Administrative Package Cover Page

This file contains the following documents:

1. Summary of application (in plain language)
   - English
   - Alternative Language (Spanish)
2. First Notice (NORI-Notice of Receipt of Application and Intent to Obtain a Permit)
   - English
   - Alternative Language (Spanish)
3. Application materials (**NOTE:** This application was declared Administratively Complete before June 1, 2024. Application materials are available for review at the Public Viewing Location provided in the NORI.)

Portada de Paquete Administrativo

Este archivo contiene los siguientes documentos:

1. Resumen en lenguaje sencillo (PLS, por sus siglas en inglés) de la actividad propuesta
   - Inglés
   - Idioma alternativo (español)
2. Primer aviso (NORI, el Aviso de Recepción de Solicitud e Intención de Obtener un Permiso)
   - Inglés
   - Idioma alternativo (español)
3. Solicitud original (**NOTA:** Esta solicitud se declaró administrativamente completa antes del 1 de junio de 2024. Los materiales de la solicitud están disponibles para revisión en la ubicación de consulta pública que se indica en el NORI.)

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

PLAIN LANGUAGE SUMMARY FOR TPDES OR TLAP PERMIT APPLICATIONS

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

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

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

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

ENGLISH TEMPLATE FOR TPDES or TLAP NEW/RENEWAL/AMENDMENT APPLICATIONS 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 West Harris County Municipal Utility District No. 11 (CN600740013) operates the West Harris County Municipal Utility District No. 11 Wastewater Treatment Facility (RN102998374). an activated sludge plant designed with single state nitrification criteria. The facility is located at 8665 West Sam Houston Parkway North, in Houston, Harris County, Texas 77040.

This application is for a renewal to discharge at an annual average flow of 1,500,000 gallons per day of treated domestic water via Harris County Flood Control District (HCFCD) Ditch E-200-00-00; thence to HCFCD Ditch E141-00-00; thence to White Oak Bayou Above Tidal in Segment No. 1017 of the San Jacinto River Basin.

Discharges from the facility are expected to contain five-day carbonaceous biochemical oxygen demand, total suspended solids, ammonia nitrogen, total copper, total dissolve solids, and Escherichia coli. Additional potential pollutants are included in the Domestic Technical Report 1.0, Section 7. Domestic wastewater is treated by an activated sludge process plant

and the treatment units include bar screens, aeration basins, secondary clarifiers, sludge digesters, and chlorine contact chambers.

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.

El West Harris County Municipal Utility District No. 11 (CN600740013) opera el West Harris County Municipal Utility District No. 11 Wastewater Treatment Facility (RN102998374), una planta de lodos activados diseñada con criterios de nitrificación de estado único. La instalación está ubicado en 8665 West Sam Houston Parkway North, en Houston, Condado de Harris, Texas 77040. Esta solicitud es para una renovación para descargar a un flujo promedio anual de 1,500,000 galones por día de agua doméstica tratada a través de la Harris County Flood Control District (HCFCD) No. E-200-00-00; de allí a HCFCD Ditch E141-00-00; de allí a White Oak Bayou Above Tidal en el Segmento No. 1017 de la Cuenca del Río San Jacinto. Se espera que las descargas de la instalación contengan demanda bioquímica de oxígeno carbonoso de cinco días, sólidos suspendidos totales, nitrógeno amoniacal, cobre total, sólidos disueltos totales y Escherichia coli. Los contaminantes potenciales adicionales se incluyen en el Informe técnico doméstico 1.0, Sección 7. Las aguas residuales domésticas son tratadas por una planta de proceso de lodos activados y las unidades de tratamiento incluyen filtros de barras, tanques de aireación, clarificadores secundarios, digestores de lodos, y cámaras de contacto con cloro.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

PERMIT NO. WQ0013689001

APPLICATION. West Harris County Municipal Utility District No. 11, 10000 Memorial Drive, Suite 260, Houston, Texas 77024, has applied to the Texas Commission on Environmental Quality (TCEQ) to renew Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0013689001 (EPA I.D. No. TX0111937) to authorize the discharge of treated wastewater at a volume not to exceed an annual average flow of 1,500,000 gallons per day. The domestic wastewater treatment facility is located at 8665 West Sam Houston Parkway North, near the city of Houston, in Harris County, Texas 77040. The discharge route is from the plant site to a series of Harris County Flood Control District ditches; thence to Whiteoak Bayou Above Tidal. TCEQ received this application on May 6, 2024. The permit application will be available for viewing and copying at Harris County Public Library - Maud Smith Marks Branch, 1815 Westgreen Boulevard, Katy, in Harris 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=-95.550833,29.897222&level=18

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

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

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

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

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

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

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

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

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

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

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

Further information may also be obtained from West Harris County Municipal Utility District No. 11 at the address stated above or by calling Mr. Shawn Sharkey, P.E., Jacobs Engineering Group Inc, at 713-582-0132.

