*+	mg/L		114	35 - 111
2,4,6-Trichlorophenol	0.0400	0.04858		mg/L		121	52 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	106		29 - 112

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QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-157695/2-A

Matrix: Water

Analysis Batch: 158078

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 157695

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorophenol (Surr)	58		28 - 114
Nitrobenzene-d5 (Surr)	100		15 - 314
Phenol-d5 (Surr)	34		8 - 424
p-Terphenyl-d14 (Surr)	108		20 - 141
2,4,6-Tribromophenol (Surr)	146	S1+	31 - 132

Lab Sample ID: LCSD 860-157695/3-A

Matrix: Water

Analysis Batch: 158078

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 157695

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	0.0400	0.04087		mg/L		102	60 - 132	5	29
Acenaphthylene	0.0400	0.03931		mg/L		98	54 - 126	4	30
Anthracene	0.0400	0.04458		mg/L		111	43 - 120	2	30
Benzidine	0.0400	0.006785	J *	mg/L		17	25 - 125	9	30
Benzo[a]anthracene	0.0400	0.04355		mg/L		109	42 - 133	3	30
Benzo[a]pyrene	0.0400	0.04604		mg/L		115	32 - 148	5	30
Benzo[b]fluoranthene	0.0400	0.04415		mg/L		110	42 - 140	1	30
Benzo[g,h,i]perylene	0.0400	0.05108		mg/L		128	13 - 195	2	30
Benzo[k]fluoranthene	0.0400	0.04164		mg/L		104	25 - 146	5	30
Bis(2-chloroethoxy)methane	0.0400	0.03738		mg/L		93	49 - 165	6	30
Bis(2-chloroethyl)ether	0.0400	0.03984		mg/L		100	43 - 126	9	30
bis (2-chloroisopropyl) ether	0.0400	0.03841		mg/L		96	63 - 139	9	30
Bis(2-ethylhexyl) phthalate	0.0400	0.04864		mg/L		122	29 - 137	2	30
4-Bromophenyl phenyl ether	0.0400	0.04636		mg/L		116	65 - 120	1	26
Butyl benzyl phthalate	0.0400	0.04773		mg/L		119	12 - 140	1	30
2-Chloronaphthalene	0.0400	0.04041		mg/L		101	65 - 120	3	15
2-Chlorophenol	0.0400	0.03378		mg/L		84	36 - 120	8	30
4-Chlorophenyl phenyl ether	0.0400	0.04368		mg/L		109	38 - 145	3	30
Chrysene	0.0400	0.04274		mg/L		107	44 - 140	1	30
Dibenz(a,h)anthracene	0.0400	0.05113		mg/L		128	16 - 200	2	30
3,3'-Dichlorobenzidine	0.0400	0.04520		mg/L		113	18 - 213	2	30
2,4-Dichlorophenol	0.0400	0.04188		mg/L		105	53 - 122	7	30
Diethyl phthalate	0.0400	0.04332		mg/L		108	17 - 120	3	30
2,4-Dimethylphenol	0.0400	0.03625		mg/L		91	42 - 120	8	30
Dimethyl phthalate	0.0400	0.04221		mg/L		106	25 - 120	4	30
Di-n-butyl phthalate	0.0400	0.04755		mg/L		119	8 - 120	3	28
4,6-Dinitro-o-cresol	0.0400	0.05184		mg/L		130	53 - 130	0	30
2,4-Dinitrophenol	0.0400	0.04994		mg/L		125	12 - 173	3	30
2,4-Dinitrotoluene	0.0400	0.04951		mg/L		124	48 - 127	2	25
2,6-Dinitrotoluene	0.0400	0.04575		mg/L		114	68 - 137	5	29
Di-n-octyl phthalate	0.0400	0.04191		mg/L		105	19 - 132	6	30
1,2-Diphenylhydrazine	0.0400	0.03941		mg/L		99	28 - 136	3	30
Fluoranthene	0.0400	0.04567		mg/L		114	43 - 121	3	30
Fluorene	0.0400	0.04270		mg/L		107	70 - 120	3	23
Hexachlorobenzene	0.0400	0.04664		mg/L		117	8 - 142	2	30
Hexachlorobutadiene	0.0400	0.03381		mg/L		85	38 - 120	11	30
Hexachlorocyclopentadiene	0.0400	0.04632		mg/L		116	41 - 125	1	30

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QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 860-157695/3-A

Matrix: Water

Analysis Batch: 158078

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 157695

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexachloroethane	0.0400	0.02819		mg/L		70	55 - 120	12	30
Indeno[1,2,3-cd]pyrene	0.0400	0.04901		mg/L		123	13 - 151	2	30
Isophorone	0.0400	0.03773		mg/L		94	47 - 180	6	30
m & p - Cresol	0.0400	0.02520		mg/L		63	14 - 176	13	30
Naphthalene	0.0400	0.03686		mg/L		92	36 - 120	8	30
Nitrobenzene	0.0400	0.03736		mg/L		93	54 - 158	5	30
2-Nitrophenol	0.0400	0.04743		mg/L		119	45 - 167	6	30
4-Nitrophenol	0.0400	0.01781		mg/L		45	13 - 129	11	30
N-Nitrosodiethylamine	0.0400	0.03910		mg/L		98	30 - 160	7	30
N-Nitrosodimethylamine	0.0400	0.01570		mg/L		39	20 - 125	12	30
N-Nitrosodi-n-butylamine	0.0400	0.03613		mg/L		90	33 - 141	7	30
N-Nitrosodi-n-propylamine	0.0400	0.03726		mg/L		93	14 - 198	7	30
N-Nitrosodiphenylamine	0.0400	0.03455		mg/L		86	2 - 196	1	30
o-Cresol	0.0400	0.02589		mg/L		65	14 - 176	10	30
p-Chloro-m-cresol	0.0400	0.03880		mg/L		97	41 - 128	6	30
Pentachlorobenzene	0.0400	0.04450		mg/L		111	25 - 131	3	30
Pentachlorophenol	0.0400	0.04814		mg/L		120	38 - 152	2	30
Phenanthrene	0.0400	0.04299		mg/L		107	65 - 120	2	30
Phenol	0.0400	0.01381		mg/L		35	17 - 120	14	30
Pyrene	0.0400	0.04434		mg/L		111	70 - 120	1	30
Pyridine	0.0800	0.01567		mg/L		20	5 - 94	9	30
1,2,4,5-Tetrachlorobenzene	0.0400	0.03994		mg/L		100	41 - 125	4	30
1,2,4-Trichlorobenzene	0.0400	0.03526		mg/L		88	57 - 130	8	30
2,4,5-Trichlorophenol	0.0400	0.04402		mg/L		110	35 - 111	4	30
2,4,6-Trichlorophenol	0.0400	0.04647		mg/L		116	52 - 129	4	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2-Fluorobiphenyl (Surr)	101		29 - 112
2-Fluorophenol (Surr)	50		28 - 114
Nitrobenzene-d5 (Surr)	93		15 - 314
Phenol-d5 (Surr)	30		8 - 424
p-Terphenyl-d14 (Surr)	109		20 - 141
2,4,6-Tribromophenol (Surr)	139	S1+	31 - 132

Method: Organotins SIM - Organotins (GC/MS SIM)

Lab Sample ID: MB 570-435885/1-A

Matrix: Water

Analysis Batch: 436315

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 435885

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tributyltin	<1.14	U	3.00	1.14	ng/L		04/30/24 16:40	05/01/24 19:16	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tripentyltin	58		10 - 120				04/30/24 16:40	05/01/24 19:16	1

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QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: Organotins SIM - Organotins (GC/MS SIM) (Continued)

Lab Sample ID: LCS 570-435885/2-A

Matrix: Water

Analysis Batch: 436315

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 435885

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Tributyltin	178	122.8		ng/L		69	10 - 120
Surrogate	%Recovery	LCS Qualifier	Limits				
Tripentyltin	67		10 - 120				

Lab Sample ID: LCSD 570-435885/3-A

Matrix: Water

Analysis Batch: 436315

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 435885

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Tributyltin	178	124.9		ng/L		70	10 - 120	2	30
Surrogate	%Recovery	LCSD Qualifier	Limits						
Tripentyltin	59		10 - 120						

Method: 608.3 - Organochlorine Pesticides in Water

Lab Sample ID: MB 860-157425/1-A

Matrix: Water

Analysis Batch: 157578

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 157425

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.0000081	U	0.0000100	0.0000008	mg/L		04/29/24 15:17	04/30/24 11:28	1
4,4'-DDE	<0.0000109	U	0.0000100	0.0000010	mg/L		04/29/24 15:17	04/30/24 11:28	1
4,4'-DDT	<0.0000379	U	0.0000200	0.0000037	mg/L		04/29/24 15:17	04/30/24 11:28	1
Aldrin	<0.0000113	U	0.0000100	0.0000011	mg/L		04/29/24 15:17	04/30/24 11:28	1
alpha-BHC	<0.0000142	U	0.0000090	0.0000014	mg/L		04/29/24 15:17	04/30/24 11:28	1
alpha-Chlordane	<0.0000181	U	0.0000100	0.0000018	mg/L		04/29/24 15:17	04/30/24 11:28	1
beta-BHC	<0.0000389	U	0.0000180	0.0000038	mg/L		04/29/24 15:17	04/30/24 11:28	1
Chlordane	<0.000103	U	0.000250	0.000103	mg/L		04/29/24 15:17	04/30/24 11:28	1
delta-BHC	<0.0000245	U	0.000250	0.0000024	mg/L		04/29/24 15:17	04/30/24 11:28	1
Dicofol	<0.0000500	U	0.000100	0.0000500	mg/L		04/29/24 15:17	04/30/24 11:28	1
Dieldrin	<0.0000095	U	0.0000100	0.0000009	mg/L		04/29/24 15:17	04/30/24 11:28	1
Endosulfan I	<0.0000107	U	0.0000100	0.0000010	mg/L		04/29/24 15:17	04/30/24 11:28	1
Endosulfan II	<0.0000122	U	0.0000100	0.0000012	mg/L		04/29/24 15:17	04/30/24 11:28	1
Endosulfan sulfate	<0.0000112	U	0.0000100	0.0000011	mg/L		04/29/24 15:17	04/30/24 11:28	1
Endrin	<0.0000156	U	0.0000100	0.0000015	mg/L		04/29/24 15:17	04/30/24 11:28	1
Endrin aldehyde	<0.0000118	U	0.0000100	0.0000011	mg/L		04/29/24 15:17	04/30/24 11:28	1
Endrin ketone	<0.0000200	U	0.0000100	0.0000020	mg/L		04/29/24 15:17	04/30/24 11:28	1

Eurofins Midland

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: MB 860-157425/1-A

Matrix: Water

Analysis Batch: 157578

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 157425

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
gamma-BHC (Lindane)	<0.00000299	U	0.0000100	0.00000299	mg/L		04/29/24 15:17	04/30/24 11:28	1
gamma-Chlordane	<0.00000289	U	0.0000100	0.00000289	mg/L		04/29/24 15:17	04/30/24 11:28	1
Heptachlor	<0.00000446	U	0.0000090	0.00000446	mg/L		04/29/24 15:17	04/30/24 11:28	1
Heptachlor epoxide	<0.00000134	U	0.0000100	0.00000134	mg/L		04/29/24 15:17	04/30/24 11:28	1
Methoxychlor	<0.00000390	U	0.0000200	0.00000390	mg/L		04/29/24 15:17	04/30/24 11:28	1
Mirex	<0.0000200	U	0.0000200	0.0000200	mg/L		04/29/24 15:17	04/30/24 11:28	1
Toxaphene	<0.0000769	U	0.0000200	0.0000769	mg/L		04/29/24 15:17	04/30/24 11:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	112		15 - 136	04/29/24 15:17	04/30/24 11:28	1
Tetrachloro-m-xylene (Surr)	117		18 - 126	04/29/24 15:17	04/30/24 11:28	1

Lab Sample ID: LCS 860-157425/2-A

Matrix: Water

Analysis Batch: 157578

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 157425

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
4,4'-DDD	0.000100	0.0001245		mg/L		124	31 - 141
4,4'-DDE	0.000100	0.0001227		mg/L		123	30 - 145
4,4'-DDT	0.000100	0.0001282		mg/L		128	25 - 160
Aldrin	0.000100	0.0001064		mg/L		106	42 - 140
alpha-BHC	0.000100	0.0001069		mg/L		107	37 - 140
alpha-Chlordane	0.000100	0.0001182		mg/L		118	45 - 140
beta-BHC	0.000100	0.0001242		mg/L		124	17 - 147
delta-BHC	0.000100	0.00006282	J	mg/L		63	19 - 140
Dieldrin	0.000100	0.0001114		mg/L		111	36 - 146
Endosulfan I	0.000100	0.0001223		mg/L		122	45 - 153
Endosulfan II	0.000100	0.0001261		mg/L		126	22 - 171
Endosulfan sulfate	0.000100	0.0001100		mg/L		110	26 - 144
Endrin	0.000100	0.0001424		mg/L		142	30 - 147
Endrin aldehyde	0.000100	0.0001078		mg/L		108	60 - 130
Endrin ketone	0.000100	0.0001199		mg/L		120	60 - 130
gamma-BHC (Lindane)	0.000100	0.0001170		mg/L		117	34 - 140
gamma-Chlordane	0.000100	0.0001195		mg/L		119	45 - 140
Heptachlor	0.000100	0.0001207		mg/L		121	34 - 140
Heptachlor epoxide	0.000100	0.0001164		mg/L		116	37 - 142
Methoxychlor	0.000100	0.0001254		mg/L		125	50 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	118		15 - 136
Tetrachloro-m-xylene (Surr)	122		18 - 126

Eurofins Midland

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCSD 860-157425/3-A

Matrix: Water

Analysis Batch: 157578

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 157425

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4,4'-DDD	0.000100	0.0001035		mg/L		104	31 - 141	18	30
4,4'-DDE	0.000100	0.00009656		mg/L		97	30 - 145	24	30
4,4'-DDT	0.000100	0.0001071		mg/L		107	25 - 160	18	30
Aldrin	0.000100	0.00008737		mg/L		87	42 - 140	20	30
alpha-BHC	0.000100	0.00008985		mg/L		90	37 - 140	17	30
alpha-Chlordane	0.000100	0.00009816		mg/L		98	45 - 140	19	30
beta-BHC	0.000100	0.0001046		mg/L		105	17 - 147	17	30
delta-BHC	0.000100	0.00005396	J	mg/L		54	19 - 140	15	30
Dieldrin	0.000100	0.00009821		mg/L		98	36 - 146	13	30
Endosulfan I	0.000100	0.0001064		mg/L		106	45 - 153	14	30
Endosulfan II	0.000100	0.0001143		mg/L		114	22 - 171	10	30
Endosulfan sulfate	0.000100	0.0001037		mg/L		104	26 - 144	6	30
Endrin	0.000100	0.0001225		mg/L		123	30 - 147	15	30
Endrin aldehyde	0.000100	0.00009823		mg/L		98	60 - 130	9	30
Endrin ketone	0.000100	0.0001136		mg/L		114	60 - 130	5	30
gamma-BHC (Lindane)	0.000100	0.00009921		mg/L		99	34 - 140	16	30
gamma-Chlordane	0.000100	0.00009970		mg/L		100	45 - 140	18	30
Heptachlor	0.000100	0.0001012		mg/L		101	34 - 140	18	30
Heptachlor epoxide	0.000100	0.00009946		mg/L		99	37 - 142	16	30
Methoxychlor	0.000100	0.0001212		mg/L		121	50 - 130	3	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	133		15 - 136
Tetrachloro-m-xylene (Surr)	100		18 - 126

Lab Sample ID: MB 192-16690/1-A

Matrix: Water

Analysis Batch: 16861

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 16690

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorpyrifos	<0.00640	U	0.0200	0.00640	ug/L		04/26/24 09:30	04/30/24 18:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	43		22 - 117	04/26/24 09:30	04/30/24 18:56	1
DCB Decachlorobiphenyl (Surr)	53		1 - 119	04/26/24 09:30	04/30/24 18:56	1

Lab Sample ID: LCS 192-16690/2-A

Matrix: Water

Analysis Batch: 16861

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 16690

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorpyrifos	0.100	0.08151		ug/L		81	48 - 126

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	61		22 - 117
DCB Decachlorobiphenyl (Surr)	56 p		1 - 119

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QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCSD 192-16690/3-A

Matrix: Water

Analysis Batch: 16861

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 16690

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorpyrifos	0.100	0.08194		ug/L		82	48 - 126	1	23
Surrogate	%Recovery	LCSD Qualifier	Limits						
Tetrachloro-m-xylene (Surr)	62		22 - 117						
DCB Decachlorobiphenyl (Surr)	78		1 - 119						

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 860-157425/1-A

Matrix: Water

Analysis Batch: 157570

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 157425

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.0000125	U	0.000100	0.0000125	mg/L		04/29/24 15:17	04/30/24 14:41	1
PCB-1221	<0.0000125	U	0.000100	0.0000125	mg/L		04/29/24 15:17	04/30/24 14:41	1
PCB-1232	<0.0000125	U	0.000100	0.0000125	mg/L		04/29/24 15:17	04/30/24 14:41	1
PCB-1242	<0.0000125	U	0.000100	0.0000125	mg/L		04/29/24 15:17	04/30/24 14:41	1
PCB-1248	<0.0000125	U	0.000100	0.0000125	mg/L		04/29/24 15:17	04/30/24 14:41	1
PCB-1254	<0.00000780	U	0.000100	0.00000780	mg/L		04/29/24 15:17	04/30/24 14:41	1
PCB-1260	<0.00000780	U	0.000100	0.00000780	mg/L		04/29/24 15:17	04/30/24 14:41	1
Polychlorinated biphenyls, Total	<0.000100	U	0.000100	0.000100	mg/L		04/29/24 15:17	04/30/24 14:41	1
Surrogate	%Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac			
Tetrachloro-m-xylene (Surr)	101		18 - 126	04/29/24 15:17	04/30/24 14:41	1			
DCB Decachlorobiphenyl (Surr)	141	S1+	15 - 136	04/29/24 15:17	04/30/24 14:41	1			

Lab Sample ID: LCS 860-157425/4-A

Matrix: Water

Analysis Batch: 157570

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 157425

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
PCB-1016			0.00100	0.0009288		mg/L		93	61 - 103		
PCB-1260			0.00100	0.001152		mg/L		115	37 - 130		
Surrogate	LCS %Recovery	LCS Qualifier	Limits								
Tetrachloro-m-xylene (Surr)	104		18 - 126								
DCB Decachlorobiphenyl (Surr)	132		15 - 136								

Lab Sample ID: LCSD 860-157425/5-A

Matrix: Water

Analysis Batch: 157570

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 157425

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-1016	0.00100	0.0009595		mg/L		96	61 - 103	3	24
PCB-1260	0.00100	0.001174		mg/L		117	37 - 130	2	28

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QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: LCSD 860-157425/5-A
Matrix: Water
Analysis Batch: 157570

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 157425

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene (Surr)	101		18 - 126
DCB Decachlorobiphenyl (Surr)	138	S1+	15 - 136

Method: 614 - Organophosphorous Pesticides (GC)

Lab Sample ID: MB 280-651449/1-A
Matrix: Water
Analysis Batch: 651796

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 651449

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Guthion	<0.353	U	2.50	0.353	ug/L		04/30/24 10:41	05/03/24 03:49	1
Diazinon	<0.147	U	0.500	0.147	ug/L		04/30/24 10:41	05/03/24 03:49	1
Disulfoton	<0.322	U	1.00	0.322	ug/L		04/30/24 10:41	05/03/24 03:49	1
Malathion	<0.133	U	2.00	0.133	ug/L		04/30/24 10:41	05/03/24 03:49	1
Methyl parathion	<0.141	U	4.00	0.141	ug/L		04/30/24 10:41	05/03/24 03:49	1
Ethyl Parathion	<0.144	U	1.00	0.144	ug/L		04/30/24 10:41	05/03/24 03:49	1
Demeton, Total	<0.209	U	3.00	0.209	ug/L		04/30/24 10:41	05/03/24 03:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Chlormephos (Surr)	98		49 - 171	04/30/24 10:41	05/03/24 03:49	1
Triphenylphosphate (Surr)	104		60 - 154	04/30/24 10:41	05/03/24 03:49	1

Lab Sample ID: LCS 280-651449/2-A
Matrix: Water
Analysis Batch: 651796

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 651449

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Guthion	4.00	3.626		ug/L		91	42 - 125
Diazinon	4.00	3.609		ug/L		90	47 - 149
Disulfoton	4.00	3.592		ug/L		90	44 - 139
Malathion	4.00	3.565		ug/L		89	53 - 137
Methyl parathion	4.00	3.339	J	ug/L		83	55 - 131
Ethyl Parathion	4.00	3.428		ug/L		86	47 - 142
Demeton, Total	4.00	3.606	*3	ug/L		90	33 - 141

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Chlormephos (Surr)	120		49 - 171
Triphenylphosphate (Surr)	119		60 - 154

Lab Sample ID: LCSD 280-651449/3-A
Matrix: Water
Analysis Batch: 651796

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 651449

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Guthion	4.00	3.817		ug/L		95	42 - 125	5	36
Diazinon	4.00	3.824		ug/L		96	47 - 149	6	40
Disulfoton	4.00	3.722		ug/L		93	44 - 139	4	40
Malathion	4.00	4.010		ug/L		100	53 - 137	12	28

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QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 614 - Organophosphorous Pesticides (GC) (Continued)

Lab Sample ID: LCSD 280-651449/3-A

Matrix: Water

Analysis Batch: 651796

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 651449

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl parathion	4.00	3.666	J	ug/L		92	55 - 131	9	30
Ethyl Parathion	4.00	3.735		ug/L		93	47 - 142	9	40
Demeton, Total	4.00	3.803	*3	ug/L		95	33 - 141	5	50

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Chlormephos (Surr)	122		49 - 171
Triphenylphosphate (Surr)	122		60 - 154

Method: 615 - Herbicides (GC)