Issuance Date: June 6, 2024

Comisión de Calidad Ambiental del Estado de Texas

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

PERMISO NO. WQ0013689001

SOLICITUD. West Harris County Municipal Utility District No. 11, 10000 Memorial Drive, Suite 260, Houston, Texas 77024, ha solicitado a la Comisión de Calidad Ambiental del Estado de Texas (TCEQ) para renovar el Permiso No. WQ0013689001 (EPA I.D. No. TX0111937) del Sistema de Eliminación de Descargas de Contaminantes de Texas (TPDES) para autorizar la descarga de aguas residuales tratadas en un volumen que no sobrepasa un flujo promedio anual de 1,500,000 galones por día. La planta está ubicada 8665 West Sam Houston Parkway North en el Condado de Harris, Texas 77040. La ruta de descarga va desde el sitio de la planta hasta una serie de zanjas del Distrito de Control de Inundaciones del Condado de Harris; de allí a Whiteoak Bayou Above Tidal. La TCEQ recibió esta solicitud el May 6, 2024. La solicitud para el permiso estará disponible para leerla y copiarla en Biblioteca pública del condado de Harris - Sucursal Maud Smith Marks, 1815 Westgreen Boulevard, Katy, Texas antes de la fecha de publicación de este aviso en el periódico. Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación es proporcionado como una cortesía y no es parte de la solicitud o del aviso. Para la ubicación exacta, consulte la solicitud.
https://gisweb.tceq.texas.gov/LocationMapper/?marker=-95.550833,29.897222&level=18

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

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

OPORTUNIDAD DE UNA AUDIENCIA ADMINISTRATIVA DE LO CONTENCIOSO. Después del plazo para presentar comentarios públicos, el Director Ejecutivo considerará todos los

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

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

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

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

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

También se puede obtener información adicional del West Harris County Municipal Utility District No. 11 a la dirección indicada arriba o llamando a Shawn Sharkey, P.E. al 713-582-0132.

Fecha de emisión: 6 de junio de 2024

Texas Commission on Environmental Quality

COMBINED

NOTICE OF RECEIPT OF APPLICATION AND INTENT TO OBTAIN WATER QUALITY PERMIT (NORI)

AND

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

RENEWAL

PERMIT NO. WQ0013689001

APPLICATION AND PRELIMINARY DECISION. West Harris County Municipal Utility District No. 11, 10000 Memorial Drive, Suite 260, Houston, Texas 77024, has applied to the Texas Commission on Environmental Quality (TCEQ) for a renewal of Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0013689001, which authorizes the discharge of treated domestic wastewater at an annual average flow not to exceed 1,500,000 gallons per day. TCEQ received this application on May 6, 2024.

This combined notice is being issued to correct the contact name and contact phone number that were provided in the original NORI.

The facility is located at 8665 West Sam Houston Parkway North, near the City of Houston, in Harris County, Texas 77040. The treated effluent is discharged to Harris County Flood Control District ditch E200-00-00, thence to Harris County Flood Control District ditch E141-00-00, thence to Whiteoak Bayou Above Tidal in Segment No. 1017 of the San Jacinto River Basin. The unclassified receiving water uses are minimal aquatic life use for Harris County Flood Control District ditch E200-00-00 and limited aquatic life use for Harris County Flood Control District ditch E141-00-00. The designated uses for Segment No. 1017 are primary contact recreation and limited 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.
https://gisweb.tceq.texas.gov/LocationMapper/?marker=-95.550833,29.897222&level=18

The TCEQ Executive Director has completed the technical review of the application and prepared a draft permit. The draft permit, if approved, would establish the conditions under which the facility must operate. The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The permit application, Executive Director's preliminary decision, and draft permit are available for viewing and copying at Harris County Public Library - Maud Smith Marks Branch, 1815 Westgreen Boulevard, Katy, in Harris County, Texas. The application, including any updates, and associated notices are available electronically at the following webpage:
https://www.tceq.texas.gov/permitting/wastewater/tpdes-applications.

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

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

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

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

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

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

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

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

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

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

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

Further information may also be obtained from West Harris County Municipal Utility District No. 11 at the address stated above or by calling **Mr. Kenrick Piercy, P.E., at 713-784-4500.**

Issuance Date: March 20, 2025

Comisión De Calidad Ambiental Del Estado De Texas

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

RENOVACIÓN

PERMISO NO. WQ0013689001

SOLICITUD Y DECISIÓN PRELIMINAR. Distrito de Servicios Públicos Municipales del Condado de West Harris No. 11, 10000 Memorial Drive, Suite 260, Houston, Texas 77024, ha solicitado a la Comisión de Calidad Ambiental del Estado de Texas (TCEQ) una renovación de Sistema de Eliminación de Descargas Contaminantes de Texas (TPDES) Permiso No. WQ0013689001, para autorizar la descarga de aguas residuales domesticas tratadas con un flujo medio anual que no exceda 1,500,000 galones por día. La TCEQ recibió esta solicitud el 6 de Mayo, 2024.

La planta está ubicada en 8665 West Sam Houston Parkway North, cerca de la Ciudad de Houston, en el Condado de Harris, Texas. El efluente tratado es descargado al Distrito de Control de Inundaciones del Condado de Harris, zanja E200-00-00, de allí al Distrito de Inundaciones del Condado de Harris, zanja E141-00-00, de allí al Pantano Whiteoak sobre la marea en el Segmento No. 1017 de la Cuenca del Río San Jacinto. Los usos no clasificados de las aguas receptoras son usos mínimos de vida acuática para el Distrito de Control de Inundaciones del Condado de Harris, zanja E200-00-00 y usos limitados para vida acuática para el Distrito de Control de Inundaciones del Condado de Harris, zanja E141-00-00. Los usos designados para el Segmento No. 1017 son actividades recreativas de contacto primario y uso limitado de vida acuática. Este enlace a un mapa electrónico de la ubicación general del sitio o instalación se proporciona como cortesía pública y no forma parte de la solicitud ni del aviso. Para conocer la ubicación exacta, consulte la solicitud.
https://gisweb.tceq.texas.gov/LocationMapper/?marker=-95.550833,29.897222&level=18

El Director Ejecutivo de la TCEQ ha completado la revisión técnica de la solicitud y ha preparado un borrador del permiso. El borrador del permiso, si es aprobado, establecería las condiciones bajo las cuales la instalación debe operar. El Director Ejecutivo ha tomado una decisión preliminar que si este permiso es emitido, cumple con todos los requisitos normativos y legales. La solicitud del permiso, la decisión preliminar del Director Ejecutivo y el borrador del permiso están disponibles para leer y copiar en la Librería Publica del Condado de Harris – Maud Smith Marks Branch, 1815 Westgreen Boulevard, Katy, en el Condado de Harris, Texas. La solicitud (cualquier actualización y aviso inclusive) está disponible electrónicamente en la siguiente página web: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications.

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

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

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

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

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

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

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

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

Todos los comentarios escritos del público y los pedidos una reunión deben ser presentados durante los 30 días después de la publicación del aviso a la Oficina del Secretario Principal, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or por el internet a www.tceq.texas.gov/about/comments.html. Tenga en cuenta que cualquier información personal que usted proporcione, incluyendo su nombre, número de teléfono, dirección de correo electrónico y dirección física pasarán a formar parte del registro público de la Agencia.

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

También se puede obtener información adicional del Distrito de Servicios Públicos Municipales del Condado de West Harris No. 11 a la dirección indicada arriba o llamando al Sr. Kenrick Piercy, P.E., EHRA Engineering al 713.784.4500

Fecha de emission: 20 de marzo de 2025

TPDES PERMIT NO.
WQ0013689001
[For TCEQ office use only - EPA I.D. No. TX0111937]

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

This is a renewal that replaces TPDES Permit No. WQ0013689001 issued on September 30, 2021.

PERMIT TO DISCHARGE WASTES
under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

West Harris County Municipal Utility District No. 11

whose mailing address is

10000 Memorial Drive, Suite 260
Houston, Texas 77024

is authorized to treat and discharge wastes from the West Harris County Municipal Utility District No. 11 Wastewater Treatment Facility, SIC Code 4952

located at 8665 West Sam Houston Parkway North, near the City of Houston in Harris County, Texas 77040

to Harris County Flood Control District ditch E200-00-00, thence to Harris County Flood Control District ditch E141-00-00, thence to Whiteoak Bayou Above Tidal in Segment No. 1017 of the San Jacinto 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 REQUIREMENTS Outfall 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 1.5 million gallons per day (MGD), nor shall the average discharge during any two-hour period (2-hour peak) exceed 4167 gallons per minute.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg	7-day Avg	Daily Max	Single Grab	Report Daily Avg. & Daily Max.	
	mg/l (lbs/day)	mg/l	mg/l	mg/l	Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous ←Biochemical Oxygen Demand (5-day)	10 (125)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (188)	25	40	60	Two/week	Composite
Ammonia Nitrogen	3 (38)	6	10	15	Two/week	Composite
Total Copper	0.0147 (1.84)	N/A	0.03	0.0441	One/week	Composite
Total Dissolved Solid	Report (Report)	N/A	Report	NA	One/month	Composite
E. coli, colony-forming units or most probable number per 100 ml	63	N/A	200	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 nth 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 Compliance Monitoring Team of 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 Compliance

Monitoring Team of 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 Compliance Monitoring Team of 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 Compliance Monitoring Team of 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 Compliance Monitoring Team of 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 Compliance Monitoring Team of 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 12) 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. This annual report shall be submitted to the TCEQ Regional Office (MC Region 12) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

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

TABLE 1

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

* Dry weight basis

3. Pathogen Control

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

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

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

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

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

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

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

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

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

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

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

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

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

criteria.

Alternative 1

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

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

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

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

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

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

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

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

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

i. Prior to use or disposal, all the sewage sludge must have been generated from a

single location, except as provided in paragraph v. below;

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

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

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

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

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

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

ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain 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):

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

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

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

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

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

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

SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE 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

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

Table 3

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

*Dry weight basis

B. Pathogen Control

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

C. Management Practices

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

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

E. Record Keeping Requirements

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

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

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

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

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

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

5. The following certification statement:

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

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

   a. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii), as applicable, and to the permittee's specific sludge 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 report annually to the TCEQ Regional Office (MC Region 12) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30th of each year the following information. The permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

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

D. Sewage sludge or biosolids shall be tested 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 12) 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 12) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

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

F. Record Keeping Requirements

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

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

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

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

G. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 12) and Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30th of each year the following information. The permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

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 report the following information annually to the TCEQ Regional Office (MC Region 12) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

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. Acute toxic criteria apply at the point of discharge.

4. The permittee has submitted evidence of legal restrictions prohibiting residential structures within the part of the buffer zone not owned by the permittee to the north according to 30 TAC § 309.13(e)(3). The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). (See Attachment A)

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.

7. Violations of daily maximum limitations for the following pollutants shall be reported orally or by facsimile to TCEQ Region 12 within 24 hours from the time the permittee becomes aware of the violation followed by a written report within five working days to TCEQ Region 12 and the Enforcement Division (MC 224).

POLLUTANT	MAL
Total Copper	0.002

Test methods utilized shall be sensitive enough to demonstrate compliance with the permit effluent limitations. Permit compliance/noncompliance determinations will be based on the effluent limitations contained in this permit with consideration given to the MAL for the parameters specified above.

When an analysis of an effluent sample for any of the parameters listed above indicates no detectable levels above the MAL and the test method detection level is as sensitive as the specified MAL, a value of zero (0) shall be used for that measurement when determining calculations and reporting requirements for the self-reporting form. This applies to determinations of daily maximum concentration, calculations of loading and daily averages, and other reportable results.

When a reported value is zero (0) based on this MAL provision, the permittee shall submit the following statement with the self-reporting form either as a separate attachment to the form or as a statement in the comments section of the form.