Lab Sample ID: MB 860-157274/1-A

Matrix: Water

Analysis Batch: 157351

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 157274

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	<0.0000539	U	0.000200	0.0000539	mg/L		04/29/24 07:00	04/29/24 11:54	1
Silvex (2,4,5-TP)	<0.0000422	U	0.000200	0.0000422	mg/L		04/29/24 07:00	04/29/24 11:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	113		45 - 150	04/29/24 07:00	04/29/24 11:54	1

Lab Sample ID: LCS 860-157274/2-A

Matrix: Water

Analysis Batch: 157351

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 157274

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-D	0.00200	0.002014		mg/L		101	55 - 145
Silvex (2,4,5-TP)	0.00200	0.002493		mg/L		125	55 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	99		45 - 150

Lab Sample ID: LCSD 860-157274/3-A

Matrix: Water

Analysis Batch: 157351

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 157274

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4-D	0.00200	0.001720		mg/L		86	55 - 145	16	25
Silvex (2,4,5-TP)	0.00200	0.002376		mg/L		119	55 - 140	5	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	92		45 - 150

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QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-157125/3

Matrix: Water

Analysis Batch: 157125

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.250	U	0.500	0.250	mg/L			04/26/24 17:22	1
Fluoride	<0.100	U	0.500	0.100	mg/L			04/26/24 17:22	1
Sulfate	<0.200	U	0.500	0.200	mg/L			04/26/24 17:22	1

Lab Sample ID: LCS 860-157125/4

Matrix: Water

Analysis Batch: 157125

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.460		mg/L		95	90 - 110
Fluoride	10.0	10.14		mg/L		101	90 - 110
Sulfate	10.0	9.916		mg/L		99	90 - 110

Lab Sample ID: LCSD 860-157125/5

Matrix: Water

Analysis Batch: 157125

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10.0	9.495		mg/L		95	90 - 110	0	20
Fluoride	10.0	10.22		mg/L		102	90 - 110	1	20
Sulfate	10.0	9.923		mg/L		99	90 - 110	0	20

Lab Sample ID: LLCS 860-157125/7

Matrix: Water

Analysis Batch: 157125

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.500	0.6061		mg/L		121	50 - 150
Fluoride	0.500	0.4448	J	mg/L		89	50 - 150
Sulfate	0.500	0.4960	J	mg/L		99	50 - 150

Lab Sample ID: MB 860-157126/3

Matrix: Water

Analysis Batch: 157126

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.0391	U	0.100	0.0391	mg/L			04/26/24 17:22	1

Lab Sample ID: LCS 860-157126/4

Matrix: Water

Analysis Batch: 157126

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	10.0	10.00		mg/L		100	80 - 120

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 860-157126/5

Matrix: Water

Analysis Batch: 157126

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	10.0	10.04		mg/L		100	80 - 120	0	20

Lab Sample ID: LLCS 860-157126/6

Matrix: Water

Analysis Batch: 157126

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrate as N	0.100	0.1209		mg/L		121	50 - 150		

Method: 632 - Carbamate and Urea Pesticides (HPLC)

Lab Sample ID: MB 860-157696/1-A

Matrix: Water

Analysis Batch: 159127

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 157696

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diuron	<0.0514	U	0.0900	0.0514	ug/L		04/30/24 16:17	05/07/24 15:53	1

Lab Sample ID: MB 860-157696/1-A

Matrix: Water

Analysis Batch: 159133

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 157696

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbaryl	<1.85	U	5.00	1.85	ug/L		04/30/24 16:17	05/09/24 01:39	1

Lab Sample ID: LCS 860-157696/2-A

Matrix: Water

Analysis Batch: 159127

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 157696

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diuron	2.00	1.950		ug/L		97	70 - 130		

Lab Sample ID: LCS 860-157696/2-A

Matrix: Water

Analysis Batch: 159133

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 157696

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Carbaryl	100	105.6		ug/L		106	70 - 130		

Lab Sample ID: LCSD 860-157696/3-A

Matrix: Water

Analysis Batch: 159127

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 157696

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diuron	2.00	1.995		ug/L		100	70 - 130	2	20

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QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 632 - Carbamate and Urea Pesticides (HPLC) (Continued)

Lab Sample ID: LCSD 860-157696/3-A
Matrix: Water
Analysis Batch: 159133

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 157696

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Carbaryl	100	105.7		ug/L		106	70 - 130	0	20

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 400-670530/12-A
Matrix: Water
Analysis Batch: 670605

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 670530

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.200	U	0.500	0.200	ng/L		05/03/24 16:00	05/06/24 12:01	1

Lab Sample ID: LCS 400-670530/13-A
Matrix: Water
Analysis Batch: 670605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 670530

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.764		ng/L		95	79 - 121

Lab Sample ID: LCSD 400-670530/14-A
Matrix: Water
Analysis Batch: 670605

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 670530

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.850		ng/L		97	79 - 121	2	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 860-157820/1-A
Matrix: Water
Analysis Batch: 157905

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 157820

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.00301	U	0.0200	0.00301	mg/L		05/01/24 10:30	05/01/24 16:30	1
Antimony	<0.00105	U	0.00200	0.00105	mg/L		05/01/24 10:30	05/01/24 16:30	1
Arsenic	0.0004020	J	0.00400	0.000341	mg/L		05/01/24 10:30	05/01/24 16:30	1
Barium	<0.000289	U	0.00400	0.000289	mg/L		05/01/24 10:30	05/01/24 16:30	1
Beryllium	<0.000148	U	0.00200	0.000148	mg/L		05/01/24 10:30	05/01/24 16:30	1
Boron	<0.00252	U	0.0100	0.00252	mg/L		05/01/24 10:30	05/01/24 16:30	1
Cadmium	<0.000258	U	0.00200	0.000258	mg/L		05/01/24 10:30	05/01/24 16:30	1
Chromium	0.0008790	J	0.00400	0.000325	mg/L		05/01/24 10:30	05/01/24 16:30	1
Cobalt	<0.000264	U	0.00200	0.000264	mg/L		05/01/24 10:30	05/01/24 16:30	1
Copper	<0.000690	U	0.00400	0.000690	mg/L		05/01/24 10:30	05/01/24 16:30	1
Iron	<0.00200	U	0.0200	0.00200	mg/L		05/01/24 10:30	05/01/24 16:30	1
Lead	<0.000140	U	0.00200	0.000140	mg/L		05/01/24 10:30	05/01/24 16:30	1
Magnesium	0.01387	J	0.100	0.00916	mg/L		05/01/24 10:30	05/01/24 16:30	1
Manganese	<0.000160	U	0.00200	0.000160	mg/L		05/01/24 10:30	05/01/24 16:30	1
Molybdenum	0.001376	J	0.00200	0.000163	mg/L		05/01/24 10:30	05/01/24 16:30	1
Nickel	<0.000486	U	0.00200	0.000486	mg/L		05/01/24 10:30	05/01/24 16:30	1
Selenium	0.001027	J	0.00200	0.000685	mg/L		05/01/24 10:30	05/01/24 16:30	1
Silver	<0.000118	U	0.00200	0.000118	mg/L		05/01/24 10:30	05/01/24 16:30	1

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QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 860-157820/1-A
Matrix: Water
Analysis Batch: 157905

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 157820

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	<0.000215	U	0.00200	0.000215	mg/L		05/01/24 10:30	05/01/24 16:30	1
Tin	<0.000333	U	0.00200	0.000333	mg/L		05/01/24 10:30	05/01/24 16:30	1
Titanium	<0.000419	U	0.00400	0.000419	mg/L		05/01/24 10:30	05/01/24 16:30	1
Zinc	<0.000885	U	0.00400	0.000885	mg/L		05/01/24 10:30	05/01/24 16:30	1

Lab Sample ID: LCS 860-157820/2-A
Matrix: Water
Analysis Batch: 157905

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 157820

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.500	0.5017		mg/L		100	85 - 115
Antimony	0.100	0.08929		mg/L		89	85 - 115
Arsenic	0.100	0.09828		mg/L		98	85 - 115
Barium	0.100	0.09593		mg/L		96	85 - 115
Beryllium	0.100	0.09543		mg/L		95	85 - 115
Boron	0.100	0.09522		mg/L		95	85 - 115
Cadmium	0.100	0.09821		mg/L		98	85 - 115
Chromium	0.100	0.1008		mg/L		101	85 - 115
Cobalt	0.100	0.09846		mg/L		98	85 - 115
Copper	0.100	0.09507		mg/L		95	85 - 115
Iron	0.500	0.4937		mg/L		99	85 - 115
Lead	0.100	0.09711		mg/L		97	85 - 115
Magnesium	2.50	2.512		mg/L		100	85 - 115
Manganese	0.100	0.09880		mg/L		99	85 - 115
Molybdenum	0.100	0.09793		mg/L		98	85 - 115
Nickel	0.100	0.09661		mg/L		97	85 - 115
Selenium	0.100	0.09676		mg/L		97	85 - 115
Silver	0.0500	0.04769		mg/L		95	85 - 115
Thallium	0.100	0.09769		mg/L		98	85 - 115
Tin	0.100	0.09598		mg/L		96	85 - 115
Titanium	0.100	0.09760		mg/L		98	85 - 115
Zinc	0.100	0.09738		mg/L		97	85 - 115

Lab Sample ID: LCSD 860-157820/3-A
Matrix: Water
Analysis Batch: 157905

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 157820

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	0.500	0.4948		mg/L		99	85 - 115	1	20
Antimony	0.100	0.1017		mg/L		102	85 - 115	13	20
Arsenic	0.100	0.09818		mg/L		98	85 - 115	0	20
Barium	0.100	0.09550		mg/L		95	85 - 115	0	20
Beryllium	0.100	0.09525		mg/L		95	85 - 115	0	20
Boron	0.100	0.09660		mg/L		97	85 - 115	1	20
Cadmium	0.100	0.09862		mg/L		99	85 - 115	0	20
Chromium	0.100	0.1003		mg/L		100	85 - 115	0	20
Cobalt	0.100	0.09700		mg/L		97	85 - 115	1	20
Copper	0.100	0.09455		mg/L		95	85 - 115	1	20
Iron	0.500	0.5028		mg/L		101	85 - 115	2	20

Eurofins Midland

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 860-157820/3-A
Matrix: Water
Analysis Batch: 157905

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 157820

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lead	0.100	0.09729		mg/L		97	85 - 115	0	20
Magnesium	2.50	2.482		mg/L		99	85 - 115	1	20
Manganese	0.100	0.09792		mg/L		98	85 - 115	1	20
Molybdenum	0.100	0.09878		mg/L		99	85 - 115	1	20
Nickel	0.100	0.09660		mg/L		97	85 - 115	0	20
Selenium	0.100	0.09641		mg/L		96	85 - 115	0	20
Silver	0.0500	0.04746		mg/L		95	85 - 115	0	20
Thallium	0.100	0.09842		mg/L		98	85 - 115	1	20
Tin	0.100	0.09649		mg/L		96	85 - 115	1	20
Titanium	0.100	0.09328		mg/L		93	85 - 115	5	20
Zinc	0.100	0.09706		mg/L		97	85 - 115	0	20

Method: 1664B - HEM and SGT-HEM

Lab Sample ID: MB 860-160353/1
Matrix: Water
Analysis Batch: 160353

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	<1.57	U	5.00	1.57	mg/L			05/15/24 10:59	1

Lab Sample ID: LCS 860-160353/2
Matrix: Water
Analysis Batch: 160353

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HEM (Oil & Grease)	40.0	39.00		mg/L		97	78 - 114

Lab Sample ID: LCSD 860-160353/3
Matrix: Water
Analysis Batch: 160353

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HEM (Oil & Grease)	40.0	36.00		mg/L		90	78 - 114	6	18

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 860-159375/96
Matrix: Water
Analysis Batch: 159375

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.0508	U	0.100	0.0508	mg/L			05/08/24 23:16	1

Lab Sample ID: LCS 860-159375/98
Matrix: Water
Analysis Batch: 159375

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	1.00	0.9270		mg/L		93	90 - 110

Eurofins Midland

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCSD 860-159375/99

Matrix: Water

Analysis Batch: 159375

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia	1.00	0.9690		mg/L		97	90 - 110	4	20

Lab Sample ID: LLCS 860-159375/97

Matrix: Water

Analysis Batch: 159375

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Ammonia	0.100	0.06200	J	mg/L		62	50 - 150		

Lab Sample ID: MB 860-160076/16

Matrix: Water

Analysis Batch: 160076

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.0508	U	0.100	0.0508	mg/L			05/13/24 11:54	1

Lab Sample ID: MB 860-160076/56

Matrix: Water

Analysis Batch: 160076

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.0508	U	0.100	0.0508	mg/L			05/13/24 14:08	1

Lab Sample ID: LCS 860-160076/57

Matrix: Water

Analysis Batch: 160076

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Ammonia	1.00	0.9490		mg/L		95	90 - 110		

Lab Sample ID: LCSD 860-160076/58

Matrix: Water

Analysis Batch: 160076

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia	1.00	0.9610		mg/L		96	90 - 110	1	20

Lab Sample ID: LLCS 860-160076/19

Matrix: Water

Analysis Batch: 160076

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Ammonia	0.100	0.1100		mg/L		110	50 - 150		

Eurofins Midland

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 860-159510/4-A
Matrix: Water
Analysis Batch: 160080

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 159510

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	<0.0890	U	0.200	0.0890	mg/L		05/10/24 01:23	05/13/24 17:15	1

Lab Sample ID: LCS 860-159510/6-A
Matrix: Water
Analysis Batch: 160080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 159510

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	2.00	1.932		mg/L		97	90 - 110

Lab Sample ID: LCSD 860-159510/7-A
Matrix: Water
Analysis Batch: 160080

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 159510

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrogen, Kjeldahl	2.00	1.830		mg/L		91	90 - 110	5	20

Lab Sample ID: LLCS 860-159510/5-A
Matrix: Water
Analysis Batch: 160080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 159510

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	0.200	0.1280	J	mg/L		64	50 - 150

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 860-159558/55
Matrix: Water
Analysis Batch: 159558

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus Total	<0.0143	U	0.0200	0.0143	mg/L			05/09/24 19:37	1
Phosphorus Pentoxide	<0.0329	U	0.0458	0.0329	mg/L			05/09/24 19:37	1

Lab Sample ID: LCS 860-159558/56
Matrix: Water
Analysis Batch: 159558

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus Total	0.250	0.2390		mg/L		96	90 - 110
Total Phosphorus as PO4	0.766	0.7328		mg/L		96	90 - 110

Lab Sample ID: LCSD 860-159558/57
Matrix: Water
Analysis Batch: 159558

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phosphorus Total	0.250	0.2380		mg/L		95	90 - 110	0	20
Total Phosphorus as PO4	0.766	0.7297		mg/L		95	90 - 110	0	20

Eurofins Midland

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 365.1 - Phosphorus, Total (Continued)

Lab Sample ID: MB 860-160889/16

Matrix: Water

Analysis Batch: 160889

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus Total	<0.0143	U	0.0200	0.0143	mg/L			05/16/24 14:11	1
Phosphorus Pentoxide	<0.0329	U	0.0458	0.0329	mg/L			05/16/24 14:11	1

Lab Sample ID: LCS 860-160889/17

Matrix: Water

Analysis Batch: 160889

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus Total	0.250	0.2250		mg/L		90	90 - 110
Total Phosphorus as PO4	0.766	0.6899		mg/L		90	90 - 110

Lab Sample ID: LCSD 860-160889/18

Matrix: Water

Analysis Batch: 160889

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phosphorus Total	0.250	0.2370		mg/L		95	90 - 110	5	20
Total Phosphorus as PO4	0.766	0.7266		mg/L		95	90 - 110	5	20

Method: 420.4 - Phenolics, Total Recoverable

Lab Sample ID: MB 860-160566/143

Matrix: Water

Analysis Batch: 160566

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenols, Total	<0.00580	U	0.0100	0.00580	mg/L			05/15/24 17:54	1

Lab Sample ID: LCS 860-160566/144

Matrix: Water

Analysis Batch: 160566

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phenols, Total	0.100	0.1079		mg/L		108	90 - 110

Lab Sample ID: LCSD 860-160566/145

Matrix: Water

Analysis Batch: 160566

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phenols, Total	0.100	0.1099		mg/L		110	90 - 110	2	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 880-79367/3

Matrix: Water

Analysis Batch: 79367

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	<0.00270	U	0.0100	0.00270	mg/L			04/25/24 18:58	1

Eurofins Midland

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: LCS 880-79367/4

Matrix: Water

Analysis Batch: 79367

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	0.0400	0.04042		mg/L		101	85 - 115

Lab Sample ID: LCSD 880-79367/5

Matrix: Water

Analysis Batch: 79367

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cr (VI)	0.0400	0.04042		mg/L		101	85 - 115	0	20

Lab Sample ID: 880-42711-1 MS

Matrix: Water

Analysis Batch: 79367

Client Sample ID: TX 10069-005

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	<0.00270	U	0.200	0.2007		mg/L		100	85 - 115

Lab Sample ID: 880-42711-1 MSD

Matrix: Water

Analysis Batch: 79367

Client Sample ID: TX 10069-005

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cr (VI)	<0.00270	U	0.200	0.2007		mg/L		100	85 - 115	0	20

Method: Kelada 01 - Cyanide, Total, Acid Dissociable and Thiocyanate

Lab Sample ID: MB 860-159372/24

Matrix: Water

Analysis Batch: 159372

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.00198	U	0.00500	0.00198	mg/L			05/08/24 15:19	1

Lab Sample ID: MB 860-159372/64

Matrix: Water

Analysis Batch: 159372

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.00198	U	0.00500	0.00198	mg/L			05/08/24 17:12	1

Lab Sample ID: LCS 860-159372/26

Matrix: Water

Analysis Batch: 159372

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.1010		mg/L		101	90 - 110

Eurofins Midland

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: Kelada 01 - Cyanide, Total, Acid Dissociable and Thiocyanate (Continued)

Lab Sample ID: LCS 860-159372/65

Matrix: Water

Analysis Batch: 159372

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.1001		mg/L		100	90 - 110

Lab Sample ID: LCSD 860-159372/27

Matrix: Water

Analysis Batch: 159372

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cyanide, Total	0.100	0.1029		mg/L		103	90 - 110	2	20

Lab Sample ID: LCSD 860-159372/66

Matrix: Water

Analysis Batch: 159372

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cyanide, Total	0.100	0.1015		mg/L		102	90 - 110	1	20

Lab Sample ID: LLCS 860-159372/25

Matrix: Water

Analysis Batch: 159372

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.00500	0.005292		mg/L		106	50 - 150

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 860-159563/2

Matrix: Water

Analysis Batch: 159563

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<4.00	U	4.00	4.00	mg/L			05/09/24 17:56	1
Bicarbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00	mg/L			05/09/24 17:56	1
Carbonate Alkalinity as CaCO3	<4.00	U	4.00	4.00	mg/L			05/09/24 17:56	1
Hydroxide Alkalinity	<4.00	U	4.00	4.00	mg/L			05/09/24 17:56	1
Phenolphthalein Alkalinity	<4.00	U	4.00	4.00	mg/L			05/09/24 17:56	1

Lab Sample ID: LCS 860-159563/3

Matrix: Water

Analysis Batch: 159563

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	236.1		mg/L		94	85 - 115

Lab Sample ID: LCSD 860-159563/4

Matrix: Water

Analysis Batch: 159563

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	236.1		mg/L		94	85 - 115	0	20

Eurofins Midland

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 880-42711-1 DU

Matrix: Water

Analysis Batch: 159563

Client Sample ID: TX 10069-005

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	106	^2	106.9		mg/L		0.6	20
Bicarbonate Alkalinity as CaCO3	106	^2	106.9		mg/L		0.6	20
Carbonate Alkalinity as CaCO3	<4.00	U	<4.00	U	mg/L		NC	20
Hydroxide Alkalinity	<4.00	U	<4.00	U	mg/L		NC	20
Phenolphthalein Alkalinity	<4.00	U	<4.00	U	mg/L		NC	20

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 860-159170/2

Matrix: Water

Analysis Batch: 159170

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<10.0	U	10.0	10.0	umho/cm @ 25C			05/08/24 00:49	1

Lab Sample ID: LCS 860-159170/3

Matrix: Water

Analysis Batch: 159170

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	1410	1411		umho/cm @ 25C		100	90 - 110

Lab Sample ID: LCSD 860-159170/4

Matrix: Water

Analysis Batch: 159170

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Specific Conductance	1410	1402		umho/cm @ 25C		99	90 - 110	1	20

Lab Sample ID: LLCS 860-159170/5

Matrix: Water

Analysis Batch: 159170

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	10.0	12.52		umho/cm @ 25C		125	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 860-158124/1

Matrix: Water

Analysis Batch: 158124

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<5.00	U	5.00	5.00	mg/L			05/02/24 13:30	1

Eurofins Midland

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 860-158124/2

Matrix: Water

Analysis Batch: 158124

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	982.0		mg/L		98	80 - 120

Lab Sample ID: LCSD 860-158124/3

Matrix: Water

Analysis Batch: 158124

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	1000	978.0		mg/L		98	80 - 120	0	10

Lab Sample ID: LLCS 860-158124/4

Matrix: Water

Analysis Batch: 158124

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	5.00	6.500		mg/L		130	50 - 150

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 860-157831/1

Matrix: Water

Analysis Batch: 157831

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<4.00	U	4.00	4.00	mg/L			05/01/24 10:51	1

Lab Sample ID: LCS 860-157831/2

Matrix: Water

Analysis Batch: 157831

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	106.0		mg/L		106	80 - 120

Lab Sample ID: LCSD 860-157831/3

Matrix: Water

Analysis Batch: 157831

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Suspended Solids	100	98.00		mg/L		98	80 - 120	8	10

Method: SM 4500 Cl G - Chlorine, Residual

Lab Sample ID: MB 860-157484/3

Matrix: Water

Analysis Batch: 157484

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine, Total Residual	<0.0500	U	0.0500	0.0500	mg/L			04/29/24 18:08	1

Eurofins Midland

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method: SM 4500 Cl G - Chlorine, Residual (Continued)

Lab Sample ID: LCS 860-157484/4

Matrix: Water

Analysis Batch: 157484

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorine, Total Residual	0.250	0.2444		mg/L		98	85 - 115