"The reported value(s) of zero (0) for [list parameter(s)] on the self-reporting form for [monitoring period date range] is based on the following conditions: 1) the analytical method used had a method detection level as sensitive as the MAL specified in the permit, and 2) the analytical results contained no detectable levels above the specified MAL."

When an analysis of an effluent sample for a parameter indicates no detectable levels and the test method detection level is not as sensitive as the MAL specified in the permit, or an MAL is not specified in the permit for that parameter, the level of detection achieved shall be used for that measurement when determining calculations and reporting requirements for the self-reporting form. A zero (0) may not be used.

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.

Revised July 2007

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 this permit and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," fourth edition (EPA-821-R-02-013) or its most recent update:

      1) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*) (Method 1002.0). This test should be terminated when 60% of the surviving adults in the control produce three broods or at the end of eight days, whichever occurs first. This test shall be conducted once per quarter.

      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 effluent dilution concentrations are 30%, 40%, 53%, 71%, and 95% effluent. The critical dilution, defined as 95% 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 shall resume a quarterly testing frequency for that species until this permit is reissued.

2. Required Toxicity Testing Conditions

a. 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 number of water flea neonates per surviving adult of 15 or greater;

3) a control mean dry weight of surviving fathead minnow larvae of 0.25 mg or greater;

4) a control coefficient of variation percent (CV%) of 40 or less in between replicates for the young of surviving females in the water flea test; and the growth and survival endpoints in the fathead minnow test;

5) a critical dilution CV% of 40 or less for the young of surviving females in the water flea test; and the growth and survival endpoints for the fathead minnow 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;

6) a percent minimum significant difference of 47 or less for water flea reproduction; and

7) a percent minimum significant difference of 30 or less for fathead minnow growth.

b. Statistical Interpretation

1) For the water flea survival test, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be the Fisher's exact test as described in the manual referenced in in Part 1.b.

2) For the water flea reproduction test and the fathead minnow larval 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.

3) 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.

4) 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% 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.

5) 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, reproduction, or growth of the test organism in a specified effluent dilution when compared to the survival, reproduction, or growth of the test organism in the control.

6) 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.

7) Pursuant to the responsibility assigned to the permittee in Part 2.b.3), 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.

8) TCEQ staff will review test results for consistency with rules, procedures, and permit requirements.

c. 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.

d. Samples and Composites

1) The permittee shall collect a minimum of three composite samples from Outfall 001. The second and third 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 number 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 TLP3B, enter a “1” if the NOEC for survival is less than the critical dilution; otherwise, enter a “0.”

2) For the water flea, Parameter TOP3B, report the NOEC for survival.

3) For the water flea, Parameter TXP3B, report the LOEC for survival.

4) For the water flea, Parameter TWP3B, enter a “1” if the NOEC for reproduction is less than the critical dilution; otherwise, enter a “0.”

5) For the water flea, Parameter TPP3B, report the NOEC for reproduction.

6) For the water flea, Parameter TYP3B, report the LOEC for reproduction.

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 lethality and significant effect were defined in Part 2.b. Significant sublethality is defined as a statistically significant difference in growth/reproduction at the critical dilution when compared to the growth/reproduction 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 analyses 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 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, 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 which identifies the pollutant(s) 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.

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 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.

h. Based on 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.

i. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 1 (SHEET 1 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

Dates and Times Composites Collected

Date Time Date Time

No. 1 FROM: _____ TO: _____

No. 2 FROM: _____ TO: _____

No. 3 FROM:_____ TO: _____

Test initiated: _____am/pm _____date

Dilution water used: _____ Receiving water _____ Synthetic Dilution water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

REP	Percent effluent					
	0%	30%	40%	53%	71%	95%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Survival Mean						
Total Mean						
CV%*						
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)

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

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 number of young produced per adult significantly less than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

   CRITICAL DILUTION (95%): _____ YES _____ NO

PERCENT SURVIVAL

	Percent effluent					
Time of Reading	0%	30%	40%	53%	71%	95%
24h						
48h						
End of Test						

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 (95%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

   a.) NOEC survival = _____% effluent

   b.) LOEC survival = _____% effluent

   c.) NOEC reproduction = _____% effluent

   d.) LOEC reproduction = _____% effluent

TABLE 1 (SHEET 3 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL

Dates and Times Composites Collected

Date Time Date Time

No. 1 FROM: _____ TO: _____

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%							
30%							
40%							
53%							
71%							
95%							
PMSD							

* Coefficient of Variation = standard deviation x 100/mean

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 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 (95%): _____ 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%									
30%									
40%									
53%									
71%									
95%									

* 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 (95%): _____ 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 whole effluent toxicity (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," fifth edition (EPA-821-R-02-012) or its most recent update:

1) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*). 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.

A valid test result must be submitted for each reporting period. The permittee must report, and then repeat, an invalid test during the same reporting period. The repeat test shall include the control and the 100% effluent dilution and use the appropriate number of organisms and replicates, as specified above. 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. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. 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, a chemical-specific limit, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.

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 Part 1.c., the control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.

c. Samples and Composites

1) The permittee shall collect one composite sample from Outfall 001.

2) The permittee shall collect the composite sample 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 sample 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 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, and 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 a “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 a "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 a "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 a "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 analyses 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 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 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.

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 Part 5.h. The report shall also specify a corrective action schedule for implementing the selected control mechanism.

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.

j. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

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

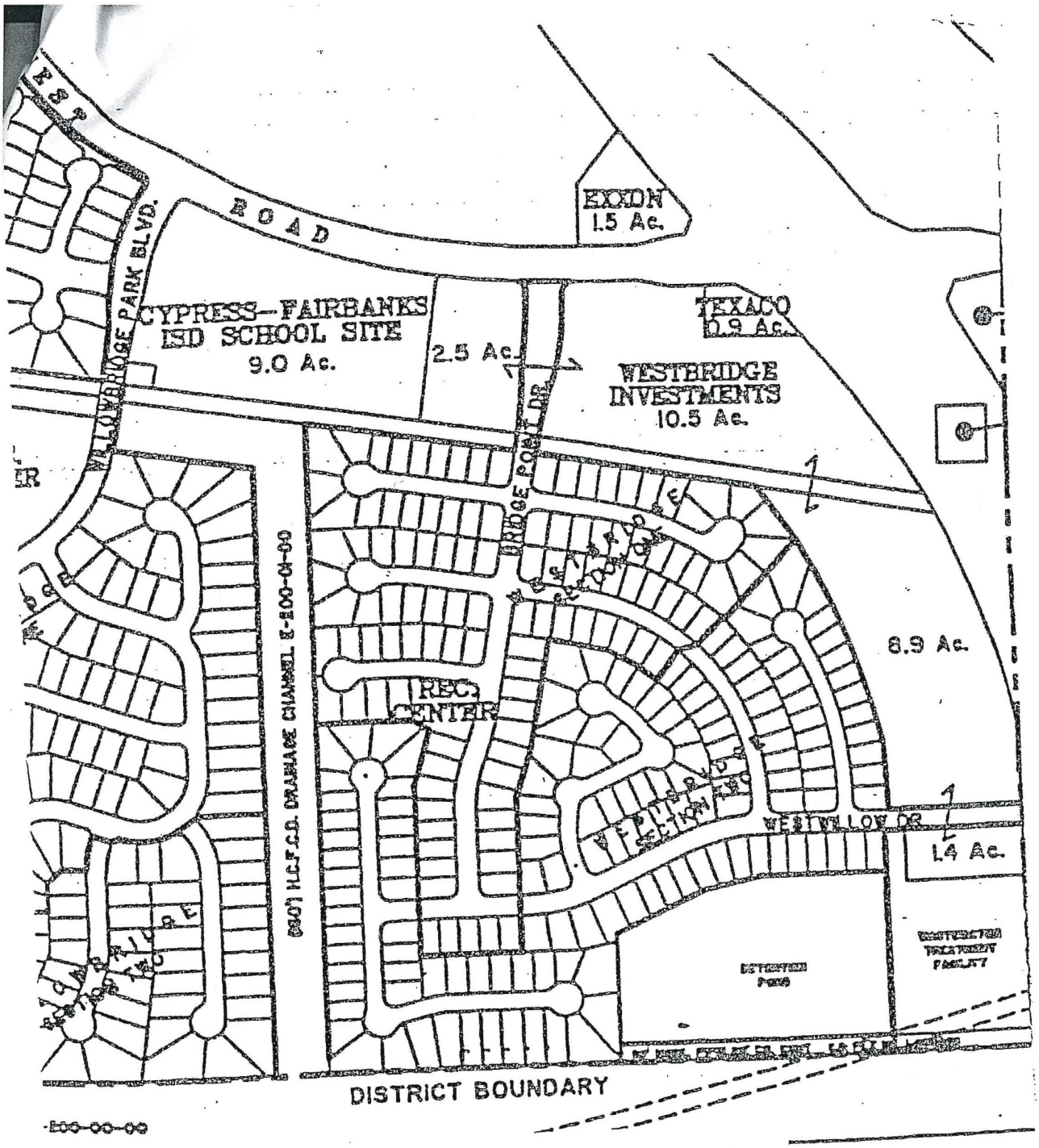
	Time	Date
Composite Sample Collected		
Test Initiated		

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



West Harris County Municipal Utility District No. 11
TPDES Permit No. 13689-001
ATTACHMENT "A"

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For draft Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0013689001, EPA I.D. No. TX0111937, to discharge to water in the state.

Issuing Office: Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Applicant: West Harris County Municipal Utility District No. 11
10000 Memorial Drive, Suite 260
Houston, Texas 77024

Prepared By: Sonia Bhuiya
Municipal Permits Team
Wastewater Permitting Section (MC 148)
Water Quality Division
(512) 239-1205

Date: January 8, 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 1.5 million gallons per day (MGD). The existing wastewater treatment facility serves West Harris County Municipal Utility District No. 11.

3. FACILITY AND DISCHARGE LOCATION

The plant site is located at 8665 West Sam Houston Parkway North, near the City of Houston, in Harris County, Texas 77040.

Outfall Location:

Outfall Number	Latitude	Longitude
001	29.896132 N	95.550606 W

The treated effluent is discharged to Harris County Flood Control District ditch E200-00-00, thence to Harris County Flood Control District ditch E141-00-00, thence to Whiteoak Bayou Above Tidal in Segment No. 1017 of the San Jacinto River Basin. The unclassified receiving water uses are minimal aquatic life use for Harris County Flood

Control District ditch E200-00-00 and limited aquatic life use for Harris County Flood Control District ditch E141-00-00. The designated uses for Segment No. 1017 are primary contact recreation and limited aquatic life use.

4. TREATMENT PROCESS DESCRIPTION AND SEWAGE SLUDGE DISPOSAL

The West Harris County Municipal Utility District No. 11 Wastewater Treatment Facility is an activated sludge process plant operated in the complete mix mode. Treatment units include a lift station, bar screen, two aeration basins, two final clarifiers, three aerobic sludge digesters, two chlorine contact chambers, and a dechlorination chamber. 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, McCarty Road Landfill, Registration No. 261-B, in Harris 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 West Harris County MUD No. 11 WWTP does not appear to receive significant industrial wastewater contributions. The WWTP receives process wastewater from one industrial user (IU). The process wastewater flow from the IU contributes less than 1.0% of the WWTP current maximum hydraulic capacity. The POTW has not experienced any instances of pass through or interference, therefore, at this time, the TCEQ is not requiring the permittee to develop a pretreatment program.