Lab Sample ID: LCSD 860-157484/5

Matrix: Water

Analysis Batch: 157484

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorine, Total Residual	0.250	0.2380		mg/L		95	85 - 115	3	20

Method: SM5210B CBOD - Carbonaceous BOD, 5 Day

Lab Sample ID: SCB 860-158533/2

Matrix: Water

Analysis Batch: 158533

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonaceous Biochemical Oxygen Demand	0.7680		0.0000020 0	0.0000020 0	mg/L			04/26/24 18:34	1

Lab Sample ID: USB 860-158533/1

Matrix: Water

Analysis Batch: 158533

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonaceous Biochemical Oxygen Demand	<0.00000200	U	0.0000020 0	0.0000020 0	mg/L			04/26/24 18:31	1

Lab Sample ID: LCS 860-158533/3

Matrix: Water

Analysis Batch: 158533

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbonaceous Biochemical Oxygen Demand	198	227.2		mg/L		115	85 - 115

QC Association Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

GC/MS VOA

Analysis Batch: 157986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	624.1	
MB 860-157986/9	Method Blank	Total/NA	Water	624.1	
LCS 860-157986/3	Lab Control Sample	Total/NA	Water	624.1	
LCSD 860-157986/4	Lab Control Sample Dup	Total/NA	Water	624.1	

Analysis Batch: 158022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1 - DL	TX 10069-005	Total/NA	Water	624.1	
MB 860-158022/10	Method Blank	Total/NA	Water	624.1	
LCS 860-158022/3	Lab Control Sample	Total/NA	Water	624.1	
LCSD 860-158022/4	Lab Control Sample Dup	Total/NA	Water	624.1	

GC/MS Semi VOA

Prep Batch: 157695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	625	
MB 860-157695/1-A	Method Blank	Total/NA	Water	625	
LCS 860-157695/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 860-157695/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 158078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	625.1	157695
MB 860-157695/1-A	Method Blank	Total/NA	Water	625.1	157695
LCS 860-157695/2-A	Lab Control Sample	Total/NA	Water	625.1	157695
LCSD 860-157695/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	157695

Prep Batch: 435885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	Organotin	
MB 570-435885/1-A	Method Blank	Total/NA	Water	Organotin	
LCS 570-435885/2-A	Lab Control Sample	Total/NA	Water	Organotin	
LCSD 570-435885/3-A	Lab Control Sample Dup	Total/NA	Water	Organotin	

Analysis Batch: 436315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-435885/1-A	Method Blank	Total/NA	Water	Organotins SIM	435885
LCS 570-435885/2-A	Lab Control Sample	Total/NA	Water	Organotins SIM	435885
LCSD 570-435885/3-A	Lab Control Sample Dup	Total/NA	Water	Organotins SIM	435885

Analysis Batch: 438256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	Organotins SIM	435885

GC Semi VOA

Prep Batch: 16690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	608	
MB 192-16690/1-A	Method Blank	Total/NA	Water	608	
LCS 192-16690/2-A	Lab Control Sample	Total/NA	Water	608	

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QC Association Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

GC Semi VOA (Continued)

Prep Batch: 16690 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 192-16690/3-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 16861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	608.3	16690
MB 192-16690/1-A	Method Blank	Total/NA	Water	608.3	16690
LCS 192-16690/2-A	Lab Control Sample	Total/NA	Water	608.3	16690
LCSD 192-16690/3-A	Lab Control Sample Dup	Total/NA	Water	608.3	16690

Prep Batch: 157274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	3511	
MB 860-157274/1-A	Method Blank	Total/NA	Water	3511	
LCS 860-157274/2-A	Lab Control Sample	Total/NA	Water	3511	
LCSD 860-157274/3-A	Lab Control Sample Dup	Total/NA	Water	3511	

Analysis Batch: 157351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	615	157274
MB 860-157274/1-A	Method Blank	Total/NA	Water	615	157274
LCS 860-157274/2-A	Lab Control Sample	Total/NA	Water	615	157274
LCSD 860-157274/3-A	Lab Control Sample Dup	Total/NA	Water	615	157274

Prep Batch: 157425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	608	
MB 860-157425/1-A	Method Blank	Total/NA	Water	608	
LCS 860-157425/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 860-157425/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 860-157425/3-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 860-157425/5-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 157570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	608.3	157425
MB 860-157425/1-A	Method Blank	Total/NA	Water	608.3	157425
LCS 860-157425/4-A	Lab Control Sample	Total/NA	Water	608.3	157425
LCSD 860-157425/5-A	Lab Control Sample Dup	Total/NA	Water	608.3	157425

Analysis Batch: 157578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 860-157425/1-A	Method Blank	Total/NA	Water	608.3	157425
LCS 860-157425/2-A	Lab Control Sample	Total/NA	Water	608.3	157425
LCSD 860-157425/3-A	Lab Control Sample Dup	Total/NA	Water	608.3	157425

Analysis Batch: 157789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	608.3	157425

Eurofins Midland

QC Association Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

GC Semi VOA

Prep Batch: 651449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	614	
MB 280-651449/1-A	Method Blank	Total/NA	Water	614	
LCS 280-651449/2-A	Lab Control Sample	Total/NA	Water	614	
LCSD 280-651449/3-A	Lab Control Sample Dup	Total/NA	Water	614	

Analysis Batch: 651796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	614	651449
MB 280-651449/1-A	Method Blank	Total/NA	Water	614	651449
LCS 280-651449/2-A	Lab Control Sample	Total/NA	Water	614	651449
LCSD 280-651449/3-A	Lab Control Sample Dup	Total/NA	Water	614	651449

HPLC/IC

Analysis Batch: 157125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	300.0	
880-42711-1 - DL	TX 10069-005	Total/NA	Water	300.0	
MB 860-157125/3	Method Blank	Total/NA	Water	300.0	
LCS 860-157125/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-157125/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-157125/7	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 157126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	300.0	
MB 860-157126/3	Method Blank	Total/NA	Water	300.0	
LCS 860-157126/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-157126/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-157126/6	Lab Control Sample	Total/NA	Water	300.0	

Prep Batch: 157696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	CWA_Prep	
MB 860-157696/1-A	Method Blank	Total/NA	Water	CWA_Prep	
LCS 860-157696/2-A	Lab Control Sample	Total/NA	Water	CWA_Prep	
LCSD 860-157696/3-A	Lab Control Sample Dup	Total/NA	Water	CWA_Prep	

Analysis Batch: 159127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	632	157696
MB 860-157696/1-A	Method Blank	Total/NA	Water	632	157696
LCS 860-157696/2-A	Lab Control Sample	Total/NA	Water	632	157696
LCSD 860-157696/3-A	Lab Control Sample Dup	Total/NA	Water	632	157696

Analysis Batch: 159133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	632	157696
MB 860-157696/1-A	Method Blank	Total/NA	Water	632	157696
LCS 860-157696/2-A	Lab Control Sample	Total/NA	Water	632	157696
LCSD 860-157696/3-A	Lab Control Sample Dup	Total/NA	Water	632	157696

Eurofins Midland

QC Association Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Metals

Prep Batch: 157820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total Recoverable	Water	200.8	
MB 860-157820/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 860-157820/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 860-157820/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	

Analysis Batch: 157905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total Recoverable	Water	200.8	157820
880-42711-1	TX 10069-005	Total Recoverable	Water	200.8	157820
MB 860-157820/1-A	Method Blank	Total Recoverable	Water	200.8	157820
LCS 860-157820/2-A	Lab Control Sample	Total Recoverable	Water	200.8	157820
LCSD 860-157820/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	157820

Prep Batch: 670530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	1631E	
MB 400-670530/12-A	Method Blank	Total/NA	Water	1631E	
LCS 400-670530/13-A	Lab Control Sample	Total/NA	Water	1631E	
LCSD 400-670530/14-A	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 670605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	1631E	670530
MB 400-670530/12-A	Method Blank	Total/NA	Water	1631E	670530
LCS 400-670530/13-A	Lab Control Sample	Total/NA	Water	1631E	670530
LCSD 400-670530/14-A	Lab Control Sample Dup	Total/NA	Water	1631E	670530

General Chemistry

Analysis Batch: 79367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	7196A	
MB 880-79367/3	Method Blank	Total/NA	Water	7196A	
LCS 880-79367/4	Lab Control Sample	Total/NA	Water	7196A	
LCSD 880-79367/5	Lab Control Sample Dup	Total/NA	Water	7196A	
880-42711-1 MS	TX 10069-005	Total/NA	Water	7196A	
880-42711-1 MSD	TX 10069-005	Total/NA	Water	7196A	

Prep Batch: 157160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	BOD Prep	

Analysis Batch: 157484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	SM 4500 Cl G	
MB 860-157484/3	Method Blank	Total/NA	Water	SM 4500 Cl G	
LCS 860-157484/4	Lab Control Sample	Total/NA	Water	SM 4500 Cl G	
LCSD 860-157484/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 Cl G	

Eurofins Midland

QC Association Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

General Chemistry

Analysis Batch: 157831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	SM 2540D	
MB 860-157831/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 860-157831/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 860-157831/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 158124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	SM 2540C	
MB 860-158124/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-158124/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-158124/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-158124/4	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 158147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	7196A	

Analysis Batch: 158533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	SM5210B CBOD	157160
SCB 860-158533/2	Method Blank	Total/NA	Water	SM5210B CBOD	
USB 860-158533/1	Method Blank	Total/NA	Water	SM5210B CBOD	
LCS 860-158533/3	Lab Control Sample	Total/NA	Water	SM5210B CBOD	

Analysis Batch: 159003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	360.1	

Analysis Batch: 159170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	SM 2510B	
MB 860-159170/2	Method Blank	Total/NA	Water	SM 2510B	
LCS 860-159170/3	Lab Control Sample	Total/NA	Water	SM 2510B	
LCSD 860-159170/4	Lab Control Sample Dup	Total/NA	Water	SM 2510B	
LLCS 860-159170/5	Lab Control Sample	Total/NA	Water	SM 2510B	

Analysis Batch: 159171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 159372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	Kelada 01	
MB 860-159372/24	Method Blank	Total/NA	Water	Kelada 01	
MB 860-159372/64	Method Blank	Total/NA	Water	Kelada 01	
LCS 860-159372/26	Lab Control Sample	Total/NA	Water	Kelada 01	
LCS 860-159372/65	Lab Control Sample	Total/NA	Water	Kelada 01	
LCSD 860-159372/27	Lab Control Sample Dup	Total/NA	Water	Kelada 01	
LCSD 860-159372/66	Lab Control Sample Dup	Total/NA	Water	Kelada 01	
LLCS 860-159372/25	Lab Control Sample	Total/NA	Water	Kelada 01	

Eurofins Midland

QC Association Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

General Chemistry

Analysis Batch: 159375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 860-159375/96	Method Blank	Total/NA	Water	350.1	
LCS 860-159375/98	Lab Control Sample	Total/NA	Water	350.1	
LCSD 860-159375/99	Lab Control Sample Dup	Total/NA	Water	350.1	
LLCS 860-159375/97	Lab Control Sample	Total/NA	Water	350.1	

Prep Batch: 159510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	351.2	
MB 860-159510/4-A	Method Blank	Total/NA	Water	351.2	
LCS 860-159510/6-A	Lab Control Sample	Total/NA	Water	351.2	
LCSD 860-159510/7-A	Lab Control Sample Dup	Total/NA	Water	351.2	
LLCS 860-159510/5-A	Lab Control Sample	Total/NA	Water	351.2	

Analysis Batch: 159558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	365.1	
MB 860-159558/55	Method Blank	Total/NA	Water	365.1	
LCS 860-159558/56	Lab Control Sample	Total/NA	Water	365.1	
LCSD 860-159558/57	Lab Control Sample Dup	Total/NA	Water	365.1	

Analysis Batch: 159563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	SM 2320B	
MB 860-159563/2	Method Blank	Total/NA	Water	SM 2320B	
LCS 860-159563/3	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 860-159563/4	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
880-42711-1 DU	TX 10069-005	Total/NA	Water	SM 2320B	

Analysis Batch: 160076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	350.1	
MB 860-160076/16	Method Blank	Total/NA	Water	350.1	
MB 860-160076/56	Method Blank	Total/NA	Water	350.1	
LCS 860-160076/57	Lab Control Sample	Total/NA	Water	350.1	
LCSD 860-160076/58	Lab Control Sample Dup	Total/NA	Water	350.1	
LLCS 860-160076/19	Lab Control Sample	Total/NA	Water	350.1	

Analysis Batch: 160080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	351.2	159510
MB 860-159510/4-A	Method Blank	Total/NA	Water	351.2	159510
LCS 860-159510/6-A	Lab Control Sample	Total/NA	Water	351.2	159510
LCSD 860-159510/7-A	Lab Control Sample Dup	Total/NA	Water	351.2	159510
LLCS 860-159510/5-A	Lab Control Sample	Total/NA	Water	351.2	159510

Analysis Batch: 160353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	1664B	
MB 860-160353/1	Method Blank	Total/NA	Water	1664B	
LCS 860-160353/2	Lab Control Sample	Total/NA	Water	1664B	
LCSD 860-160353/3	Lab Control Sample Dup	Total/NA	Water	1664B	

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QC Association Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

General Chemistry

Analysis Batch: 160566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	420.4	
MB 860-160566/143	Method Blank	Total/NA	Water	420.4	
LCS 860-160566/144	Lab Control Sample	Total/NA	Water	420.4	
LCSD 860-160566/145	Lab Control Sample Dup	Total/NA	Water	420.4	

Analysis Batch: 160889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	365.1	
MB 860-160889/16	Method Blank	Total/NA	Water	365.1	
LCS 860-160889/17	Lab Control Sample	Total/NA	Water	365.1	
LCSD 860-160889/18	Lab Control Sample Dup	Total/NA	Water	365.1	

Biology

Analysis Batch: 2586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-42711-1	TX 10069-005	Total/NA	Water	9223B	

Lab Chronicle

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Client Sample ID: TX 10069-005

Lab Sample ID: 880-42711-1

Date Collected: 04/25/24 08:42

Matrix: Water

Date Received: 04/25/24 10:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	157986	05/02/24 03:39	A1S	EET HOU
Total/NA	Analysis	624.1	DL	5	5 mL	5 mL	158022	05/02/24 12:39	NA	EET HOU
Total/NA	Prep	625			1000 mL	1.00 mL	157695	04/30/24 16:14	DR	EET HOU
Total/NA	Analysis	625.1		1	1 mL	1 mL	158078	05/02/24 18:18	PXS	EET HOU
Total/NA	Prep	Organotin			1048.9 mL	1 mL	435885	04/30/24 16:40	UWEZ	EET CAL 4
Total/NA	Analysis	Organotins SIM		1	1 mL	1 mL	438256	05/07/24 17:41	ULLI	EET CAL 4
Total/NA	Prep	608			1000 mL	1 mL	157425	04/29/24 15:17	BH	EET HOU
Total/NA	Analysis	608.3		1			157570	04/30/24 17:23	WP	EET HOU
Total/NA	Prep	608			1000 mL	1 mL	157425	04/29/24 15:17	BH	EET HOU
Total/NA	Analysis	608.3		1			157789	05/01/24 13:26	WP	EET HOU
Total/NA	Prep	608			510 mL	5 mL	16690	04/26/24 09:48	SS	EET ARK
Total/NA	Analysis	608.3		1			16861	04/30/24 23:07	SS	EET ARK
Total/NA	Prep	614			1039.2 mL	2 mL	651449	04/30/24 10:41	DN	EET DEN
Total/NA	Analysis	614		1	0.25 mL	0.25 mL	651796	05/03/24 07:00	SP	EET DEN
Total/NA	Prep	3511			51.6 mL	4 mL	157274	04/29/24 07:00	TH	EET HOU
Total/NA	Analysis	615		1			157351	04/29/24 22:14	WP	EET HOU
Total/NA	Analysis	300.0		1			157125	04/26/24 23:07	A1S	EET HOU
Total/NA	Analysis	300.0		1			157126	04/26/24 23:07	A1S	EET HOU
Total/NA	Analysis	300.0	DL	10			157125	04/26/24 23:17	A1S	EET HOU
Total/NA	Prep	CWA_Prep			1000 mL	10 mL	157696	04/30/24 16:17	DR	EET HOU
Total/NA	Analysis	632		1			159127	05/07/24 23:00	YG	EET HOU
Total/NA	Prep	CWA_Prep			1000 mL	10 mL	157696	04/30/24 16:17	DR	EET HOU
Total/NA	Analysis	632		1			159133	05/09/24 05:29	YG	EET HOU
Total/NA	Prep	1631E			40 mL	40 mL	670530	05/03/24 15:50	VLC	EET PEN
Completed:								05/06/24 09:36 ¹		
Total/NA	Analysis	1631E		1			670605	05/06/24 13:10	VLC	EET PEN
Total Recoverable	Prep	200.8			50 mL	50 mL	157820	05/01/24 10:30	MD	EET HOU
Total Recoverable	Analysis	200.8		1			157905	05/01/24 17:05	DP	EET HOU
Total Recoverable	Prep	200.8			50 mL	50 mL	157820	05/01/24 10:30	MD	EET HOU
Total Recoverable	Analysis	200.8		50			157905	05/01/24 17:11	DP	EET HOU
Total/NA	Analysis	1664B		1	1000 mL	1000 mL	160353	05/15/24 10:59	TB	EET HOU
Total/NA	Analysis	350.1		1	10 mL	10 mL	160076	05/13/24 15:08	AA	EET HOU
Total/NA	Prep	351.2			20 mL	20 mL	159510	05/10/24 01:24	MLEI	EET HOU
Total/NA	Analysis	351.2		1			160080	05/13/24 17:33	LD	EET HOU
Total/NA	Analysis	360.1		1			159003	05/07/24 19:39	HN	EET HOU
Total/NA	Analysis	365.1		1	10 mL	10 mL	159558	05/09/24 20:54	HN	EET HOU
Total/NA	Analysis	365.1		10	10 mL	10 mL	160889	05/16/24 14:55	HN	EET HOU
Total/NA	Analysis	420.4		1	10 mL	10 mL	160566	05/15/24 18:13	AA	EET HOU
Total/NA	Analysis	7196A		1			158147	05/26/24 09:48	JDM	EET HOU
Total/NA	Analysis	7196A		1	97 mL	100 mL	79367	04/25/24 18:58	SMC	EET MID
Total/NA	Analysis	Kelada 01		1	10 mL	10 mL	159372	05/08/24 16:50	AA	EET HOU
Total/NA	Analysis	SM 2320B		1			159563	05/09/24 20:40	SC	EET HOU

Eurofins Midland

Lab Chronicle

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Client Sample ID: TX 10069-005

Lab Sample ID: 880-42711-1

Date Collected: 04/25/24 08:42

Matrix: Water

Date Received: 04/25/24 10:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2510B		1			159170	05/08/24 01:20	RY	EET HOU
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	158124	05/02/24 13:30	TR	EET HOU
Total/NA	Analysis	SM 2540D		1	575 mL	1000 mL	157831	05/01/24 10:53	FN	EET HOU
Total/NA	Analysis	SM 4500 Cl G		1	10 mL	10 mL	157484	04/29/24 18:10	SCI	EET HOU
Total/NA	Analysis	SM 4500 H+ B		1			159171	05/08/24 01:20	RY	EET HOU
Total/NA	Prep	BOD Prep					157160	04/26/24 18:31	ALL	EET HOU
Total/NA	Analysis	SM5210B CBOD		1	280 mL	300 mL	158533	04/26/24 18:54	ALL	EET HOU
Total/NA	Analysis	9223B		1	100 mL	100 mL	2586	04/26/24 16:45	CT	EET LUB

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

= EMLab P&K - Houston, 6110 W. 34th Street, Houston, TX 77092
EET ARK = Eurofins Arkansas, 8600 Kanis Rd, Little Rock, AR 72204, TEL (501)224-5060
EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494
EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200
EET LUB = Eurofins Lubbock, 6701 Aberdeen Ave., Suite 8, Lubbock, TX 79424, TEL (806)794-1296
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440
EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Accreditation/Certification Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Laboratory: Eurofins Midland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

Laboratory: Eurofins Arkansas

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	60-0889	03-02-25
Florida	NELAP	E87118	06-30-24
Iowa	State	436 Cert 10 02 2023	10-02-24
Louisiana (All)	NELAP	01946	06-30-24
Oklahoma	State	8709	08-31-24
Oregon	NELAP	4192-001	07-11-24
Texas	NELAP	T104704575-23-1	05-19-24
Washington	State	C1087	07-13-24

Laboratory: Eurofins Calscience

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0830	11-16-24
California	Los Angeles County Sanitation Districts	10109	08-01-24
California	State	3082	07-31-24
Kansas	NELAP	E-10420	08-01-24
Nevada	State	CA00111	05-19-24
Oregon	NELAP	4175	02-03-25
USDA	US Federal Programs	P330-22-00059	06-08-26
Washington	State	C916-18	10-11-24

Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-24
A2LA	ISO/IEC 17025	2907.01	10-31-25
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	11-30-25
Arizona	State	AZ0713	12-20-24
Arkansas DEQ	State	19-047-0	04-21-24 *
California	State	2513	01-08-25
Connecticut	State	PH-0686	09-30-24
Florida	NELAP	E87667-57	06-30-24
Georgia	State	4025-011	01-08-25
Illinois	NELAP	2000172024-9	05-28-24
Iowa	State	370	12-01-24
Kansas	NELAP	E-10166	05-23-24
Kentucky (WW)	State	KY98047	12-31-24
Louisiana	NELAP	30785	06-30-14 *
Louisiana (All)	NELAP	30785	06-30-24
Minnesota	NELAP	1788752	05-12-24
Nevada	State	CO000262024-08	05-19-24
New Hampshire	NELAP	2053	04-28-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Midland

Accreditation/Certification Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Laboratory: Eurofins Denver (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Jersey	NELAP	230001	06-30-24
New York	NELAP	59923	04-01-25
North Dakota	State	R-034	01-08-24 *
Oklahoma	NELAP	8614	08-31-24
Oregon	NELAP	4025-020	05-20-24
Pennsylvania	NELAP	013	07-31-24
South Carolina	State	72002001	01-08-24 *
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-23-23	09-30-24
USDA	US Federal Programs	P330-20-00065	12-19-25
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-24
Virginia	NELAP	460232	06-14-24
Washington	State	C583	08-03-24
West Virginia DEP	State	354	11-30-24
Wisconsin	State	999615430	08-31-24
Wyoming (UST)	A2LA	2907.01	10-31-25

Laboratory: Eurofins Houston

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
365.1		Water	Phosphorus Pentoxide
420.4		Water	Phenols, Total
608.3	608	Water	Dicofol
608.3	608	Water	Endrin ketone
608.3	608	Water	Mirex
608.3	608	Water	Polychlorinated biphenyls, Total
624.1		Water	1,2,4-Trichlorobenzene
624.1		Water	1,3-Dichloropropylene
624.1		Water	Hexachlorobutadiene
624.1		Water	Naphthalene
624.1		Water	Trihalomethanes, Total
625.1	625	Water	Hexachlorophene
625.1	625	Water	m & p - Cresol
625.1	625	Water	Nonylphenol
625.1	625	Water	Total Cresols
632	CWA_Prep	Water	Diuron
7196A		Water	Cr (III)
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2320B		Water	Hydroxide Alkalinity
SM 2320B		Water	Phenolphthalein Alkalinity
SM 2540D		Water	Total Suspended Solids
SM 4500 H+ B		Water	Temperature

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Midland

Accreditation/Certification Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Laboratory: Eurofins Lubbock

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704219	03-31-25

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-24
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-00689	08-01-24
California	State	2510	06-30-24
Florida	NELAP	E81010	06-30-24
Georgia	State	E81010(FL)	06-30-24
Illinois	NELAP	200041	10-09-24
Kansas	NELAP	E-10253	10-31-24
Kentucky (UST)	State	53	06-30-24
Louisiana (All)	NELAP	30976	06-30-24
Louisiana (DW)	State	LA017	12-31-24
North Carolina (WW/SW)	State	314	12-31-24
Oklahoma	NELAP	9810	08-31-24
Pennsylvania	NELAP	68-00467	01-31-25
South Carolina	State	96026	06-30-24
Tennessee	State	TN02907	06-30-24
Texas	NELAP	T104704286	09-30-24
US Fish & Wildlife	US Federal Programs	A22340	06-30-24
USDA	US Federal Programs	FLGNV23001	01-08-26
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-24
West Virginia DEP	State	136	03-31-25

Method Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	EPA	EET HOU
625.1	Semivolatile Organic Compounds (GC/MS)	EPA	EET HOU
Organotins SIM	Organotins (GC/MS SIM)	Lab SOP	EET CAL 4
608.3	Organochlorine Pesticides in Water	EPA	EET ARK
608.3	Organochlorine Pesticides in Water	EPA	EET HOU
608.3	Polychlorinated Biphenyls (PCBs) (GC)	EPA	EET HOU
614	Organophosphorous Pesticides (GC)	EPA-01	EET DEN
615	Herbicides (GC)	EPA-01	EET HOU
300.0	Anions, Ion Chromatography	EPA	EET HOU
632	Carbamate and Urea Pesticides (HPLC)	EPA-01	EET HOU
1631E	Mercury, Low Level (CVAFS)	EPA	EET PEN
200.8	Metals (ICP/MS)	EPA	EET HOU
1664B	HEM and SGT-HEM	1664B	EET HOU
350.1	Nitrogen, Ammonia	EPA	EET HOU
351.2	Nitrogen, Total Kjeldahl	EPA	EET HOU
360.1	Oxygen, Dissolved	EPA	EET HOU
365.1	Phosphorus, Total	EPA	EET HOU
420.4	Phenolics, Total Recoverable	EPA	EET HOU
7196A	Chromium, Trivalent (Colorimetric)	SW846	EET HOU
7196A	Chromium, Hexavalent	SW846	EET MID
Kelada 01	Cyanide, Total, Acid Dissociable and Thiocyanate	EPA	EET HOU
SM 2320B	Alkalinity	SM	EET HOU
SM 2510B	Conductivity, Specific Conductance	SM	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU
SM 2540D	Solids, Total Suspended (TSS)	SM	EET HOU
SM 4500 Cl G	Chlorine, Residual	SM	EET HOU
SM 4500 H+ B	pH	SM	EET HOU
SM5210B CBOD	Carbonaceous BOD, 5 Day	SM	EET HOU
9223B	Coliforms, Total, and E.Coll (Colilert - Quanti Tray)	SM	EET LUB
9230B	SM 9230B Enterococci	SM	
1631E	Preparation, Mercury, Low Level	EPA	EET PEN
200.8	Preparation, Total Recoverable Metals	EPA	EET HOU
351.2	Nitrogen, Total Kjeldahl	EPA	EET HOU
3511	Microextraction of Organic Compounds	SW846	EET HOU
608	Liquid-Liquid Extraction (Separatory Funnel)	EPA	EET ARK
608	Liquid-Liquid Extraction (Separatory Funnel)	EPA	EET HOU
614	Liquid-Liquid Extraction	EPA-01	EET DEN
625	Liquid-Liquid Extraction	EPA	EET HOU
BOD Prep	Preparation, BOD	SM	EET HOU
CWA_Prep	Liquid-Liquid Extraction (Separatory Funnel)	EPA	EET HOU
Organotin	Extraction (Organotins)	WRC	EET CAL 4

Protocol References:

1664B = EPA-821-98-002

EPA = US Environmental Protection Agency

EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.

Lab SOP = Laboratory Standard Operating Procedure

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WRC = WRC Notebook 11431-39, ICI America's Western Research Center May, 1989.

Method Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Method	Method Description	Protocol	Laboratory
Laboratory References:			
	= EMLab P&K - Houston, 6110 W. 34th Street, Houston, TX 77092		
	EET ARK = Eurofins Arkansas, 8600 Kanis Rd, Little Rock, AR 72204, TEL (501)224-5060		
	EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494		
	EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100		
	EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200		
	EET LUB = Eurofins Lubbock, 6701 Aberdeen Ave., Suite 8, Lubbock, TX 79424, TEL (806)794-1296		
	EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		
	EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001		

Sample Summary

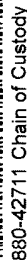
Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-42711-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-42711-1	TX 10069-005	Water	04/25/24 08:42	04/25/24 10:39

- 1
- 2
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Shirley M. Jones



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1 2 3 4 5 6 7 8 9 10 11 12 13 14 Ver. 01/16/2019

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003623458

ORIGIN ID:MAFA (432) 563-1800
SAMPLE RECEIVING
XENCO LABORATORIES-ODESSA
1211 W. FLORIDA AVE.

SHIP DATE: 25APR24
ACTWGT: 20.00 LB
CAD: 7354048/INET4730

MIDLAND, TX 79701
UNITED STATES US

BILL SENDER

TO: EUROFINS CALSCIENCE, LLC
EUROFINS CALSCIENCE, LLC
2841 DOW AVE



880-42711 Waybill

663 610 FEG 9A E3

TUSTIN CA 92780

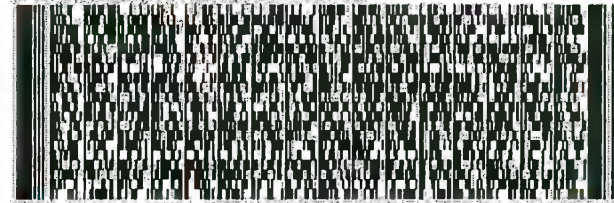
(714) 895-5494

REF:

INV:

DEPT:

PO:



FedEx
Express



40012 40012 001 04

FedEx Ship Manager - Print Your Label(s)

FRI - 26 APR 10:30A

PRIORITY OVERNIGHT

TRK#
0201

7761 0758 6710

A7 DTHA

92780

CA-US SNA



4/25/24, 11:59 AM

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Chain of Custody Record

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Phone: 432-704-5440

Client Information (Sub Contract Lab)

Client Contact: **Shipping/Receiving**
Company: **TestAmerica Laboratories, Inc.**
Address: **4955 Yarrow Street,**
City: **Arvada**
State, Zip: **CO, 80002**
Phone: **303-736-0100(Tel) 303-431-7171(Fax)**
Email:
Project Name: **Big Spring TPDES Permit Renewal**
Site:

Lab PM: **Taylor, Holly**
E-Mail: **Holly.Taylor@eurofins.com**
Accreditations Required (See note): **NELAP - Texas**

Carrier Tracking No(s): **880-10017-1**
Page: **Page 1 of 1**
Job #: **880-42711-1**
Preservation Codes:

Due Date Requested: **5/1/2024**
TAT Requested (days):

PO #:
WO #:
Project #: **88002100**
SSOW#:

Sample Date: **4/25/24**
Sample Time: **08:42 Central**
Sample Type (C=Comp, G=grab):
Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air): **Water**

Field Filtered Sample (Yes or No): **X**
Perform MS/MSD (Yes or No): **X**
Pesticides (GC): **614/614 Prep (MOD) Organophosphorous**

Total Number of containers: **2**
Special Instructions/Note:

Other:

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For **Months**

Possible Hazard Identification
Unconfirmed
Deliverable Requested: I, II, III, IV, Other (specify) **Primary Deliverable Rank: 2**

Empty Kit Relinquished by: **J. Vasquez**
Relinquished by:
Relinquished by:
Relinquished by:

Relinquished by:
Relinquished by:
Relinquished by:
Relinquished by:

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Relinquished by:
Relinquished by:
Relinquished by:

Custody Seal No.: **03**
Custody Seal Intact: **Yes**

Ver: 06/08/2021

1211 W. Florida Ave
Midland, TX 79701
Phone: 432-704-5440

Loc: 880
42711



880-42711 Chain of Custody

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.

Possible Hazard Identification

Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify)

Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by:

Date:

Time:

Method of Shipment:

Relinquished by:

Date/Time:

Company

Received by:

Date/Time:

Company

Relinquished by:

Date/Time:

	Company
--	---------

Received by:

Date/Time:

	Company
--	---------

Relinquished by:

Date/Time:

Company	
---------	--

Received by:

Date/Time:

Company	Revenue	Profit	Assets	Liabilities	Equity
Company A	100	20	120	80	40
Company B	150	30	180	120	60
Company C	200	40	240	160	80
Company D	250	50	300	200	100
Company E	300	60	360	240	120
Company F	350	70	420	280	140
Company G	400	80	480	320	160
Company H	450	90	540	360	180
Company I	500	100	600	400	200
Company J	550	110	660	440	220
Company K	600	120	720	480	240
Company L	650	130	780	520	260
Company M	700	140	840	560	280
Company N	750	150	900	600	300
Company O	800	160	960	640	320
Company P	850	170	1020	680	340
Company Q	900	180	1080	720	360
Company R	950	190	1140	760	380
Company S	1000	200	1200	800	400

Custody Seals Intact:
☐ Yes ☐ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

1-8/1-9 544



Chain of Custody Record

Client Information (Sub Contract Lab)		Lab PM: Taylor, Holly		Carrier Tracking No(s): 880-10024.1	
Client Contact: Shipping/Receiving		E-Mail: Holly.Taylor@eurofins.com		Page: Page 1 of 1	
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 880-42711-1	
Address: 6701 Aberdeen Ave., Suite 8, Lubbock State, Zip: TX, 79424		Due Date Requested: 5/2/2024		Preservation Codes:	
Phone: 806-794-1296(Tel)		TAT Requested (days):			
Email:		PO #			
Project #: 88002100		WO #			
Site: Big Spring TPDES Permit Renewal		Sample Date		Sample Time	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time	
TX 10069-005 (880-42711-1)		4/25/24		08:42 Central	
Sample Type (C=Comp, G=grab)		Sample Matrix (W=Water, S=Solid, O=Volatile, BT=Tissue, A=Air)		Field Filtered Sample (Yes or No)	
Preservation Code:		Water		X	
Perform MS/MSD (Yes or No)		92238, C10T18, 8H/Coliforms, Total, and E.Coli		(Collected -)	
Total Number of Containers		2		Special Instructions/Note:	
Other:					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client		Disposal By Lab	
Special Instructions/QC Requirements:		Date/Time:		Date/Time:	
Empty Kit Relinquished by:		Date/Time:		Date/Time:	
Relinquished by:		Date/Time:		Date/Time:	
Relinquished by:		Date/Time:		Date/Time:	
Custody Seal No.:		Custody Seal No.:		Custody Seal No.:	
Custody Seals Intact: Yes No		Custody Seal No.:		Custody Seal No.:	

Chain of Custody Record



Environment Testine

Eurofins Midland
1211 W Florida Ave
Midland TX 79701
Phone: 432-704-5440

[illegible]

Login Sample Receipt Checklist

Client: Freese and Nichols Inc

Job Number: 880-42711-1

Login Number: 42711

List Source: Eurofins Midland

List Number: 1

Creator: Rodriguez, Leticia

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Login Sample Receipt Checklist

Client: Freese and Nichols Inc

Job Number: 880-42711-1

Login Number: 42711

List Number: 2

Creator: Vang, Matthew

List Source: Eurofins Arkansas

List Creation: 04/26/24 09:42 AM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Freese and Nichols Inc

Job Number: 880-42711-1

Login Number: 42711

List Number: 5

Creator: Khana, Piyush

List Source: Eurofins Calscience

List Creation: 04/26/24 12:06 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Freese and Nichols Inc

Job Number: 880-42711-1

Login Number: 42711

List Number: 6

Creator: Little, Matthew L

List Source: Eurofins Denver

List Creation: 04/27/24 09:56 AM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Freese and Nichols Inc

Job Number: 880-42711-1

Login Number: 42711

List Number: 4

Creator: Baker, Jeremiah

List Source: Eurofins Houston

List Creation: 04/26/24 11:56 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Login Sample Receipt Checklist

Client: Freese and Nichols Inc

Job Number: 880-42711-1

Login Number: 42711

List Number: 3

Creator: Triplett, Colby

List Source: Eurofins Lubbock

List Creation: 04/26/24 10:09 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Freese and Nichols Inc

Job Number: 880-42711-1

Login Number: 42711

List Number: 7

Creator: Pardonner, Brett

List Source: Eurofins Pensacola

List Creation: 04/29/24 10:24 AM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.6°C IR11
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Cassandra Villarreal
Freese and Nichols Inc
801 Cherry St
Ste 2800
Fort Worth, Texas 76102

Generated 7/2/2024 2:43:18 AM

JOB DESCRIPTION

Big Spring TPDES Permit Renewal

JOB NUMBER

880-44956-1

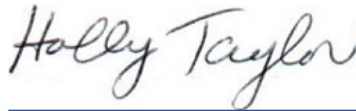
Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
7/2/2024 2:43:18 AM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

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Definitions/Glossary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-44956-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Freese and Nichols Inc
Project: Big Spring TPDES Permit Renewal

Job ID: 880-44956-1

Job ID: 880-44956-1

Eurofins Midland

Job Narrative 880-44956-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 6/19/2024 11:30 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C.

Receipt Exceptions

ICOC received in Denver states 3 containers, we only received 2.
TX10069-003 COBS WWTP (880-44956-1)

Pesticides

Method 614: The initial calibration verification (ICV) result for batch 280-658431 was above the upper control limit. The affected analytes are: Demeton-S. Sample results were non-detects, and have been reported as qualified data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Midland

Client Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-44956-1

Client Sample ID: TX10069-003 COBS WWTP

Lab Sample ID: 880-44956-1

Date Collected: 06/19/24 08:48

Matrix: Water

Date Received: 06/19/24 11:30

Method: EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorpyrifos	<0.00640	U	0.0200	0.00640	ug/L		06/21/24 08:54	06/27/24 23:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	43	p	22 - 117				06/21/24 08:54	06/27/24 23:15	1
DCB Decachlorobiphenyl (Surr)	43	p	1 - 119				06/21/24 08:54	06/27/24 23:15	1

Method: EPA-01 614 - Organophosphorous Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Guthion	<0.343	U	2.43	0.343	ug/L		06/25/24 14:11	06/26/24 23:36	1
Diazinon	<0.143	U	0.486	0.143	ug/L		06/25/24 14:11	06/26/24 23:36	1
Disulfoton	<0.313	U	0.973	0.313	ug/L		06/25/24 14:11	06/26/24 23:36	1
Malathion	<0.129	U	1.95	0.129	ug/L		06/25/24 14:11	06/26/24 23:36	1
Methyl parathion	<0.137	U	3.89	0.137	ug/L		06/25/24 14:11	06/26/24 23:36	1
Ethyl Parathion	<0.140	U	0.973	0.140	ug/L		06/25/24 14:11	06/26/24 23:36	1
Demeton, Total	<0.203	U	2.92	0.203	ug/L		06/25/24 14:11	06/26/24 23:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Chlormephos (Surr)	69		49 - 171				06/25/24 14:11	06/26/24 23:36	1
Triphenylphosphate (Surr)	98		60 - 154				06/25/24 14:11	06/26/24 23:36	1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	0.00320		0.00200	0.000685	mg/L		06/24/24 10:30	06/24/24 15:46	1

Surrogate Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-44956-1

Method: 608.3 - Organochlorine Pesticides in Water

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX1 (22-117)	DCBP1 (1-119)
880-44956-1	TX10069-003 COBS WWTP	43 p	43 p
Surrogate Legend			
TCX = Tetrachloro-m-xylene (Surr)			
DCBP = DCB Decachlorobiphenyl (Surr)			

Method: 614 - Organophosphorous Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	CMF1 (49-171)	TPP1 (60-154)
880-44956-1	TX10069-003 COBS WWTP	69	98
LCS 280-658262/2-A	Lab Control Sample	83	109
MB 280-658262/1-A	Method Blank	77	102
Surrogate Legend			
CMF = Chlormephos (Surr)			
TPP = Triphenylphosphate (Surr)			

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-44956-1

Method: 614 - Organophosphorous Pesticides (GC)

Lab Sample ID: MB 280-658262/1-A

Matrix: Water

Analysis Batch: 658431

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 658262

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Guthion	<0.353	U	2.50	0.353	ug/L		06/25/24 14:11	06/26/24 14:01	1
Diazinon	<0.147	U	0.500	0.147	ug/L		06/25/24 14:11	06/26/24 14:01	1
Disulfoton	<0.322	U	1.00	0.322	ug/L		06/25/24 14:11	06/26/24 14:01	1
Malathion	<0.133	U	2.00	0.133	ug/L		06/25/24 14:11	06/26/24 14:01	1
Methyl parathion	<0.141	U	4.00	0.141	ug/L		06/25/24 14:11	06/26/24 14:01	1
Ethyl Parathion	<0.144	U	1.00	0.144	ug/L		06/25/24 14:11	06/26/24 14:01	1
Demeton, Total	<0.209	U	3.00	0.209	ug/L		06/25/24 14:11	06/26/24 14:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Chlormephos (Surr)	77		49 - 171	06/25/24 14:11	06/26/24 14:01	1
Triphenylphosphate (Surr)	102		60 - 154	06/25/24 14:11	06/26/24 14:01	1

Lab Sample ID: LCS 280-658262/2-A

Matrix: Water

Analysis Batch: 658431

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 658262

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Guthion	4.00	3.811		ug/L		95	42 - 125
Diazinon	4.00	3.632		ug/L		91	47 - 149
Disulfoton	4.00	3.507		ug/L		88	44 - 139
Malathion	4.00	3.823		ug/L		96	53 - 137
Methyl parathion	4.00	3.857	J	ug/L		96	55 - 131
Ethyl Parathion	4.00	4.035		ug/L		101	47 - 142
Demeton, Total	4.00	3.246		ug/L		81	33 - 141

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Chlormephos (Surr)	83		49 - 171
Triphenylphosphate (Surr)	109		60 - 154

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 860-167732/1-A

Matrix: Water

Analysis Batch: 167816

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 167732

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	<0.000685	U	0.00200	0.000685	mg/L		06/24/24 10:30	06/24/24 15:17	1

Lab Sample ID: LCS 860-167732/2-A

Matrix: Water

Analysis Batch: 167816

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 167732

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Selenium	0.100	0.09514		mg/L		95	85 - 115

Eurofins Midland

QC Sample Results

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-44956-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 860-167732/3-A				Client Sample ID: Lab Control Sample Dup							
Matrix: Water				Prep Type: Total Recoverable							
Analysis Batch: 167816				Prep Batch: 167732							
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit		
Selenium	0.100	0.09443		mg/L		94	85 - 115	1	20		

Lab Sample ID: LLCS 860-167732/4-A				Client Sample ID: Lab Control Sample							
Matrix: Water				Prep Type: Total Recoverable							
Analysis Batch: 167816				Prep Batch: 167732							
Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits				
Selenium	0.00200	0.002086		mg/L		104	50 - 150				

QC Association Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-44956-1

GC Semi VOA

Prep Batch: 19096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-44956-1	TX10069-003 COBS WWTP	Total/NA	Water	608	

Analysis Batch: 19472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-44956-1	TX10069-003 COBS WWTP	Total/NA	Water	608.3	19096

Prep Batch: 658262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-44956-1	TX10069-003 COBS WWTP	Total/NA	Water	614	
MB 280-658262/1-A	Method Blank	Total/NA	Water	614	
LCS 280-658262/2-A	Lab Control Sample	Total/NA	Water	614	

Analysis Batch: 658431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-44956-1	TX10069-003 COBS WWTP	Total/NA	Water	614	658262
MB 280-658262/1-A	Method Blank	Total/NA	Water	614	658262
LCS 280-658262/2-A	Lab Control Sample	Total/NA	Water	614	658262

Metals

Prep Batch: 167732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-44956-1	TX10069-003 COBS WWTP	Total Recoverable	Water	200.8	
MB 860-167732/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 860-167732/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 860-167732/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	
LLCS 860-167732/4-A	Lab Control Sample	Total Recoverable	Water	200.8	

Analysis Batch: 167816

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-44956-1	TX10069-003 COBS WWTP	Total Recoverable	Water	200.8	167732
MB 860-167732/1-A	Method Blank	Total Recoverable	Water	200.8	167732
LCS 860-167732/2-A	Lab Control Sample	Total Recoverable	Water	200.8	167732
LCSD 860-167732/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	167732
LLCS 860-167732/4-A	Lab Control Sample	Total Recoverable	Water	200.8	167732