6. SUMMARY OF SELF-REPORTED EFFLUENT ANALYSES

The following is a summary of the applicant's effluent monitoring data for the period April 2029 through March 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 ($CBOD_5$), total suspended solids (TSS), ammonia nitrogen (NH_3-N), total Copper and Total Dissolved Solid (TDS). 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.

Parameter	Average of Daily Avg
Flow, MGD	0.66
$CBOD_5$, mg/l	2.84
TSS, mg/l	2.35
NH_3-N, mg/l	0.24
E. coli, CFU or MPN per 100 ml	2
Total Copper, mg/l	0.05
TDS, mg/l	591.45

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

The annual average flow of effluent shall not exceed 1.5 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 4167 gallons per minute.

Parameter	30-Day Average		7-Day Average	Daily Maximum
	mg/l	lbs/day	mg/l	mg/l
$CBOD_5$	10	125	15	25
TSS	15	188	25	40
NH_3-N	3	38	6	10
Total Copper	0.0147	1.84	N/A	0.03
DO (minimum)	4.0	N/A	N/A	N/A
E. coli, CFU or MPN	63	N/A	N/A	200
per 100 ml	Report	Report	N/A	Report
TDS				

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. 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.

Parameter	Monitoring Requirement
Flow, MGD	Continuous
$CBOD_5$	Two/week
TSS	Two/week
NH_3-N	Two/week
Total Copper	One/week
DO	Two/week
E. coli	One/week
TDS	One/month

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, McCarty Road Landfill, Registration No. 261-B, in Harris 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 30%, 40%, 53%, 71%, and 95%. The low-flow effluent concentration (critical dilution) is defined as 95% 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.

Other Requirement No. 8 in the existing permit has been removed**,** because it is no longer applicable.

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 Harris County Flood Control District ditch E200-00-00, thence to Harris County Flood Control District ditch E141-00-00, thence to Whiteoak Bayou Above Tidal in Segment No. 1017 of the San Jacinto River Basin. The unclassified receiving water uses are minimal aquatic life use for Harris County Flood Control District ditch E200-00-00 and limited aquatic life use for Harris County Flood Control District ditch E141-00-00. The designated uses for Segment No. 1017 are primary contact recreation and limited 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) biological opinion on the State of Texas authorization of the Texas Pollutant Discharge Elimination System (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. 1017 is not currently listed on the State's inventory of impaired and threatened waters (the 2022 Clean Water Act Section 303(d) list).

The pollutant analysis of treated effluent provided by the permittee in the application indicated 264 mg/l total dissolved solids (TDS), 55.5 mg/l sulfate, and 122 mg/l chloride present in the effluent. The segment criteria for Segment No. 1017 are 600 mg/l for TDS, 65 mg/l for sulfate, and 110 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 A1 of this Fact Sheet.

The TMDL project Fourteen Total Maximum Daily Loads for Nickel in the Houston Ship Channel System (TMDL Project No.1) **has been withdrawn and is no longer applicable**.

TMDL Project No. 22: *Eighteen Total Maximum Daily Loads for Bacteria in Buffalo and Whiteoak Bayous and Tributaries Segments 1013, 1013A, 1013C, 1014, 1014A, 1014B, 1014E, 1014H, 1014K, 1014L, 1014M, 1014N, 1014O, 1017, 1017A, 1017B, 1017D, and 1017E* has been approved for this segment.

On April 8, 2009, the TCEQ adopted TMDL Project No. 22 *Eighteen Total Maximum Daily Loads for Bacteria in Buffalo and Whiteoak Bayous and Tributaries*. The EPA approved the TMDL on June 11, 2009. The TMDL addresses elevated levels of bacteria in multiple segments and assessment units of these bayous and their tributaries. The waste load allocation (WLA) for wastewater treatment facilities was established as the permitted flow for each facility multiplied by one-half the geometric mean criterion for bacteria. Future growth from existing or new permitted sources is not limited by these TMDLs as long as the sources do not exceed the limits of one-half the bacteria geometric mean criterion for *E. coli*. To ensure that effluent limitations for this discharge are consistent with the WLAs provided in the TMDL, a concentration based effluent limitation for *E. coli* of 63 CFU or MPN per 100 ml has been included in the draft permit.

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 effluent limits recommended above 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*, (June 2010) 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 or zone of initial dilution for this discharge directly to an intermittent stream; acute freshwater criteria apply at the end of pipe. Chronic freshwater criteria are applied in the perennial

freshwater stream.