Lab Chronicle

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-44956-1

Client Sample ID: TX10069-003 COBS WWTP
Date Collected: 06/19/24 08:48
Date Received: 06/19/24 11:30

Lab Sample ID: 880-44956-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	608			1000 mL	10 mL	19096	06/21/24 08:54	SS	EET ARK
Total/NA	Analysis	608.3		1			19472	06/27/24 23:15	SS	EET ARK
Total/NA	Prep	614			1027.9 mL	2 mL	658262	06/25/24 14:11	JES	EET DEN
Total/NA	Analysis	614		1	0.25 mL	0.25 mL	658431	06/26/24 23:36	MKW	EET DEN
Total Recoverable	Prep	200.8			50 mL	50 mL	167732	06/24/24 10:30	MD	EET HOU
Total Recoverable	Analysis	200.8		1			167816	06/24/24 15:46	DP	EET HOU

Laboratory References:
EET ARK = Eurofins Arkansas, 8600 Kanis Rd, Little Rock, AR 72204, TEL (501)224-5060
EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Accreditation/Certification Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-44956-1

Laboratory: Eurofins Arkansas

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	60-0889	03-02-25
Florida	NELAP	E87118	06-30-24
Iowa	State	436 Cert 10 02 2023	10-02-24
Louisiana (All)	NELAP	01946	06-30-24
Oklahoma	State	8709	08-31-24
Oregon	NELAP	4192-001	07-11-24
Texas	NELAP	T104704575-23-1	05-31-25
Washington	State	C1087	07-13-24

Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-25
A2LA	ISO/IEC 17025	2907.01	10-31-25
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	06-26-24
Arizona	State	AZ0713	12-20-24
Arkansas DEQ	State	19-047-0	04-21-25
California	State	2513	01-08-25
Connecticut	State	PH-0686	09-30-24
Florida	NELAP	E87667-57	06-30-24
Georgia	State	4025-011	01-08-25
Illinois	NELAP	2000172024-9	05-31-25
Iowa	State	370	12-01-24
Kansas	NELAP	E-10166	04-30-25
Kentucky (WW)	State	KY98047	12-31-24
Louisiana	NELAP	30785	06-30-14 *
Louisiana (All)	NELAP	30785	06-30-25
Minnesota	NELAP	1788752	12-31-24
Nevada	State	CO000262024-08	08-02-24
New Hampshire	NELAP	2053	04-28-25
New Jersey	NELAP	230001	06-30-24
New York	NELAP	59923	04-01-25
North Dakota	State	R-034	01-08-24 *
Oklahoma	NELAP	8614	08-31-24
Oregon	NELAP	4025-020	01-08-25
Pennsylvania	NELAP	013	07-31-24
South Carolina	State	72002001	01-08-24 *
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-23-23	09-30-24
USDA	US Federal Programs	P330-20-00065	12-19-25
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-24
Virginia	NELAP	460232	06-14-25
Washington	State	C583	08-03-24
West Virginia DEP	State	354	11-30-24
Wisconsin	State	999615430	08-31-24
Wyoming (UST)	A2LA	2907.01	10-31-25

Laboratory: Eurofins Houston

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Midland

Accreditation/Certification Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-44956-1

Laboratory: Eurofins Houston (Continued)

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215	06-30-24

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-44956-1

Method	Method Description	Protocol	Laboratory
608.3	Organochlorine Pesticides in Water	EPA	EET ARK
614	Organophosphorous Pesticides (GC)	EPA-01	EET DEN
200.8	Metals (ICP/MS)	EPA	EET HOU
200.8	Preparation, Total Recoverable Metals	EPA	EET HOU
608	Liquid-Liquid Extraction (Separatory Funnel)	EPA	EET ARK
614	Liquid-Liquid Extraction	EPA-01	EET DEN

Protocol References:

EPA = US Environmental Protection Agency

EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.

Laboratory References:

EET ARK = Eurofins Arkansas, 8600 Kanis Rd, Little Rock, AR 72204, TEL (501)224-5060

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: Freese and Nichols Inc
Project/Site: Big Spring TPDES Permit Renewal

Job ID: 880-44956-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-44956-1	TX10069-003 COBS WWTP	Water	06/19/24 08:48	06/19/24 11:30

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Chain of Custody Record



Client Information		Sampler	Lab PM	Carrier Tracking No(s)	COC No.
Client Contact	Phone	Taylor, Holly			880-9792-1375.1
Cassandra Villarreal	E-Mail	Holly.Taylor@et.eurofinsus.com	State of Origin	Page 1 of 1	
Company	PWSID	Analysis Requested			Job #
Freese and Nichols Inc					
Address	Due Date Requested:				Preservation Codes:
801 Cherry St Ste 2800					N - None
City	TAT Requested (days):				D - HNO3
Fort Worth					
State, Zip:	Compliance Project: ☐ Yes ☒ No				
TX, 76102	PO #				
Phone	Purchase Order not required				
817-735-7294(Tel)	WO #				
Email					
Cassandra.villarreal@freese.com	Project #				
Project Name	88002100				
Big Spring TPDES Permit Renewal	SSOW#				
Site					
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, B=soil, O=overhead, BT=biomass, A=air)
TX10069-003 COBS WORT	6/19/24	8:45	G	Water	
		8:46	E	W	
		8:45	E	W	
		8:47	G	W	
		8:46	G	W	
		8:45	G	W	
		8:48	G	W	
		9:48	G	W	
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
☐ Non-Hazard	☐ Flammable	☐ Skin Irritant	☐ Poison B	☐ Unknown	☐ Radiological
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment	
Relinquished by:	Date/Time:	Received by:		Date/Time:	Company
Relinquished by:	6/19/24 - 9:00 AM	Company:		COBS	
Relinquished by:	Date/Time:	Received by:		Date/Time:	Company
Relinquished by:		Received by:		Date/Time:	Company
Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:			
☒ Yes ☐ No		4.3/4.2			



XXL

[illegible]



Chain of Custody Record

[illegible]

Login Sample Receipt Checklist

Client: Freese and Nichols Inc

Job Number: 880-44956-1

Login Number: 44956

List Source: Eurofins Midland

List Number: 1

Creator: Rodriguez, Leticia

Question	Answer	Comment
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		

Login Sample Receipt Checklist

Client: Freese and Nichols Inc

Job Number: 880-44956-1

Login Number: 44956

List Number: 2

Creator: Hansen, Lauren K

List Source: Eurofins Arkansas

List Creation: 06/20/24 09:15 AM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Freese and Nichols Inc

Job Number: 880-44956-1

Login Number: 44956

List Number: 4

Creator: Held, Wesley

List Source: Eurofins Denver

List Creation: 06/20/24 12:23 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Freese and Nichols Inc

Job Number: 880-44956-1

Login Number: 44956

List Number: 3

Creator: Baker, Jeremiah

List Source: Eurofins Houston

List Creation: 06/20/24 12:03 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

August 20, 2024

www.freese.com

Francesca Findlay
Water Quality Division (MC-148)
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Re: Response to TCEQ Notice of Deficiency
Application to Renew Wastewater Permit No. WQ0010069003 (RN101721249)
City of Big Spring (CN600668693)

Dear Ms. Findlay:

The City of Big Spring and Freese and Nichols, Inc. (FNI) received a letter from the Texas Commission on Environmental Quality (TCEQ) dated August 6, 2024 that requested a written response to address the deficiency associated with the application to renew Wastewater Permit No. WQ0010069003. On behalf of the applicant, City of Big Spring, FNI offers the following responses to the TCEQ NOD.

1. Core Data Form, Section II, item 17: Please provide an email address.

An updated Core Data Form with the updated information is included with this correspondence.

2. The following is a portion of the Notice of Receipt of Application and Intent to Obtain a Water Quality Permit 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.

- a. Please correct the city of Big Springs to Big Spring and revise the NORI as follows:

City of Big Springs, 310 Nolan Street, Big Springs, Texas 79720, has applied to the Texas Commission on Environmental Quality (TCEQ) to renew Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0010069003 (EPA I.D. No. TX0047023) to authorize the discharge of treated wastewater at a volume not to exceed an annual average flow of 3,800,000 gallons per day. The domestic wastewater treatment facility is located at 3607 11th Place Ext., in the city of Big Springs, in Howard County, Texas 79720. The discharge route is from the plant site to a ditch; thence to Beals Creek; thence to the Colorado River Below Lake J.B. Thomas. TCEQ received this application on August 5, 2024. The permit application will be available for viewing and copying at City Hall of Big Springs, 310 Nolan Street, Big Springs, in Howard 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/tpdes-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

Ms. Findlay
8/6/2024
Page 2 of 2



location, refer to the application.
<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-101.428,32.255&level=18>
Further information may also be obtained from the City of Big Springs at the address
stated above or by calling Mr. Chad Tidwell, Water/Wastewater Treatment Manager, at
432-264-2389.

Please feel free to contact me if you have any questions or require additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read 'C Villarreal'.

Cassandra Villarreal, M.S.
Freese and Nichols, Inc.

cc: Mr. Shane Bowles, City of Big Spring
Mr. Chad Tidwell, City of Big Spring
File BSP24064

Attachments



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 600668693		RN 101721249

SECTION II: Customer Information

4. General Customer Information		5. Effective Date for Customer Information Updates (mm/dd/yyyy)		7/8/2024	
☐ New Customer ☒ Update to Customer Information ☐ Change in Regulated Entity Ownership					
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)					
<i>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).</i>					
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)				<i>If new Customer, enter previous Customer below:</i>	
City of Big Spring					
7. TX SOS/CPA Filing Number		8. TX State Tax ID (11 digits)		9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)
11. Type of Customer:		☐ Corporation		☐ Individual	Partnership: ☐ General ☐ Limited
Government: ☒ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other		☐ Sole Proprietorship		☐ Other:	
12. Number of Employees				13. Independently Owned and Operated?	
☐ 0-20 ☐ 21-100 ☐ 101-250 ☒ 251-500 ☐ 501 and higher				☒ Yes ☐ No	
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following					
☐ Owner ☐ Operator ☒ Owner & Operator ☐ Other:					
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant					
15. Mailing Address:	310 Nolan Street				
	City	Big Spring	State	TX	ZIP 79720 ZIP + 4
16. Country Mailing Information (if outside USA)				17. E-Mail Address (if applicable)	
N/A				sbowles@mybigspring.com	
18. Telephone Number		19. Extension or Code		20. Fax Number (if applicable)	

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							
<i>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).</i>							
22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)							
City of Big Spring Water Reclamation Plant							
23. Street Address of the Regulated Entity: (No PO Boxes)	3607 11 th Place Ext						
	City	Big Spring	State	TX	ZIP	79720	ZIP + 4
24. County	Howard						

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

25. Description to Physical Location:	N/A						
26. Nearest City					State	Nearest ZIP Code	
Big Spring					TX	79720	
<i>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).</i>							
27. Latitude (N) In Decimal:		32.255528			28. Longitude (W) In Decimal:		-101.428306
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		
32	15	19.9	101	24	41.9		
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)		
4952	4941		221320		221310		
33. What is the Primary Business of this entity? (Do not repeat the SIC or NAICS description.)							
Domestic wastewater treatment							
34. Mailing Address:	310 Nolan Street						
	City	Big Spring	State	TX	ZIP	79720	ZIP + 4
35. E-Mail Address:	sbowles@mybigspring.com						
36. Telephone Number	37. Extension or Code		38. Fax Number (if applicable)				
(432) 264-2392			() -				

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.

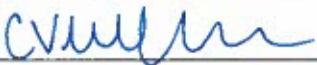
☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☒ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:
	WQ0010069003			

SECTION IV: Preparer Information

40. Name:	Cassandra Villarreal	41. Title:	Environmental Scientist
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(817) 735-7294		() -	cassandra.villarreal@freese.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:	Freese and Nichols, Inc	Job Title:	Environmental Scientist
Name (In Print):	Cassandra Villarreal	Phone:	(817) 735- 7294
Signature:		Date:	7/17/2024

Francesca Findlay

From: Cassandra Villarreal <Cassandra.Villarreal@freese.com>
Sent: Tuesday, August 20, 2024 11:02 AM
To: Francesca Findlay
Cc: sbowles@mybigspring.com; ctidwell@mybigspring.com
Subject: RE: WQ0010069003 City of Big Springs
Attachments: Big Spring Renewal Admin Review NOD Letter.pdf

Caution: This email may contain suspicious content. Please take care when clicking links or opening attachments. When in doubt, contact the TCEQ Help Desk.

Dear Ms. Findlay,

On behalf of the City of Big Spring, Freese and Nichols, Inc. has attached a response letter to the TCEQ NOD letter dated August 6, 2024. Please let me know if you have any questions or require additional information.

Thank you,

Cassie Villarreal, MS | Environmental Scientist | Freese and Nichols, Inc. | 817-735-7294 office | 979-220-1610 mobile | www.freese.com



From: Francesca Findlay <Francesca.Findlay@tceq.texas.gov>
Sent: Tuesday, August 6, 2024 12:59 PM
To: sbowles@mybigspring.com
Cc: Cassandra Villarreal <Cassandra.Villarreal@freese.com>
Subject: FW: WQ0010069003 City of Big Springs

This is an email from an EXTERNAL source. DO NOT click links or open attachments without positive sender verification of purpose. Never enter USERNAME, PASSWORD or sensitive information on linked pages from this email. Please report all suspicious messages using the Report Message button in Outlook.

Dear Mr. Boyles:

The attached Notice of Deficiency letter sent on August 6, 2024, requesting additional information needed to declare the application administratively complete. Please send the complete response to my attention August 20, 2024.

Thank you,

Dan Sindorf

Francesca Findlay
License & Permit Specialist
ARP Team | Water Quality Division
512-239-2441
Texas Commission on Environmental Quality



Please consider whether it is necessary to print this e-mail

This electronic mail message is intended exclusively for the individual or entity to which it is addressed. This message, together with any attachment, may contain the sender's organization's confidential and privileged information. The recipient is hereby notified to treat the information as confidential and privileged and to not disclose or use the information except as authorized by sender's organization. Any unauthorized review, printing, retention, copying, disclosure, distribution, retransmission, dissemination or other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient is prohibited. If you received this message in error, please immediately contact the sender by reply email and delete all copies of the material from any computer. Thank you for your cooperation.

Francesca Findlay

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License & Permit Specialist
ARP Team | Water Quality Division
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Texas Commission on Environmental Quality



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TPDES PERMIT NO.
WQ0010069003
*[For TCEQ office use only - EPA I.D.
No. TX0047023]*

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

This is a renewal that replaces TPDES
Permit No. WQ0010069003 issued on
February 10, 2020.

PERMIT TO DISCHARGE WASTES
under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

City of Big Spring

whose mailing address is

310 Nolan Street
Big Spring, Texas 79720

is authorized to treat and discharge wastes from the City of Big Spring Water Reclamation Plant,
SIC Code 4952

located at 3607 11th Place, in the City of Big Spring, Howard County, Texas 79720

to a ditch, thence to Beals Creek, thence to Colorado River Below Lake J. B. Thomas in Segment
No. 1412 of the Colorado River Basin

only according to effluent limitations, monitoring requirements, and other conditions set forth
in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ),
the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does
not grant to the permittee the right to use private or public property for conveyance of
wastewater along the discharge route described in this permit. This includes, but is not limited
to, property belonging to any individual, partnership, corporation, or other entity. Neither does
this permit authorize any invasion of personal rights nor any violation of federal, state, or local
laws or regulations. It is the responsibility of the permittee to acquire property rights as may be
necessary to use the discharge route.

This permit shall expire at midnight, **five years from the date of issuance.**

ISSUED DATE:

For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number 001

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 3.8 million gallons per day (MGD), nor shall the average discharge during any two-hour period (2-hour peak) exceed 7,917 gallons per minute.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (317)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (475)	25	40	60	Two/week	Composite
Ammonia Nitrogen						
April - October	3 (95)	6	10	15	Two/week	Composite
November - March	4 (127)	6	10	15	Two/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	One/week	Grab

2. The effluent shall contain a total chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l total chlorine residual and shall monitor total chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC § 305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code (TWC) §§ 5.103 and 5.105, and the Texas Health and Safety Code (THSC) §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in TWC § 26.001 and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

1. Flow Measurements

- a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with one million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

2. Concentration Measurements

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.
 - i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

- ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.
- d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the sampling day.

The daily discharge determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily discharge determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

- e. Bacteria concentration (*E. coli* or Enterococci) - Colony Forming Units (CFU) or Most Probable Number (MPN) of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the n th root of the product of all measurements made in a calendar month, where n equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substituted value of one shall be made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
 - f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD x Concentration, mg/l x 8.34).
 - g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.
3. Sample Type
- a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).

- b. Grab sample - an individual sample collected in less than 15 minutes.
- 4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
- 5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids that have not been classified as hazardous waste separated from wastewater by unit processes.
- 6. The term "biosolids" is defined as sewage sludge that has been tested or processed to meet Class A, Class AB, or Class B pathogen standards in 30 TAC Chapter 312 for beneficial use.
- 7. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

MONITORING AND REPORTING REQUIREMENTS

1. Self-Reporting

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, effluent monitoring data shall be submitted each month, to the Enforcement Division (MC 224), by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be submitted online using the NetDMR reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. Monitoring results must be signed and certified as required by Monitoring and Reporting Requirements No. 10.

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

2. Test Procedures

- a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.
- b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC § 25, Environmental Testing Laboratory Accreditation and Certification.

3. Records of Results

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

- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge or biosolids use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.
- c. Records of monitoring activities shall include the following:
 - i. date, time and place of sample or measurement;
 - ii. identity of individual who collected the sample or made the measurement.
 - iii. date and time of analysis;
 - iv. identity of the individual and laboratory who performed the analysis;
 - v. the technique or method of analysis; and
 - vi. the results of the analysis or measurement and quality assurance/quality control records.

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

4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

5. Calibration of Instruments

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

6. Compliance Schedule Reports

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

Division (MC 224).

7. Noncompliance Notification

- a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Except as allowed by 30 TAC § 305.132, report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. For Publicly Owned Treatment Works (POTWs), effective December 21, 2025, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
 - b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
 - i. Unauthorized discharges as defined in Permit Condition 2(g).
 - ii. Any unanticipated bypass that exceeds any effluent limitation in the permit.
 - iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.
 - c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.
 - d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.
8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.
9. Changes in Discharges of Toxic Substances

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

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - i. One hundred micrograms per liter (100 µg/L);
 - ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
 - iv. The level established by the TCEQ.
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - i. Five hundred micrograms per liter (500 µg/L);
 - ii. One milligram per liter (1 mg/L) for antimony;
 - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
 - iv. The level established by the TCEQ.

10. Signatories to Reports

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

11. All POTWs must provide adequate notice to the Executive Director of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to CWA § 301 or § 306 if it were directly discharging those pollutants;
- b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and
- c. For the purpose of this paragraph, adequate notice shall include information on:
 - i. The quality and quantity of effluent introduced into the POTW; and
 - ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

PERMIT CONDITIONS**1. General**

- a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.
- b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:
 - i. Violation of any terms or conditions of this permit;
 - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
 - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

2. Compliance

- a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.
- c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health or the environment.
- e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.
- f. A permit may be amended, suspended and reissued, or revoked for cause in accordance

with 30 TAC §§ 305.62 and 305.66 and TWC§ 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

- g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.
- h. In accordance with 30 TAC § 305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility which does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.
- i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under TWC §§ 7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) for violations including, but not limited to, negligently or knowingly violating the federal CWA §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§ 402 (a)(3) or 402 (b)(8).

3. Inspections and Entry

- a. Inspection and entry shall be allowed as prescribed in the TWC Chapters 26, 27, and 28, and THSC § 361.
- b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in TWC § 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

4. Permit Amendment and/or Renewal

- a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:
 - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or
 - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9; or
 - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
- c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.
- d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
- e. In accordance with the TWC § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.
- f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA § 307(a) for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions established under CWA § 307(a) for toxic pollutants within the time provided in the

regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.
- b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

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

7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to TWC Chapter 11.

8. Property Rights

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

9. Permit Enforceability

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

10. Relationship to Permit Application

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

11. Notice of Bankruptcy

- a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
 - i. the permittee;
 - ii. an entity (as that term is defined in 11 USC, § 101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or
 - iii. an affiliate (as that term is defined in 11 USC, § 101(2)) of the permittee.

- b. This notification must indicate:
 - i. the name of the permittee;
 - ii. the permit number(s);
 - iii. the bankruptcy court in which the petition for bankruptcy was filed; and
 - iv. the date of filing of the petition.

OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.
2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge or biosolids use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
 - a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.
 - b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.
4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.
5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.
6. The permittee shall remit an annual water quality fee to the Commission as required by 30

TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under TWC § 7.302(b)(6).

7. Documentation

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

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

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

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

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

- c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment, and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.
9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.
10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85%, unless otherwise authorized by this permit.
11. Facilities that generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:
 - a. Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.
 - b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.
 - c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Corrective Action Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.
 - d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.
 - e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well,

container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.

- f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC § 335 and must include the following, as it pertains to wastewater treatment and discharge:
 - i. Volume of waste and date(s) generated from treatment process;
 - ii. Volume of waste disposed of on-site or shipped off-site;
 - iii. Date(s) of disposal;
 - iv. Identity of hauler or transporter;
 - v. Location of disposal site; and
 - vi. Method of final disposal.

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

12. For industrial facilities to which the requirements of 30 TAC § 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC § 361.

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SLUDGE PROVISIONS

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

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

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge or biosolids.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.
3. The land application of processed or unprocessed chemical toilet waste, grease trap waste, grit trap waste, milk solids, or similar non-hazardous municipal or industrial solid wastes, or any of the wastes listed in this provision combined with biosolids, WTP residuals or domestic septage is prohibited unless the grease trap waste is added at a fats, oil and grease (FOG) receiving facility as part of an anaerobic digestion process.

B. Testing Requirements

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

The report shall contain test results, certification that unauthorized waste management has stopped, and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 7) and the Enforcement Division (MC 224).

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

TABLE 1

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

* Dry weight basis

3. Pathogen Control

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

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

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC § 312.82(a)(3)(A) for specific information;

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

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

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

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

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

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

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

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

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

Alternative 1

- i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.
- ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

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

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;
- iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and
- v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

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

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

- ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;
- iv. The Executive Director will accept from the U.S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and
- v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

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

- i. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.
- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain on the land surface for 4 months or longer prior to incorporation into the soil.
- iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than 4 months prior to incorporation into the soil.
- iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.
- v. Domestic livestock shall not be allowed to graze on the land for 30 days after application of biosolids.
- vi. Turf grown on land where biosolids are applied shall not be harvested for 1 year after application of the biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn.
- vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of biosolids.

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

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

4. Vector Attraction Reduction Requirements

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

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

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

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

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

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

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

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

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

Alternative 9 -

- i. Biosolids shall be injected below the surface of the land.
- ii. No significant amount of the biosolids shall be present on the land surface within one hour after the biosolids are injected.
- iii. When sewage sludge that is injected below the surface of the land is Class A or Class AB with respect to pathogens, the biosolids shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

Alternative 10 -

- i. Biosolids applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
- ii. When biosolids that are incorporated into the soil is Class A or Class AB with respect to pathogens, the biosolids shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

C. Monitoring Requirements

Toxicity Characteristic Leaching Procedure (TCLP) Test	- annually
PCBs	- annually

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

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

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

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

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

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

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

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

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

A. Pollutant Limits

Table 2

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

Table 3

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

*Dry weight basis

B. Pathogen Control

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

C. Management Practices

1. Bulk biosolids shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.
2. Bulk biosolids not meeting Class A requirements shall be land applied in a manner which complies with Applicability in accordance with 30 TAC §312.41 and the Management Requirements in accordance with 30 TAC § 312.44.
3. Bulk biosolids shall be applied at or below the agronomic rate of the cover crop.
4. An information sheet shall be provided to the person who receives bulk Class A or AB biosolids sold or given away. The information sheet shall contain the following information:
 - a. The name and address of the person who prepared the Class A or AB biosolids that are sold or given away in a bag or other container for application to the land.
 - b. A statement that application of the biosolids to the land is prohibited except in accordance with the instruction on the label or information sheet.
 - c. The annual whole sludge application rate for the biosolids application rate for the biosolids that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

D. Notification Requirements

1. If bulk biosolids are applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk biosolids are proposed to be applied. The notice shall include:
 - a. The location, by street address, and specific latitude and longitude, of each land application site.
 - b. The approximate time period bulk biosolids will be applied to the site.
 - c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk biosolids.

E. Record Keeping Requirements

The documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a biosolids material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative for a period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.
2. A description of how the pathogen reduction requirements are met (including site restrictions for Class AB and Class B biosolids, if applicable).
3. A description of how the vector attraction reduction requirements are met.
4. A description of how the management practices listed above in Section II.C are being met.
5. The following certification statement:

“I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC § 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC § 312.83(b) have been met for each site on which bulk biosolids are applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment.”
6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained. The person who applies bulk biosolids shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply:
 - a. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii), as applicable, and to the permittee’s specific sludge treatment activities.
 - b. The location, by street address, and specific latitude and longitude, of each site on which biosolids are applied.
 - c. The number of acres in each site on which bulk biosolids are applied.
 - d. The date and time biosolids are applied to each site.
 - e. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.
 - f. The total amount of biosolids applied to each site in dry tons.

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

F. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 7) and the Enforcement Division (MC 224).

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.
3. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
4. The frequency of monitoring listed in Section I.C. that applies to the permittee.
5. Toxicity Characteristic Leaching Procedure (TCLP) results.
6. PCB concentration in sludge or biosolids in mg/kg.
7. Identity of hauler(s) and TCEQ transporter number.
8. Date(s) of transport.
9. Texas Commission on Environmental Quality registration number, if applicable.
10. Amount of sludge or biosolids disposal dry weight (lbs/acre) at each disposal site.
11. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.
12. Level of pathogen reduction achieved (Class A, Class AB or Class B).
13. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B biosolids, include information on how site restrictions were met.
14. Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.
15. Vector attraction reduction alternative used as listed in Section I.B.4.
16. Amount of sludge or biosolids transported in dry tons/year.

17. The certification statement listed in either 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge or biosolids treatment activities, shall be attached to the annual reporting form.
18. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.
 - a. The location, by street address, and specific latitude and longitude.
 - b. The number of acres in each site on which bulk biosolids are applied.
 - c. The date and time bulk biosolids are applied to each site.
 - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk biosolids applied to each site.
 - e. The amount of biosolids (i.e., dry tons) applied to each site.

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

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

- A. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge meets the requirements in 30 TAC § 330 concerning the quality of the sludge or biosolids disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge and supplies that sewage sludge or biosolids to the owner or operator of a municipal solid waste landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.
- C. Sewage sludge or biosolids shall be tested annually in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR § 261.24. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

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

The report shall contain test results, certification that unauthorized waste management has stopped, and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 7) and the Enforcement Division (MC 224), by September 30 of each year.

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

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

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

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

F. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 7) and the Enforcement Division (MC 224).

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Toxicity Characteristic Leaching Procedure (TCLP) results.
3. Annual sludge or biosolids production in dry tons/year.
4. Amount of sludge or biosolids disposed in a municipal solid waste landfill in dry tons/year.
5. Amount of sludge or biosolids transported interstate in dry tons/year.
6. A certification that the sewage sludge or biosolids meets the requirements of 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
7. Identity of hauler(s) and transporter registration number.
8. Owner of disposal site(s).
9. Location of disposal site(s).
10. Date(s) of disposal.

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

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

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

A. General Requirements

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

B. Record Keeping Requirements

1. For sludge transported by an approved pipeline, the permittee must maintain records of the following:
 - a. the amount of sludge or biosolids transported;
 - b. the date of transport;
 - c. the name and TCEQ permit number of the receiving facility or facilities;
 - d. the location of the receiving facility or facilities;
 - e. the name and TCEQ permit number of the facility that generated the waste; and
 - f. copy of the written agreement between the permittee and the receiving facility to accept sludge or biosolids.
2. For sludge or biosolids transported by a registered transporter, the permittee must maintain records of the completed trip tickets in accordance with 30 TAC § 312.145(a)(1)-(7) and amount of sludge or biosolids transported.
3. The above records shall be maintained on-site on a monthly basis and shall be made available to the TCEQ upon request. These records shall be retained for at least five years.

C. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 7) and the Enforcement Division (MC 224).

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. the annual sludge or biosolids production;
3. the amount of sludge or biosolids transported;
4. the owner of each receiving facility;
5. the location of each receiving facility; and
6. the date(s) of disposal at each receiving facility.

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OTHER REQUIREMENTS

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

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

2. The facility is not located in the Coastal Management Program boundary.
3. There is no mixing zone established for this discharge to an intermittent stream with perennial pools. Chronic toxic criteria apply at the point of discharge.
4. The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC § 309.13(e).
5. The permittee shall provide facilities for the protection of its wastewater treatment facility from a 100-year flood.
6. In accordance with 30 TAC § 319.9, a permittee that has at least twelve months of uninterrupted compliance with its bacteria limit may notify the commission in writing of its compliance and request a less frequent measurement schedule. To request a less frequent schedule, the permittee shall submit a written request to the TCEQ Wastewater Permitting Section (MC 148) for each phase that includes a different monitoring frequency. The request must contain all of the reported bacteria values (Daily Avg. and Daily Max/Single Grab) for the twelve consecutive months immediately prior to the request. If the Executive Director finds that a less frequent measurement schedule is protective of human health and the environment, the permittee may be given a less frequent measurement schedule. For this permit, one/week may be reduced to two/month. **A violation of any bacteria limit by a facility that has been granted a less frequent measurement schedule will require the permittee to return to the standard frequency schedule and submit written notice to the TCEQ Wastewater Permitting Section (MC 148).** The permittee may not apply for another reduction in measurement frequency for at least 24 months from the date of the last violation. The Executive Director may establish a more frequent measurement schedule if necessary to protect human health or the environment.

CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS

1. The following pollutants may not be introduced into the treatment facility:
 - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, waste streams with a closed-cup flash point of less than 140° Fahrenheit (60° Celsius) using the test methods specified in 40 CFR § 261.21;
 - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case shall there be discharges with a pH lower than 5.0 standard units, unless the works are specifically designed to accommodate such discharges;
 - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
 - d. Any pollutant, including oxygen-demanding pollutants (e.g., biochemical oxygen demand), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
 - e. Heat in amounts which will inhibit biological activity in the POTW, resulting in Interference, but in no case shall there be heat in such quantities that the temperature at the POTW treatment plant exceeds 104° Fahrenheit (40° Celsius) unless the Executive Director, upon request of the POTW, approves alternate temperature limits;
 - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
 - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
 - h. Any trucked or hauled pollutants except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act, including any requirements established under 40 CFR Part 403 [*rev. Federal Register/ Vol. 70/ No. 198/ Friday, October 14, 2005/ Rules and Regulations, pages 60134-60798*].
3. The permittee shall provide adequate notification to the Executive Director, care of the Wastewater Permitting Section (MC 148) of the Water Quality Division, within 30 days subsequent to the permittee's knowledge of either of the following:
 - a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants; and
 - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on the quality and quantity of effluent to be introduced into the treatment works and any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

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BIOMONITORING REQUIREMENTS**CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER**

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing.

1. **Scope, Frequency, and Methodology**

- a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival, reproduction, or growth of the test organisms.
- b. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this Part of the permit and in accordance with “Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms” (EPA-821-R-02-013), fourth edition or its most recent update, unless otherwise instructed:
 - 1) Chronic static renewal 4-day survival and growth test using the water flea (*Daphnia magna*). The methodology shall be in accordance with “Development and Validation of a *Daphnia magna* Four-Day Survival and Growth Test Method”, Environmental Toxicology and Chemistry, Volume 28, Number 5, 2009.
 - 2) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*) (Method 1000.0). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These additional effluent concentrations are 32%, 42%, 56%, 75%, and 100% effluent. The critical dilution, defined as 100% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.
- d. This permit may be amended to require a WET limit, a chemical-specific effluent limit, a best management practice, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.
- e. Testing Frequency Reduction
 - 1) If none of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee may submit this information in writing

and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.

- 2) If one or more of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee shall continue quarterly testing for that species until this permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant toxicity, the permittee will resume a quarterly testing frequency for that species until this permit is reissued.

2. Required Toxicity Testing Conditions

- a. Fathead Minnow Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fail to meet the following criteria:
 - 1) a control mean survival of 80% or greater;
 - 2) a control mean dry weight of surviving fathead minnow larvae of 0.25 mg or greater;
 - 3) a CV% of 40 or less for the growth and survival endpoints for the test. However, if statistically significant lethal or nonlethal effects are exhibited at the critical dilution, a CV% greater than 40 shall not invalidate the test; and
 - 4) a percent minimum significant difference of 30 or less for fathead minnow growth.
- b. Water Flea Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fail to meet the following criteria:
 - 1) a control mean survival of 90% or greater;
 - 2) a control mean final dry weight 10 times or greater than the initial control mean dry weight; and
 - 3) a critical dilution CV% of 40 or less the growth and survival endpoints for the test. However, if statistically significant lethal or nonlethal effects are exhibited at the critical dilution, a CV% greater than 40 shall not invalidate the test.
- c. Statistical Interpretation
 - 1) For the survival and growth tests, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be in accordance with the manual referenced in Part 1.b.

- 2) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The document entitled "Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)" (EPA 821-B-00-004) provides guidance on determining the validity of test results.
- 3) If significant lethality is demonstrated (that is, there is a statistically significant difference in survival at the critical dilution when compared to the survival in the control), the conditions of test acceptability are met, and the survival of the test organisms are equal to or greater than 80% (fathead minnow) or 90% (water flea) in the critical dilution and all dilutions below that, then the permittee shall report a survival No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements.
- 4) The NOEC is defined as the greatest effluent dilution at which no significant effect is demonstrated. The Lowest Observed Effect Concentration (LOEC) is defined as the lowest effluent dilution at which a significant effect is demonstrated. A significant effect is defined as a statistically significant difference between the survival or growth of the test organism in a specified effluent dilution when compared to the survival or growth of the test organism in the control.
- 5) The use of NOECs and LOECs assumes either a monotonic (continuous) concentration-response relationship or a threshold model of the concentration-response relationship. For any test result that demonstrates a non-monotonic (non-continuous) response, the NOEC should be determined based on the guidance manual referenced in Item 3.
- 6) Pursuant to the responsibility assigned to the permittee in Part 2.b.2), test results that demonstrate a non-monotonic (non-continuous) concentration-response relationship may be submitted, prior to the due date, for technical review. The guidance manual referenced in Item 3 will be used when making a determination of test acceptability.
- 7) TCEQ staff will review test results for consistency with rules, procedures, and permit requirements.

d. Dilution Water

- 1) Dilution water used in the toxicity tests must be the receiving water collected at a point upstream of the discharge point as close as possible to the discharge point but unaffected by the discharge. Where the toxicity tests are conducted on effluent discharges to receiving waters that are classified as intermittent streams, or where the toxicity tests are conducted on effluent discharges where no receiving water is available due to zero flow conditions, the permittee shall:
 - a) substitute a synthetic dilution water that has a pH, hardness, and alkalinity similar to that of the closest downstream perennial

water unaffected by the discharge; or

- b) use the closest downstream perennial water unaffected by the discharge.
 - 2) Where the receiving water proves unsatisfactory as a result of pre-existing instream toxicity (i.e. fails to fulfill the test acceptance criteria of Part 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
 - a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of Part 2.a;
 - b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days); and
 - c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3.
 - 3) The synthetic dilution water shall consist of standard, moderately hard, reconstituted water. Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.
- e. Samples and Composites
- 1) The permittee shall collect a minimum of three composite samples for the fathead minnow test and a minimum of two composite samples for the water flea test from Outfall 001. The additional composite samples will be used for the renewal of the dilution concentrations for each toxicity test.
 - 2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.
 - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first composite sample. The holding time for any subsequent composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
 - 4) If Outfall 001 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum numbers of effluent portions, and the sample holding time, are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate

days if the discharge occurs over multiple days. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.

- 5) The effluent samples shall not be dechlorinated after sample collection.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated whether carried to completion or not.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit.
 - 1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12-month period.
 - 2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.
 - 3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th, for biomonitoring conducted during the previous calendar quarter.
 - 4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.
- c. Enter the following codes for the appropriate parameters for valid tests only:
 - 1) For the water flea, Parameter TLP3C, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - 2) For the water flea, Parameter TOP3C, report the NOEC for survival.
 - 3) For the water flea, Parameter TXP3C, report the LOEC for survival.
 - 4) For the water flea, Parameter TWP3C, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."
 - 5) For the water flea, Parameter TPP3C, report the NOEC for growth.
 - 6) For the water flea, Parameter TYP3C, report the LOEC for growth.
 - 7) For the fathead minnow, Parameter TLP6C, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

- 8) For the fathead minnow, Parameter TOP6C, report the NOEC for survival.
 - 9) For the fathead minnow, Parameter TXP6C, report the LOEC for survival.
 - 10) For the fathead minnow, Parameter TWP6C, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."
 - 11) For the fathead minnow, Parameter TPP6C, report the NOEC for growth.
 - 12) For the fathead minnow, Parameter TYP6C, report the LOEC for growth.
- d. Enter the following codes for retests only:
- 1) For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - 2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

4. Persistent Toxicity

The requirements of this part apply only when a test demonstrates a significant effect at the critical dilution. Significant effect and significant lethality were defined in Part 2.b. Significant sublethality is defined as a statistically significant difference in growth at the critical dilution when compared to the growth in the control.

- a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates a significant effect (lethal or sublethal) at the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test.
- b. If the retests are performed due to a demonstration of significant lethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of Part 4.a. are suspended upon completion of the two retests and submittal of the TRE action plan and schedule defined in Part 5.

If neither test demonstrates significant lethality and the permittee is testing under the reduced testing frequency provision of Part 1.e., the permittee shall return to a quarterly testing frequency for that species.

- c. If the two retests are performed due to a demonstration of significant sublethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall again perform two retests as stipulated in Part 4.a.
- d. If the two retests are performed due to a demonstration of significant sublethality, and neither test demonstrates significant lethality, the permittee

shall continue testing at the quarterly frequency.

- e. Regardless of whether retesting for lethal or sublethal effects, or a combination of the two, no more than one retest per month is required for a species.

5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, or within 45 days of being so instructed due to multiple toxic events, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, or within 90 days of being so instructed due to multiple toxic events, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall describe an approach for the reduction or elimination of lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:
 - 1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA/600/6-91/005F) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
 - 2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for

- the identified and suspected pollutant and source of effluent toxicity;
- 3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
 - 4) Project Organization - The TRE action plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.
- d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;
 - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
 - 3) any data and substantiating documentation that identifies the pollutant and source of effluent toxicity;
 - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
 - 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and
 - 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.
- Copies of the TRE activities report shall also be submitted to the U.S. EPA Region 6 office.
- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in

Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are herein defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall provide information pertaining to the specific control mechanism selected that will, when implemented, result in the reduction of effluent toxicity to no significant lethality at the critical dilution. The report shall also provide a specific corrective action schedule for implementing the selected control mechanism. A copy of the TRE final report shall also be submitted to the U.S. EPA Region 6 office.
- h. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.

TABLE 1 (SHEET 1 OF 4)

BIOMONITORING REPORTING

WATER FLEA SURVIVAL AND GROWTH

Dates and Times
Composites
Collected

No. 1 FROM: _____ Date _____ Time _____ TO: _____ Date _____ Time _____

No. 2 FROM: _____ TO: _____

No. 3 FROM: _____ TO: _____

Test initiated: _____ am/pm _____ date

Dilution water used: _____ Receiving water _____ Synthetic Dilution water

WATER FLEA GROWTH DATA

Effluent Concentration	Average Dry Weight in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D			
0%							
32%							
42%							
56%							
75%							
100%							
PMSD							

*Coefficient of Variation = standard deviation x 100/mean (calculation based on young of the surviving adults)

Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.

TABLE 1 (SHEET 2 OF 4)

WATER FLEA SURVIVAL AND GROWTH

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean growth significantly less than growth in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION (100%): _____ YES _____ NO

PERCENT SURVIVAL

Time of Reading	Percent effluent					
	0%	32%	42%	56%	75%	100%
24h						
48h						
4day						
CV%						

2. Fisher's Exact Test:

Is the mean survival at test end significantly less than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (100%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

a.) NOEC survival = _____ % effluent

b.) LOEC survival = _____ % effluent

c.) NOEC growth = _____ % effluent

d.) LOEC growth = _____ % effluent

TABLE 1 (SHEET 3 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL

Dates and Times Composites Collected

No. 1 FROM: _____ Date _____ Time _____ TO: _____ Date _____ Time _____

No. 2 FROM: _____ TO: _____

No. 3 FROM: _____ TO: _____

Test initiated: _____ am/pm _____ date

Dilution water used: _____ Receiving water _____ Synthetic dilution water

FATHEAD MINNOW GROWTH DATA

Effluent Concentration	Average Dry Weight in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%							
32%							
42%							
56%							
75%							
100%							
PMSD							

* Coefficient of Variation = standard deviation x 100/mean

- Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean dry weight (growth) at 7 days significantly less than the control's dry weight (growth) for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION (100%): _____ YES _____ NO

TABLE 1 (SHEET 4 OF 4)
BIOMONITORING REPORTING
FATHEAD MINNOW GROWTH AND SURVIVAL TEST
FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration	Percent Survival in replicate chambers					Mean percent survival			CV%*
	A	B	C	D	E	24h	48h	7 day	
0%									
32%									
42%									
56%									
75%									
100%									

* Coefficient of Variation = standard deviation x 100/mean

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7 days significantly less than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (100%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

a.) NOEC survival = _____ % effluent

b.) LOEC survival = _____ % effluent

c.) NOEC growth = _____ % effluent

d.) LOEC growth = _____ % effluent

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 for WET testing.

1. Scope, Frequency, and Methodology

- a. The permittee shall test the effluent for lethality in accordance with the provisions in this section. Such testing will determine compliance with Texas Surface Water Quality Standard 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.
- b. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with “Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms” (EPA-821-R-02-012), fifth edition or its most recent update:
 - 1) Acute 24-hour static toxicity test using the water flea (*Daphnia magna*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.
 - 2) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit. All test results, valid or invalid, must be submitted as described below.

- c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. Except as discussed in item 2.b., the control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.
- d. This permit may be amended to require a WET limit, a Best Management Practice (BMP), Chemical-Specific (CS) limits, or other appropriate actions to address toxicity. The permittee may be required to conduct a Toxicity Reduction Evaluation after multiple toxic events.
- e. As the dilution series specified in the Chronic Biomonitoring Requirements includes a 100% effluent concentration, the results from those tests may fulfill the requirements of this Section; any tests performed in the proper time interval may be substituted. Compliance will be evaluated as specified in item a. The 50% survival in 100% effluent for a 24-hour period standard applies to all tests utilizing a 100% effluent dilution, regardless of whether the results are submitted to comply with the minimum testing frequency defined in item b.

2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.
- b. Dilution Water - In accordance with item 1.c., the control and dilution water shall normally consist of standard, synthetic, moderately hard, reconstituted water. If the permittee utilizes the results of a chronic test to satisfy the requirements in item 1.e., the permittee may use the receiving water or dilution water that meets the requirements of item 2.a as the control and dilution water.
- c. Samples and Composites
 - 1) The permittee shall collect one composite sample from Outfall 001.
 - 2) The permittee shall collect the composite samples such that the sample is representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged.
 - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. The samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
 - 4) If Outfall 001 ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report.
 - 5) The effluent sample shall not be dechlorinated after sample collection.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit.
 - 1) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.
 - 2) Quarterly biomonitoring test results are due on or before April 20th, July

20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.