For the intermittent stream, the percent effluent for acute protection of aquatic life is 100% because the 7Q2 of the intermittent stream is 0.0 cfs. This effluent percentage also provides acute protection of aquatic life in the perennial stream. TCEQ uses the mass balance equation to estimate dilution in the perennial stream during critical conditions. The estimated dilution for chronic protection of aquatic life is calculated using the permitted flow of 1.5 MGD and the 7-day, 2-year (7Q2) flow of 0.13cfs for Harris County Flood Control District (HCFCD) ditch E200-00-00 within three miles of Harris County Flood Control District (HCFCD) ditch E141-00-00. the perennial stream. The following critical effluent percentages are being used:

Acute Effluent %: 100% Chronic Effluent %: 94.70%

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 lower of the two LTAs (acute and chronic) 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 40 mg/l for hardness (as calcium carbonate), 86 mg/l chlorides, 7.6standard units for pH, and 10 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

Harris County Flood Control District (HCFCD) ditch E200-00-00 within three miles of Harris County Flood Control District (HCFCD) ditch E141-00-00

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). Freshwater fish tissue bioaccumulation criteria are applied for human health protection in the perennial stream. TCEQ uses the mass balance equation to estimate dilution in the perennial stream during average flow conditions. The estimated dilution for human health protection is calculated using the permitted flow of 1.5 MGD and the harmonic mean flow of 0.2 cfs for Harris County Flood Control District (HCFCD) ditch E200-00-00 within three miles of Harris County Flood Control District (HCFCD) ditch E141-00-00.

The following critical effluent percentage is being used:

Human Health Effluent %: 92.066%

Whiteoak Bayou Above Tidal

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). Freshwater fish tissue bioaccumulation criteria are applied at the edge of the human health mixing zone. The human health mixing zone for this discharge is identical to the aquatic life mixing zone. TCEQ uses the mass balance equation to estimate dilution at the edge of the human health mixing zone during average flow conditions. The estimated dilution at the edge of the human health mixing zone is calculated using the permitted flow of 1.5 MGD and the harmonic mean flow of 10.1 cfs for Whiteoak Bayou Above Tidal. The following critical effluent percentage is being used:

Human Health Effluent %: 18.68 %

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 and B1 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. 1017, 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 3 years, the permittee performed twenty-four chronic tests, with no demonstrations of significant toxicity (i.e., no failures) by the water flea or fathead minnow.

A reasonable potential 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 no demonstrations of significant toxicity during the period of record for either test species, a determination of no reasonable potential was made.

All test data results were used for this determination.

(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 fourteen 24-hour acute tests, with one demonstration of significant mortality (i.e., one failure) by the water flea and one failure by the fathead minnow.

(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 Sonia Bhuiya at (512) 239-1205.

11. ADMINISTRATIVE RECORD

The following items were considered in developing the draft permit:

A. PERMIT(S)

TPDES Permit No. WQ0013689001 issued on September 30, 2021.

B. APPLICATION

Application received on May 6,2024, and additional information received on une 6, 2024.

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.

The TMDL project Fourteen Total Maximum Daily Loads for Nickel in the Houston Ship Channel System (TMDL Project No.1) **has been withdrawn and is no longer applicable**.

Eighteen Total Maximum Daily Loads for Bacteria in Buffalo and Whiteoak Bayous and Tributaries Segments 1013, 1013A, 1013C, 1014, 1014A, 1014B, 1014E, 1014H, 1014K, 1014L, 1014M, 1014N, 1014O, 1017, 1017A, 1017B, 1017D, and 1017E has been approved for this segment (TMDL Project No. 22)

Attachment A1: Screening Calculations for Total Dissolved Solids, Chloride, and Sulfate

Screening Calculations for Total Dissolved Solids, Chloride, and Sulfate

Menu 3 - Discharge to a Perennial Stream or River

Applicant Name:	**West Harris County Municipal Utility District No. 11**
Permit Number, Outfall:	**13689-001, segment screen**
Segment Number:	**1017**

Enter values needed for screening:			**Data Source (edit if different)**
QE - Average effluent flow	**1.5**	MGD	Permit application
QS - Perennial stream harmonic mean flow	**26.00**	cfs	Critical conditions memo
QE - Average effluent flow	**2.3208**	cfs	Calculated
CA - TDS - ambient segment concentration	**463**	mg/L	2010 IP, Appendix D
CA - chloride - ambient segment concentration	**86**	mg/L	2010 IP, Appendix D
CA - sulfate - ambient segment concentration	**33**	mg/L	2010 IP, Appendix D
CC - TDS - segment criterion	**600**	mg/L	2010 TSWQS, Appendix A
CC - chloride - segment criterion	**110**	mg/L	2010 TSWQS, Appendix A
CC - sulfate - segment criterion	**65**	mg/L	2010 TSWQS, Appendix A
CE - TDS - average effluent concentration	**264**	mg/L	Permit application
CE - chloride - average effluent concentration	**122**	mg/L	Permit application
CE - sulfate - average effluent concentration	**55.4**	mg/L	Permit application

Permit Limit Calculations

TDS

Calculate the WLA	WLA= [CC(QE+QS) - (QS)(CA)]/QE	2134.79
Calculate the LTA	LTA = WLA * 0.93	1985.35
Calculate the daily average	Daily Avg. = LTA * 1.47	**2918.47**
Calculate the daily maximum	Daily Max. = LTA * 3.11	**6174.44**
Calculate 70% of the daily average	70% of Daily Avg. =	2042.93
Calculate 85% of the daily average	85% of Daily Avg. =	2480.70

No permit limitations needed if:	**264**	**≤**	**2042.93**		
Reporting needed if:	**264**	**>**	**2042.93**	**but ≤**	**2480.70**
Permit limits may be needed if:	**264**	**>**	**2480.70**		

No permit limitations needed for TDS

Chloride

Calculate the WLA	WLA= [CC(QE+QS) - (QS)(CA)]/QE	378.87
Calculate the LTA	LTA = WLA * 0.93	352.35
Calculate the daily average	Daily Avg. = LTA * 1.47	**517.95**
Calculate the daily maximum	Daily Max. = LTA * 3.11	**1095.80**
Calculate 70% of the daily average	70% of Daily Avg. =	362.56
Calculate 85% of the daily average	85% of Daily Avg. =	440.26