- c. Enter the following codes for the appropriate parameters for valid tests only:
 - 1) For the water flea, Parameter TIE3D, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”
 - 2) For the fathead minnow, Parameter TIE6C, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”
- d. Enter the following codes for retests only:
 - 1) For retest number 1, Parameter 22415, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”
 - 2) For retest number 2, Parameter 22416, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”

4. Persistent Mortality

The requirements of this part apply when a toxicity test demonstrates significant lethality, which is defined as a mean mortality of 50% or greater of organisms exposed to the 100% effluent concentration for 24 hours.

- a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.
- b. If one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5.

5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall

specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall lead to the successful elimination of significant lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:

- 1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
 - 2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;
 - 3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
 - 4) Project Organization - The TRE action plan should describe the project staff, manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.
- d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly TRE activities reports are due on or before

April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

- 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;
- 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
- 3) any data and substantiating documentation that identifies the pollutant and source of effluent toxicity;
- 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
- 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and
- 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.

Copies of the TRE activities report shall also be submitted to the U.S. EPA Region 6 office.

- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an

appropriate control measure.

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall specify the control mechanism that will, when implemented, reduce effluent toxicity as specified in item 5.h. The report shall also specify a corrective action schedule for implementing the selected control mechanism. A copy of the TRE final report shall also be submitted to the U.S. EPA Region 6 office.
- h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE.

The permittee may be exempted from complying with 30 TAC § 307.6(e)(2)(B) upon proving that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g., metals) form a salt compound. Following the exemption, this permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.

- i. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.

TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC₅₀ below:

24 hour LC₅₀ = _____% effluent

TABLE 2 (SHEET 2 OF 2)
FATHEAD MINNOW SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC₅₀ below:

24 hour LC₅₀ = _____% effluent

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For draft Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0010069003, EPA I.D. No. TX0047023, to discharge to water in the state.

Issuing Office: Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Applicant: City of Big Spring
310 Nolan Street
Big Spring, Texas 79720

Prepared By: Abdur Rahim
Municipal Permits Team
Wastewater Permitting Section (MC 148)
Water Quality Division
(512) 239-0504

Date: August 29, 2025

Permit Action: Renewal

1. EXECUTIVE DIRECTOR RECOMMENDATION

The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The draft permit includes an expiration date of **five years from the date of issuance**.

2. APPLICANT ACTIVITY

The applicant has applied to the Texas Commission on Environmental Quality (TCEQ) for a renewal of the existing permit that authorizes the discharge of treated domestic wastewater at an annual average flow not to exceed 3.8 million gallons per day (MGD). The existing wastewater treatment facility serves the City of Big Spring.

3. FACILITY AND DISCHARGE LOCATION

The plant site is located at 3607 11th Place, in the City of Big Spring, Howard County, Texas 79720.

Outfall Location:

Outfall Number	Latitude	Longitude
001	32.256196 N	101.427025 W

The treated effluent is discharged to a ditch, thence to Beals Creek, thence to Colorado River Below Lake J. B. Thomas in Segment No. 1412 of the Colorado River Basin. The unclassified receiving water uses are minimal aquatic life use for the ditch and limited aquatic life use for Beals Creek. The designated uses for Segment No. 1412 are primary

contact recreation and high aquatic life use.

4. TREATMENT PROCESS DESCRIPTION AND SEWAGE SLUDGE DISPOSAL

The City of Big Spring Water Reclamation Plant is both an activated sludge process plant and fixed film process plant. Treatment units include bar screens, grit chambers, a primary clarifier, two trickling filters, an aeration basin, two secondary clarifiers, two anaerobic sludge digesters, sludge drying beds, a cloth media filter basin, a chlorine contact chamber, a dechlorination chamber, and cascade aeration. The facility is in operation.

Sludge generated from the treatment facility is hauled by a registered transporter and disposed of at a TCEQ-permitted landfill, City of Big Spring Landfill, Permit No. 288A, in Howard County. The draft permit also authorizes the disposal of sludge at a TCEQ-authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge.

5. INDUSTRIAL WASTE CONTRIBUTION

The draft permit includes pretreatment requirements that are appropriate for a facility of this size and complexity. The facility does not appear to receive significant industrial wastewater contributions. The facility receives industrial wastewater.

6. SUMMARY OF SELF-REPORTED EFFLUENT ANALYSES

The following is a summary of the applicant's effluent monitoring data for the period from July 2022 through July 2024. The average of Daily Average value is computed by the averaging of all 30-day average values for the reporting period for each parameter: flow, five-day carbonaceous biochemical oxygen demand (CBOD₅), total suspended solids (TSS), and ammonia nitrogen (NH₃-N). The average of Daily Average value for *Escherichia coli* (*E. coli*) in colony-forming units (CFU) or most probable number (MPN) per 100 ml is calculated via geometric mean.

<u>Parameter</u>	<u>Average of Daily Avg</u>
Flow, MGD	1.25
CBOD ₅ , mg/l	2.7
TSS, mg/l	5.3
NH ₃ -N, mg/l (April – September)	0.23
NH ₃ -N, mg/l (October – March)	0.26
<i>E. coli</i> , CFU or MPN per 100 ml	3
TDS, mg/l	1079
Chloride, mg/l	360
Sulfate, mg/l	253

7. DRAFT PERMIT CONDITIONS AND MONITORING REQUIREMENTS

The effluent limitations and monitoring requirements for those parameters that are limited in the draft permit are as follows:

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

City of Big Spring TPDES Permit No. WQ0010069003
Fact Sheet and Executive Director's Preliminary Decision

The annual average flow of effluent shall not exceed 3.8 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 7,917 gallons per minutes.

<u>Parameter</u>	<u>30-Day Average</u>		<u>7-Day</u>	<u>Daily</u>
	<u>mg/l</u>	<u>lbs/day</u>	<u>Average</u> <u>mg/l</u>	<u>Maximum</u> <u>mg/l</u>
CBOD ₅	10	317	15	25
TSS	15	475	25	40
NH ₃ -N				
April–October	3	95	6	10
November–March	4	127	6	10
DO (minimum)	4.0	N/A	N/A	N/A
<i>E. coli</i> , CFU or MPN/100 ml	126	N/A	N/A	399

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

The effluent shall contain a total chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample at each chlorine contact chamber. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l total chlorine residual and shall monitor total chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

<u>Parameter</u>	<u>Monitoring Requirement</u>
Flow, MGD	Continuous
CBOD ₅	Two/week
TSS	Two/week
NH ₃ -N	Two/week
DO	Two/week
<i>E. coli</i>	One/week

B. SEWAGE SLUDGE REQUIREMENTS

The draft permit includes Sludge Provisions according to the requirements of 30 TAC Chapter 312, Sludge Use, Disposal, and Transportation. Sludge generated from the treatment facility is hauled by a registered transporter and disposed of at a TCEQ-permitted landfill, City of Big Spring Landfill, Permit No. 288A, in Howard County. The draft permit also authorizes the disposal of sludge at a TCEQ-authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge.

C. PRETREATMENT REQUIREMENTS

Permit requirements for pretreatment are based on TPDES regulations contained in 30 TAC Chapter 305, which references 40 Code of Federal Regulations (CFR)

Part 403, "General Pretreatment Regulations for Existing and New Sources of Pollution" [rev. *Federal Register*/ Vol. 70/ No. 198/ Friday, October 14, 2005/ *Rules and Regulations*, pages 60134-60798]. The permit includes specific requirements that establish responsibilities of local government, industry, and the public to implement the standards to control pollutants which pass through or interfere with treatment processes in publicly owned treatment works or which may contaminate the sewage sludge. This permit has appropriate pretreatment language for a facility of this size and complexity.

D. WHOLE EFFLUENT TOXICITY (BIOMONITORING) REQUIREMENTS

- (1) The draft permit includes chronic freshwater biomonitoring requirements as follows. The permit requires five dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 32%, 42%, 56%, 75%, and 100%. The low-flow effluent concentration (critical dilution) is defined as 100% effluent. The critical dilution is in accordance with the "Aquatic Life Criteria" section of the "Water Quality Based Effluent Limitations/Conditions" section.
 - (a) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*). The frequency of the testing is once per quarter for at least the first year of testing, after which the permittee may apply for a testing frequency reduction.
 - (b) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*). The frequency of the testing is once per quarter for at least the first year of testing, after which the permittee may apply for a testing frequency reduction.
- (2) The draft permit includes the following minimum 24-hour acute freshwater biomonitoring requirements at a frequency of once per six months:
 - (a) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*).
 - (b) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*).

E. SUMMARY OF CHANGES FROM APPLICATION

None.

F. SUMMARY OF CHANGES FROM EXISTING PERMIT

The Standard Permit Conditions, Sludge Provisions, Other Requirements, and Biomonitoring sections of the draft permit have been updated.

For Publicly Owned Treatment Works (POTWs), effective December 21, 2025, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the

online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

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

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

8. DRAFT PERMIT RATIONALE

A. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

Regulations promulgated in Title 40 of the CFR require that technology-based limitations be placed in wastewater discharge permits based on effluent limitations guidelines, where applicable, or on best professional judgment (BPJ) in the absence of guidelines.

Effluent limitations for maximum and minimum pH are in accordance with 40 CFR § 133.102(c) and 30 TAC § 309.1(b).

B. WATER QUALITY SUMMARY AND COASTAL MANAGEMENT PLAN

(1) WATER QUALITY SUMMARY

The treated effluent is discharged to a ditch, thence to Beals Creek, thence to Colorado River Below Lake J. B. Thomas in Segment No. 1412 of the Colorado River Basin. The unclassified receiving water uses are minimal aquatic life use for the ditch and limited aquatic life use for Beals Creek. The designated uses for Segment No. 1412 are primary contact recreation and high aquatic life use. The effluent limitations in the draft permit will maintain and protect the existing instream uses. All determinations are preliminary and subject to additional review and/or revisions.

The discharge from this permit action is not expected to have an effect on any federal endangered or threatened aquatic or aquatic-dependent species or proposed species or their critical habitat. This determination is based on the United States Fish and Wildlife Service's (USFWS's) biological opinion on the State of Texas authorization of the TPDES (September 14, 1998; October 21, 1998, update). To make this determination for TPDES permits, TCEQ and EPA only considered aquatic or aquatic-dependent species occurring in watersheds of critical concern or high priority as listed in Appendix A of the USFWS biological opinion. The determination is subject to reevaluation due to subsequent updates or amendments to the biological opinion. The permit does not require EPA review with respect to the presence of endangered or threatened species.

Segment No. 1412 is currently listed on the State's inventory of impaired

and threatened waters (the 2022 CWA § 303(d) list). The listing is specifically for elevated bacteria levels from the confluence of Beals Creek upstream to the dam below Barber Reservoir pump station [Assessment Unit (AU) 1412_02]. Beals Creek is also listed on the 2022 303(d) list for elevated bacteria levels from the confluence of Gutherie Draw upstream to the confluence of Mustang Draw and Sulphur Springs Draw (AU 1412B_03). This facility is designed to provide adequate disinfection and, when operated properly, should not add to the bacterial impairment of the segment. In addition, in order to ensure that the proposed discharge meets the stream bacterial standard, an effluent limitation of 126 CFU or MPN of *E. Coli* per 100 ml has been continued in the draft permit.

Total Maximum Daily Load (TMDL) Project is applicable to Segment 1412: *Two Total Maximum Daily Loads for Total Dissolved Solids and Sulfate in E.V. Spence Reservoir for Segment 1411* (TMDL Project No. 4). On June 14, 2002, the report *Two Total Maximum Daily Loads for Total Dissolved Solids and Sulfate in E.V. Spence Reservoir* was adopted with revisions by the TNRCC, predecessor to the TCEQ. The EPA approved the TMDL on May 9, 2003. Wastewater treatment plants were not determined to be significant contributors of TDS or sulfate to the reservoir. The need for effluent limits or monitoring of these constituents is assessed using routine procedures. Effluent data provided in the application for sulfate, TDS, and chloride was screened in accordance with the *Procedures to Implement the Texas Surface Water Quality Standards*. The draft permit does not include effluent limits or monitoring requirements for sulfate, TDS, or chloride based on this screening.

The pollutant analysis of treated effluent provided by the permittee in the application indicated 2070 mg/l total dissolved solids (TDS), 360 mg/l sulfate, and 586 mg/l chloride present in the effluent. The segment criteria for Segment No. 1412 are 9210 mg/l for TDS, 1570 mg/l for sulfate, and 4740 mg/l for chlorides. Based on dissolved solids screening, no additional limits or monitoring requirements are needed for total dissolved solids, chloride, or sulfate. See Attachment A of this Fact Sheet.

The effluent limitations and conditions in the draft permit comply with EPA-approved portions of the 2018 Texas Surface Water Quality Standards (TSWQS), 30 TAC §§ 307.1 - 307.10, effective March 1, 2018; 2014 TSWQS, effective March 6, 2014; 2010 TSWQS, effective July 22, 2010; and 2000 TSWQS, effective July 26, 2000.

(2) CONVENTIONAL PARAMETERS

Effluent limitations for the conventional effluent parameters (i.e., Five-Day Biochemical Oxygen Demand or Five-Day Carbonaceous Biochemical Oxygen Demand, Ammonia Nitrogen, etc.) are based on stream standards and waste load allocations for water quality-limited streams as established in the TSWQS and the State of Texas Water Quality Management Plan (WQMP).

The existing effluent limits have been reviewed for consistency with the State of Texas Water Quality Management Plan (WQMP). The existing limits are consistent with the approved WQMP.

The effluent limitations in the draft permit meet the requirements for secondary treatment and the requirements for disinfection according to 30 TAC Chapter 309, Subchapter A: Effluent Limitations.

(3) COASTAL MANAGEMENT PLAN

The facility is not located in the Coastal Management Program boundary.

C. WATER QUALITY-BASED EFFLUENT LIMITATIONS/CONDITIONS

(1) GENERAL COMMENTS

The Texas Surface Water Quality Standards (30 TAC Chapter 307) state that surface waters will not be toxic to man, or to terrestrial or aquatic life. The methodology outlined in the *"Procedures to Implement the Texas Surface Water Quality Standards"* is designed to ensure compliance with 30 TAC Chapter 307. Specifically, the methodology is designed to ensure that no source will be allowed to discharge any wastewater that: (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical state water quality standard; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation that threatens human health.

(2) AQUATIC LIFE CRITERIA

(a) SCREENING

Water quality-based effluent limitations are calculated from freshwater aquatic life criteria found in Table 1 of the Texas Surface Water Quality Standards (30 TAC Chapter 307).

There is no mixing zone for this discharge directly to an intermittent stream; acute freshwater criteria apply at the end of pipe. Acute and chronic freshwater criteria apply at Beals Creek, the intermittent stream with perennial pools. The following critical effluent percentages are being used:

Acute Effluent %:	100%	Chronic Effluent %:	100%
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Waste load allocations (WLAs) are calculated using the above estimated effluent percentages, criteria outlined in the Texas Surface Water Quality Standards, and partitioning coefficients for metals (when appropriate and designated in the implementation procedures). The WLA is the end-of-pipe effluent concentration that can be discharged when, after mixing in the receiving stream, instream numerical criteria will not be exceeded. From the WLA, a long-term average (LTA) is calculated using a log normal probability distribution, a given coefficient of variation (0.6), and

a 90th percentile confidence level. The LTA is the long-term average effluent concentration for which the WLA will never be exceeded using a selected percentile confidence level. The LTA is used to calculate a daily average and daily maximum effluent limitation for the protection of aquatic life using the same statistical considerations with the 99th percentile confidence level and a standard number of monthly effluent samples collected (12). Assumptions used in deriving the effluent limitations include segment values for hardness, chlorides, pH, and total suspended solids (TSS) according to the segment-specific values contained in the TCEQ guidance document "Procedures to Implement the Texas Surface Water Quality Standards." The segment values are 514 mg/l for hardness (as calcium carbonate), 1700 mg/l chlorides, 7.6 standard units for pH, and 14 mg/l for TSS. For additional details on the calculation of water quality-based effluent limitations, refer to the TCEQ guidance document.

TCEQ practice for determining significant potential is to compare the reported analytical data against percentages of the calculated daily average water quality-based effluent limitation. Permit limitations are required when analytical data reported in the application exceeds 85% of the calculated daily average water quality-based effluent limitation. Monitoring and reporting is required when analytical data reported in the application exceeds 70% of the calculated daily average water quality-based effluent limitation. See Attachment B of this Fact Sheet.

(b) PERMIT ACTION

Analytical data reported in the application was screened against calculated water quality-based effluent limitations for the protection of aquatic life. Reported analytical data does not exceed 70% of the calculated daily average water quality-based effluent limitations for aquatic life protection.

(3) AQUATIC ORGANISM BIOACCUMULATION CRITERIA

(a) SCREENING

Water quality-based effluent limitations for the protection of human health are calculated using criteria for the consumption of freshwater fish tissue found in Table 2 of the Texas Surface Water Quality Standards (30 TAC Chapter 307). The discharge point is to an intermittent stream with perennial pools or to an intermittent stream within 3 miles upstream of an intermittent stream with perennial pools. Human health screening using incidental freshwater fish tissue criteria (= 10 X freshwater fish tissue criteria) is applicable due to the perennial pools that support incidental freshwater fisheries. TCEQ uses the mass balance equation to estimate dilution in the intermittent stream with perennial pools during average flow conditions. The estimated dilution for human health protection is calculated using the permitted flow of 3.8 MGD and the harmonic mean flow of 0.20 cfs for Beals Creek. The following effluent percentage is being used:

Human Health Effluent % 96.71%

Water quality-based effluent limitations for human health protection against the consumption of fish tissue are calculated using the same procedure as outlined for calculation of water quality-based effluent limitations for aquatic life protection. A 99th percentile confidence level in the long-term average calculation is used with only one long-term average value being calculated.

Significant potential is again determined by comparing reported analytical data against 70% and 85% of the calculated daily average water quality-based effluent limitation. See Attachment B of this Fact Sheet.

(b) PERMIT ACTION

Reported analytical data does not exceed 70% of the calculated daily average water quality-based effluent limitation for human health protection.

(4) DRINKING WATER SUPPLY PROTECTION

(a) SCREENING

Water Quality Segment No. 1412, which receives the discharge from this facility, is not designated as a public water supply. Screening reported analytical data of the effluent against water quality-based effluent limitations calculated for the protection of a drinking water supply is not applicable.

(b) PERMIT ACTION

None.

(5) WHOLE EFFLUENT TOXICITY (BIOMONITORING) CRITERIA

(a) SCREENING

TCEQ has determined that there may be pollutants present in the effluent that may have the potential to cause toxic conditions in the receiving stream. Whole effluent biomonitoring is the most direct measure of potential toxicity that incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity.

The existing permit includes chronic freshwater biomonitoring requirements. A summary of the biomonitoring testing for the facility indicates that in the past three years, the permittee has performed twenty-four chronic tests, with zero demonstrations of significant toxicity (i.e., zero failures).

A reasonable potential (RP) determination was performed in accordance with 40 CFR §122.44(d)(1)(ii) to determine whether the discharge will reasonably be expected to cause or contribute to an exceedance of a state water quality standard or criterion within that standard. Each test species is evaluated separately. The RP determination is based on representative data from the previous three years of chronic WET testing. This determination was performed in accordance with the methodology outlined in the TCEQ letter to the EPA dated December 28, 2015, and approved by the EPA in a letter dated December 28, 2015.

With zero failures, a determination of no RP was made. WET limits are not required and both test species may be eligible for the testing frequency reduction after one year of quarterly testing.

(b) PERMIT ACTION

The test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge. This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body.

(6) WHOLE EFFLUENT TOXICITY CRITERIA (24-HOUR ACUTE)

(a) SCREENING

The existing permit includes 24-hour acute freshwater biomonitoring language. A summary of the biomonitoring testing for the facility indicates that in the past three years, the permittee has performed twelve 24-hour acute tests, with zero demonstrations of significant mortality (i.e., zero failures).

(b) PERMIT ACTION

The draft permit includes 24-hour 100% acute biomonitoring tests for the life of the permit.

9. WATER QUALITY VARIANCE REQUESTS

No variance requests have been received.

10. PROCEDURES FOR FINAL DECISION

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant advising the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the

applicant to place a copy of the application in a public place for review and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

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

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

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

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

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

For additional information about this application, contact Abdur Rahim at (512) 239-0504.

11. ADMINISTRATIVE RECORD

The following items were considered in developing the draft permit:

A. PERMIT(S)

TPDES Permit No. WQ0010069003 issued on February 10, 2020.

B. APPLICATION

Application received on August 5, 2024, and additional information received on August 20, 2024, and September 10, 2025.

C. MEMORANDA

Interoffice Memoranda from the Water Quality Assessment Section of the TCEQ Water Quality Division. Interoffice Memorandum from the Pretreatment Team of the TCEQ Water Quality Division.

D. MISCELLANEOUS

Federal Clean Water Act § 402; Texas Water Code § 26.027; 30 TAC Chapters 30, 305, 309, 312, and 319; Commission policies; and U.S. Environmental Protection Agency guidelines.

Texas Surface Water Quality Standards, 30 TAC §§ 307.1 - 307.10.

Procedures to Implement the Texas Surface Water Quality Standards (IP), Texas Commission on Environmental Quality, June 2010, as approved by the U.S. Environmental Protection Agency, and the IP, January 2003, for portions of the 2010 IP not approved by the U.S. Environmental Protection Agency.

Texas 2022 Clean Water Act Section 303(d) List, Texas Commission on Environmental Quality, June 1, 2022; approved by the U.S. Environmental Protection Agency on July 7, 2022.

Texas Natural Resource Conservation Commission, Guidance Document for Establishing Monitoring Frequencies for Domestic and Industrial Wastewater Discharge Permits, Document No. 98-001.000-OWR-WQ, May 1998.

Two Total Maximum Daily Loads for Total Dissolved Solids and Sulfate in E.V. Spence Reservoir for Segment 1411 (TMDL Project No. 4).

Attachment A: Screening Calculations for Total Dissolved Solids, Chloride, and Sulfate

Screening Calculations for Total Dissolved Solids, Chloride, and Sulfate

Menu 7 - Discharge to an Intermittent Stream with Perennial Pools

Screen the Perennial Pool Characteristics of the Stream

Applicant Name:	City of Big Spring
Permit Number, Outfall:	WQ0010069003, 001
Segment Number:	1412

Enter values needed for screening:			Data Source (edit if different)
QE - Average effluent flow	3.8	MGD	
QS - Stream harmonic mean flow	0.66	cfs	Critical conditions memo
QE - Average effluent flow	5.8795	cfs	Calculated
CA - TDS - ambient segment concentration	4600	mg/L	2010 IP, Appendix D
CA - chloride - ambient segment concentration	1635	mg/L	2010 IP, Appendix D
CA - sulfate - ambient segment concentration	961	mg/L	2010 IP, Appendix D
CC - TDS - segment criterion	20000	mg/L	2000 TSWQS, Appendix A
CC - chloride - segment criterion	11000	mg/L	2000 TSWQS, Appendix A
CC - sulfate - segment criterion	2500	mg/L	2000 TSWQS, Appendix A
CE - TDS - average effluent concentration	2070	mg/L	Permit application
CE - chloride - average effluent concentration	586	mg/L	Permit application
CE - sulfate - average effluent concentration	360	mg/L	Permit application

Screening Equation

$$CC \geq [(QS)(CA) + (QE)(CE)]/[QE + QS]$$

Permit Limit Calculations

TDS

Calculate the WLA	WLA = $[CC(QE+QS) - (QS)(CA)]/QE$	21728.73
Calculate the LTA	LTA = WLA * 0.93	20207.72
Calculate the daily average	Daily Avg. = LTA * 1.47	29705.34
Calculate the daily maximum	Daily Max. = LTA * 3.11	62845.99
Calculate 70% of the daily average	70% of Daily Avg. =	20793.74
Calculate 85% of the daily average	85% of Daily Avg. =	25249.54

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No permit limitations needed if:	2070	≤	20793.74		
Reporting needed if:	2070	>	20793.74	but ≤	25249.54
Permit limits may be needed if:	2070	>	25249.54		

No permit limitations needed for TDS

Chloride

Calculate the WLA	WLA= [CC(QE+QS) - (QS)(CA)]/QE	12051.27		
Calculate the LTA	LTA = WLA * 0.93	11207.68		
Calculate the daily average	Daily Avg. = LTA * 1.47	16475.29		
Calculate the daily maximum	Daily Max. = LTA * 3.11	34855.88		
Calculate 70% of the daily average	70% of Daily Avg. =	11532.70		
Calculate 85% of the daily average	85% of Daily Avg. =	14003.99		
No permit limitations needed if:	586	≤	11532.70	
Reporting needed if:	586	>	11532.70	but ≤ 14003.99
Permit limits may be needed if:	586	>	14003.99	

No permit limitations needed for chloride

Sulfate

Calculate the WLA	WLA= [CC(QE+QS) - (QS)(CA)]/QE	2672.76		
Calculate the LTA	LTA = WLA * 0.93	2485.67		
Calculate the daily average	Daily Avg. = LTA * 1.47	3653.93		
Calculate the daily maximum	Daily Max. = LTA * 3.11	7730.42		
Calculate 70% of the daily average	70% of Daily Avg. =	2557.75		
Calculate 85% of the daily average	85% of Daily Avg. =	3105.84		
No permit limitations needed if:	360	≤	2557.75	
Reporting needed if:	360	>	2557.75	but ≤ 3105.84
Permit limits may be needed if:	360	>	3105.84	

No permit limitations needed for sulfate

Attachment B: Calculated Water Quality Based Effluent Limitations

TEXTOX MENU #7 - INTERMITTENT STREAM WITH PERENNIAL POOLS

The water quality-based effluent limitations developed below are calculated using:

Table 1, 2014 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life

Table 2, 2018 Texas Surface Water Quality Standards for Human Health, Incidental Fishery

"Procedures to Implement the Texas Surface Water Quality Standards," TCEQ, June 2010

PERMIT INFORMATION

Permittee Name:	City of Big Spring
TPDES Permit No.:	WQ0010069003
Outfall No.:	001
Prepared by:	Abdur Rahim
Date:	August 25, 2025

DISCHARGE INFORMATION

Intermittent Receiving Waterbody:	Beals Creek
Segment No.:	1412
TSS (mg/L):	14
pH (Standard Units):	7.6
Hardness (mg/L as CaCO ₃):	514
Chloride (mg/L):	1700
Effluent Flow for Aquatic Life (MGD):	3.8
Critical Low Flow [7Q2] (cfs):	0
% Effluent for Chronic Aquatic Life:	100
% Effluent for Acute Aquatic Life:	100
Effluent Flow for Human Health (MGD):	3.8
Harmonic Mean Flow (cfs):	0.2
% Effluent for Human Health:	96.710

CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE):

<i>Stream/River Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partition Coefficient (Kp)</i>	<i>Dissolved Fraction (Cd/Ct)</i>	<i>Source</i>	<i>Water Effect Ratio (WER)</i>	<i>Source</i>
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	69715.05	0.506		1.00	Assumed
Cadmium	6.60	-1.13	201778.70	0.261		1.00	Assumed
Chromium (total)	6.52	-0.93	284512.22	0.201		1.00	Assumed
Chromium (trivalent)	6.52	-0.93	284512.22	0.201		1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.02	-0.74	148547.47	0.325		1.00	Assumed
Lead	6.45	-0.80	341269.57	0.173		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	5.69	-0.57	108819.57	0.396		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	158302.63	0.311		1.00	Assumed
Zinc	6.10	-0.70	198477.09	0.265		1.00	Assumed

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

<i>Parameter</i>	<i>FW Acute Criterion (µg/L)</i>	<i>FW Chronic Criterion (µg/L)</i>	<i>WLAa (µg/L)</i>	<i>WLAc (µg/L)</i>	<i>LTAa (µg/L)</i>	<i>LTAc (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
Aldrin	3.0	N/A	3.00	N/A	1.72	N/A	2.52	5.34
Aluminum	991	N/A	991	N/A	568	N/A	834	1765
Arsenic	340	150	672	296	385	228	335	709

City of Big Spring TPDES Permit No. WQ0010069003
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Cadmium	42.0	0.765	161	2.93	92.1	2.25	3.31	7.00
Carbaryl	2.0	N/A	2.00	N/A	1.15	N/A	1.68	3.56
Chlordane	2.4	0.004	2.40	0.00400	1.38	0.00308	0.00452	0.00957
Chlorpyrifos	0.083	0.041	0.0830	0.0410	0.0476	0.0316	0.0464	0.0981
Chromium (+3)	2178	283	10851	1412	6218	1087	1597	3380
Chromium (+6)	15.7	10.6	15.7	10.6	9.00	8.16	11.9	25.3
Copper	66.4	38.4	205	118	117	91.0	133	282
Cyanide (free)	45.8	10.7	45.8	10.7	26.2	8.24	12.1	25.6
0.00077								
4,4'-DDT	1.1	0.001	1.10	0.00100	0.630	0	0.00113	0.00239
Demeton	N/A	0.1	N/A	0.100	N/A	0.0770	0.113	0.239
Diazinon	0.17	0.17	0.170	0.170	0.0974	0.131	0.143	0.302
Dicofol	59.3	19.8	59.3	19.8	34.0	15.2	22.4	47.4
Dieldrin	0.24	0.002	0.240	0.00200	0.138	0.00154	0.00226	0.00478
Diuron	210	70	210	70.0	120	53.9	79.2	167
Endosulfan I (alpha)	0.22	0.056	0.220	0.0560	0.126	0.0431	0.0633	0.134
Endosulfan II (beta)	0.22	0.056	0.220	0.0560	0.126	0.0431	0.0633	0.134
Endosulfan sulfate	0.22	0.056	0.220	0.0560	0.126	0.0431	0.0633	0.134
Endrin	0.086	0.002	0.0860	0.00200	0.0493	0.00154	0.00226	0.00478
Guthion	N/A	0.01	N/A	0.0100	N/A	0.00770	0.0113	0.0239
Heptachlor	0.52	0.004	0.520	0.00400	0.298	0.00308	0.00452	0.00957
Hexachlorocyclohexane (Lindane)	1.126	0.08	1.13	0.0800	0.645	0.0616	0.0905	0.191
Lead	362	14.13	2094	81.6	1200	62.8	92.3	195
Malathion	N/A	0.01	N/A	0.0100	N/A	0.00770	0.0113	0.0239
Mercury	2.4	1.3	2.40	1.30	1.38	1.00	1.47	3.11
Methoxychlor	N/A	0.03	N/A	0.0300	N/A	0.0231	0.0339	0.0718
0.00077								
Mirex	N/A	0.001	N/A	0.00100	N/A	0	0.00113	0.00239
Nickel	1870	207.7	4720	524	2705	404	593	1255
Nonylphenol	28	6.6	28.0	6.60	16.0	5.08	7.47	15.8
Parathion (ethyl)	0.065	0.013	0.0650	0.0130	0.0372	0.0100	0.0147	0.0311
Pentachlorophenol	15.9	12.2	15.9	12.2	9.14	9.42	13.4	28.4
Phenanthrene	30	30	30.0	30.0	17.2	23.1	25.2	53.4
Polychlorinated Biphenyls (PCBs)	2.0	0.014	2.00	0.0140	1.15	0.0108	0.0158	0.0335
Selenium	20	5	20.0	5.00	11.5	3.85	5.65	11.9
Silver	0.8	N/A	28.6	N/A	16.4	N/A	24.1	51.0
0.00015								
Toxaphene	0.78	0.0002	0.780	0.000200	0.447	4	6	8
Tributyltin (TBT)	0.13	0.024	0.130	0.0240	0.0745	0.0185	0.0271	0.0574
2,4,5 Trichlorophenol	136	64	136	64.0	77.9	49.3	72.4	153
Zinc	469	473	1773	1787	1016	1376	1493	3158

HUMAN HEALTH (APPLIES FOR INCIDENTAL FRESHWATER FISH TISSUE)

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

<i>Parameter</i>	<i>Incidental Fish Criterion (µg/L)</i>	<i>WLAh (µg/L)</i>	<i>LTAh (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
Acrylonitrile	1150	1189	1106	1625	3439
Aldrin	1.147E-04	0.000119	0.000110	0.000162	0.000343
Anthracene	13170	13618	12665	18617	39387
Antimony	10710	11074	10299	15139	32030
Arsenic	N/A	N/A	N/A	N/A	N/A
Barium	N/A	N/A	N/A	N/A	N/A
Benzene	5810	6008	5587	8213	17375
Benzidine	1.07	1.11	1.03	1.51	3.20
Benzo(a)anthracene	0.25	0.259	0.240	0.353	0.747
Benzo(a)pyrene	0.025	0.0259	0.0240	0.0353	0.0747
Bis(chloromethyl)ether	2.745	2.84	2.64	3.88	8.20
Bis(2-chloroethyl)ether	428.3	443	412	605	1280

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Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	75.5	78.1	72.6	106	225
Bromodichloromethane [Dichlorobromomethane]	2750	2844	2644	3887	8224
Bromoform [Tribromomethane]	10600	10961	10193	14984	31701
Cadmium	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	460	476	442	650	1375
Chlordane	0.025	0.0259	0.0240	0.0353	0.0747
Chlorobenzene	27370	28301	26320	38690	81855
Chlorodibromomethane [Dibromochloromethane]	1830	1892	1760	2586	5472
Chloroform [Trichloromethane]	76970	79588	74017	108805	230193
Chromium (hexavalent)	5020	5191	4827	7096	15013
Chrysene	25.2	26.1	24.2	35.6	75.3
Cresols [Methylphenols]	93010	96174	89442	131479	278163
Cyanide (free)	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.02	0.0207	0.0192	0.0282	0.0598
4,4'-DDE	0.0013	0.00134	0.00125	0.00183	0.00388
4,4'-DDT	0.004	0.00414	0.00385	0.00565	0.0119
2,4'-D	N/A	N/A	N/A	N/A	N/A
Danitol [Fenprothrin]	4730	4891	4549	6686	14145
1,2-Dibromoethane [Ethylene Dibromide]	42.4	43.8	40.8	59.9	126
<i>m</i> -Dichlorobenzene [1,3-Dichlorobenzene]	5950	6152	5722	8410	17794
<i>o</i> -Dichlorobenzene [1,2-Dichlorobenzene]	32990	34112	31724	46634	98662
<i>p</i> -Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	22.4	23.2	21.5	31.6	66.9
1,2-Dichloroethane	3640	3764	3500	5145	10886
1,1-Dichloroethylene [1,1-Dichloroethene]	551140	569888	529996	779093	1648287
Dichloromethane [Methylene Chloride]	133330	137865	128215	188475	398748
1,2-Dichloropropane	2590	2678	2491	3661	7745
1,3-Dichloropropene [1,3-Dichloropropylene]	1190	1230	1144	1682	3558
Dicofol [Kelthane]	3	3.10	2.88	4.24	8.97
Dieldrin	2.0E-04	0.000207	0.000192	0.000282	0.000598
2,4-Dimethylphenol	84360	87230	81124	119251	252294
Di- <i>n</i> -Butyl Phthalate	924	955	889	1306	2763
Dioxins/Furans [TCDD Equivalents]	7.97E-07	8.24E-07	7.66E-07	0.0000011	0.0000024
Endrin	0.2	0.207	0.192	0.282	0.598
Epichlorohydrin	20130	20815	19358	28455	60202
Ethylbenzene	18670	19305	17954	26391	55836
Ethylene Glycol	1.68E+08	17371482	16155479	23748554	50243540
Fluoride	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.001	0.00103	0.000962	0.00141	0.00299
Heptachlor Epoxide	0.0029	0.00300	0.00279	0.00409	0.00867
Hexachlorobenzene	0.0068	0.00703	0.00654	0.00961	0.0203
Hexachlorobutadiene	2.2	2.27	2.12	3.10	6.57
Hexachlorocyclohexane (<i>alpha</i>)	0.084	0.0869	0.0808	0.118	0.251
Hexachlorocyclohexane (<i>beta</i>)	2.6	2.69	2.50	3.67	7.77
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	3.41	3.53	3.28	4.82	10.1
Hexachlorocyclopentadiene	116	120	112	163	346
Hexachloroethane	23.3	24.1	22.4	32.9	69.6
Hexachlorophene	29	30.0	27.9	40.9	86.7
4,4'-Isopropylidenediphenol [Bisphenol A]	159820	165257	153689	225922	477971
Lead	38.3	229	213	312	661
Mercury	0.122	0.126	0.117	0.172	0.364
Methoxychlor	30	31.0	28.8	42.4	89.7
Methyl Ethyl Ketone	9.92E+06	10257447	9539426	14022955	29667614
Methyl <i>tert</i> -butyl ether [MTBE]	104820	108386	100799	148174	313483
Nickel	11400	29746	27664	40666	86034
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	18730	19367	18011	26476	56015
N-Nitrosodiethylamine	21	21.7	20.2	29.6	62.8
N-Nitroso-di- <i>n</i> -Butylamine	42	43.4	40.4	59.3	125

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Pentachlorobenzene	3.55	3.67	3.41	5.01	10.6
Pentachlorophenol	2.9	3.00	2.79	4.09	8.67
Polychlorinated Biphenyls [PCBs]	6.40E-03	0.00662	0.00615	0.00904	0.0191
Pyridine	9470	9792	9107	13386	28321
Selenium	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	2.4	2.48	2.31	3.39	7.17
1,1,2,2-Tetrachloroethane	263.5	272	253	372	788
Tetrachloroethylene [Tetrachloroethylene]	2800	2895	2693	3958	8373
Thallium	2.3	2.38	2.21	3.25	6.87
Toluene	N/A	N/A	N/A	N/A	N/A
Toxaphene	0.11	0.114	0.106	0.155	0.328
2,4,5-TP [Silvex]	3690	3816	3548	5216	11035
1,1,1-Trichloroethane	7843540	8110352	7542628	11087662	23457572
1,1,2-Trichloroethane	1660	1716	1596	2346	4964
Trichloroethylene [Trichloroethene]	719	743	691	1016	2150
2,4,5-Trichlorophenol	18670	19305	17954	26391	55836
TTHM [Sum of Total Trihalomethanes]	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	165	171	159	233	493

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS:

Aquatic Life	70% of Daily Avg.	85% of Daily Avg.
Parameter	(µg/L)	(µg/L)
Aldrin	1.76	2.14
Aluminum	584	709
Arsenic	234	285
Cadmium	2.31	2.81
Carbaryl	1.17	1.43
Chlordane	0.00316	0.00384
Chlorpyrifos	0.0324	0.0394
Chromium (+3)	1118	1358
Chromium (+6)	8.39	10.1
Copper	93.5	113
Cyanide (free)	8.47	10.2
4,4'-DDT	0.000792	0.000962
Demeton	0.0792	0.0962
Diazinon	0.100	0.121
Dicofol	15.6	19.0
Dieldrin	0.00158	0.00192
Diuron	55.4	67.3
Endosulfan (alpha)	0.0443	0.0538
Endosulfan (beta)	0.0443	0.0538
Endosulfan sulfate	0.0443	0.0538
Endrin	0.00158	0.00192
Guthion	0.00792	0.00962
Heptachlor	0.00316	0.00384
Hexachlorocyclohexane (Lindane)	0.0633	0.0769
Lead	64.6	78.5
Malathion	0.00792	0.00962
Mercury	1.03	1.25
Methoxychlor	0.0237	0.0288
Mirex	0.000792	0.000962
Nickel	415	504
Nonylphenol	5.22	6.34
Parathion (ethyl)	0.0103	0.0125
Pentachlorophenol	9.40	11.4
Phenanthrene	17.6	21.4
Polychlorinated Biphenyls (PCBs)	0.0110	0.0134
Selenium	3.96	4.81
Silver	16.8	20.5

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Toxaphene	0.000158	0.000192
Tributyltin (TBT)	0.0190	0.0230
2,4,5 Trichlorophenol	50.7	61.5
Zinc	1045	1269

Human Health	70% of	85% of
Parameter	Daily Avg.	Daily Avg.
	(µg/L)	(µg/L)
Acrylonitrile	1137	1381
Aldrin	0.000113	0.000137
Anthracene	13032	15824
Antimony	10597	12868
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	5749	6981
Benzidine	1.05	1.28
Benzo(a)anthracene	0.247	0.300
Benzo(a)pyrene	0.0247	0.0300
Bis(chloromethyl)ether	2.71	3.29
Bis(2-chloroethyl)ether	423	514
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	74.7	90.7
Bromodichloromethane [Dichlorobromomethane]	2721	3304
Bromoform [Tribromomethane]	10488	12736
Cadmium	N/A	N/A
Carbon Tetrachloride	455	552
Chlordane	0.0247	0.0300
Chlorobenzene	27083	32886
Chlorodibromomethane [Dibromochloromethane]	1810	2198
Chloroform [Trichloromethane]	76163	92484
Chromium (hexavalent)	4967	6031
Chrysene	24.9	30.2
Cresols [Methylphenols]	92035	111757
Cyanide (free)	N/A	N/A
4,4'-DDD	0.0197	0.0240
4,4'-DDE	0.00128	0.00156
4,4'-DDT	0.00395	0.00480
2,4'-D	N/A	N/A
Danitol [Fenpropathrin]	4680	5683
1,2-Dibromoethane [Ethylene Dibromide]	41.9	50.9
<i>m</i> -Dichlorobenzene [1,3-Dichlorobenzene]	5887	7149
<i>o</i> -Dichlorobenzene [1,2-Dichlorobenzene]	32644	39639
<i>p</i> -Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A
3,3'-Dichlorobenzidine	22.1	26.9
1,2-Dichloroethane	3601	4373
1,1-Dichloroethylene [1,1-Dichloroethene]	545365	662229
Dichloromethane [Methylene Chloride]	131933	160204
1,2-Dichloropropane	2562	3112
1,3-Dichloropropene [1,3-Dichloropropylene]	1177	1429
Dicofol [Kelthane]	2.96	3.60
Dieldrin	0.000197	0.000240
2,4-Dimethylphenol	83476	101363
Di- <i>n</i> -Butyl Phthalate	914	1110
Dioxins/Furans [TCDD Equivalents]	7.88E-07	9.57E-07
Endrin	0.197	0.240
Epichlorohydrin	19919	24187
Ethylbenzene	18474	22433
	16623988	20186271
Ethylene Glycol	0	1
Fluoride	N/A	N/A
Heptachlor	0.000989	0.00120

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Heptachlor Epoxide	0.00286	0.00348
Hexachlorobenzene	0.00672	0.00817
Hexachlorobutadiene	2.17	2.64
Hexachlorocyclohexane (<i>alpha</i>)	0.0831	0.100
Hexachlorocyclohexane (<i>beta</i>)	2.57	3.12
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	3.37	4.09
Hexachlorocyclopentadiene	114	139
Hexachloroethane	23.0	27.9
Hexachlorophene	28.6	34.8
4,4'-Isopropylidenediphenol [Bisphenol A]	158145	192033
Lead	218	265
Mercury	0.120	0.146
Methoxychlor	29.6	36.0
Methyl Ethyl Ketone	9816069	11919512
Methyl <i>tert</i> -butyl ether [MTBE]	103721	125947
Nickel	28466	34566
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	18533	22505
N-Nitrosodiethylamine	20.7	25.2
N-Nitroso-di- <i>n</i> -Butylamine	41.5	50.4
Pentachlorobenzene	3.51	4.26
Pentachlorophenol	2.86	3.48
Polychlorinated Biphenyls [PCBs]	0.00633	0.00769
Pyridine	9370	11378
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	2.37	2.88
1,1,2,2-Tetrachloroethane	260	316
Tetrachloroethylene [Tetrachloroethylene]	2770	3364
Thallium	2.27	2.76
Toluene	N/A	N/A
Toxaphene	0.108	0.132
2,4,5-TP [Silvex]	3651	4433
1,1,1-Trichloroethane	7761363	9424513
1,1,2-Trichloroethane	1642	1994
Trichloroethylene [Trichloroethene]	711	863
2,4,5-Trichlorophenol	18474	22433
TTHM [Sum of Total Trihalomethanes]	N/A	N/A
Vinyl Chloride	163	198