No permit limitations needed if:	**122**	**≤**	**362.56**		
Reporting needed if:	**122**	**>**	**362.56**	**but ≤**	**440.26**
Permit limits may be needed if:	**122**	**>**	**440.26**		

No permit limitations needed for chloride

Sulfate

Calculate the WLA	WLA= [CC(QE+QS) - (QS)(CA)]/QE	423.49
Calculate the LTA	LTA = WLA * 0.93	393.85
Calculate the daily average	Daily Avg. = LTA * 1.47	**578.95**
Calculate the daily maximum	Daily Max. = LTA * 3.11	**1224.86**
Calculate 70% of the daily average	70% of Daily Avg. =	405.27
Calculate 85% of the daily average	85% of Daily Avg. =	492.11

No permit limitations needed if:	**55.4**	**≤**	**405.27**		
Reporting needed if:	**55.4**	**>**	**405.27**	**but ≤**	**492.11**
Permit limits may be needed if:	**55.4**	**>**	**492.11**		

No permit limitations needed for sulfate

Attachment B: Calculated Water Quality Based Effluent Limitations

TEXTOX MENU #2 - INTERMITTENT STREAM WITHIN 3 MILES OF A FRESHWATER PERENNIAL STREAM/RIVER

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
"Procedures to Implement the Texas Surface Water Quality Standards," TCEQ, June 2010

PERMIT INFORMATION

Permittee Name:	West Harris County MUD No. 11
TPDES Permit No.:	WQ0013689001
Outfall No.:	001
Prepared by:	Sonia Bhuiya
Date:	January 8, 2025

DISCHARGE INFORMATION

Intermittent Receiving Waterbody:	
Perennial Stream/River within 3 Miles:	Harris County HCFCD ditch E200-00-00 within three miles of Harris County HCFCD ditch E141-00-00
Segment No.:	1017
TSS (mg/L):	10
pH (Standard Units):	7.6
Hardness (mg/L as $CaCO_3$):	40
Chloride (mg/L):	86
Effluent Flow for Aquatic Life (MGD):	1.5
Critical Low Flow [7Q2] (cfs) for intermittent:	0
Critical Low Flow [7Q2] (cfs) for perennial:	0.13
% Effluent for Chronic Aquatic Life (Mixing Zone):	94.70
% Effluent for Acute Aquatic Life (ZID):	100
Effluent Flow for Human Health (MGD):	1.5
Harmonic Mean Flow (cfs) for perennial:	0.2
% Effluent for Human Health:	92.066
Human Health Criterion (select: PWS, FISH, or INC)	**FISH**

CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE):

Stream/River Metal	*Intercept (b)*	*Slope (m)*	*Partition Coefficient (Kp)*	*Dissolved Fraction (Cd/Ct)*	*Source*	*Water Effect Ratio (WER)*	*Sou*
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assu
Arsenic	5.68	-0.73	89125.09	0.529		1.00	Assu
Cadmium	6.60	-1.13	295120.92	0.253		1.00	Assu
Chromium (total)	6.52	-0.93	389045.14	0.204		1.00	Assu
Chromium (trivalent)	6.52	-0.93	389045.14	0.204		1.00	Assu
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assu
Copper	6.02	-0.74	190546.07	0.344		1.00	Assu
Lead	6.45	-0.80	446683.59	0.183		1.00	Assu
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assu
Nickel	5.69	-0.57	131825.67	0.431		1.00	Assu
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assu
Silver	6.38	-1.03	223872.11	0.309		1.00	Assu
Zinc	6.10	-0.70	251188.64	0.285		1.00	Assu

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*FW Acute Criterion (µg/L)*	*FW Chronic Criterion (µg/L)*	*WLAa (µg/L)*	*WLAc (µg/L)*	*LTAa (µg/L)*	*LTAc (µg/L)*	*Daily (µg*
Aldrin	3.0	N/A	3.00	N/A	1.72	N/A	
Aluminum	991	N/A	991	N/A	568	N/A	
Arsenic	340	150	643	300	368	231	
Cadmium	3.5	0.130	13.9	0.543	7.97	0.418	0
Carbaryl	2.0	N/A	2.00	N/A	1.15	N/A	
Chlordane	2.4	0.004	2.40	0.00422	1.38	0.00325	0.0
Chlorpyrifos	0.083	0.041	0.0830	0.0433	0.0476	0.0333	0.
Chromium (trivalent)	269	35	1316	181	754	139	
Chromium (hexavalent)	15.7	10.6	15.7	11.2	9.00	8.62	
Copper	6.0	4.3	17.4	13.3	9.97	10.2	
Cyanide (free)	45.8	10.7	45.8	11.3	26.2	8.70	
4,4'-DDT	1.1	0.001	1.10	0.00106	0.630	0.000813	0.0
Demeton	N/A	0.1	N/A	0.106	N/A	0.0813	0
Diazinon	0.17	0.17	0.170	0.180	0.0974	0.138	0
Dicofol [Kelthane]	59.3	19.8	59.3	20.9	34.0	16.1	
Dieldrin	0.24	0.002	0.240	0.00211	0.138	0.00163	0.0
Diuron	210	70	210	73.9	120	56.9	
Endosulfan I (*alpha*)	0.22	0.056	0.220	0.0591	0.126	0.0455	0.
Endosulfan II (*beta*)	0.22	0.056	0.220	0.0591	0.126	0.0455	0.
Endosulfan sulfate	0.22	0.056	0.220	0.0591	0.126	0.0455	0.
Endrin	0.086	0.002	0.0860	0.00211	0.0493	0.00163	0.0
Guthion [Azinphos Methyl]	N/A	0.01	N/A	0.0106	N/A	0.00813	0.
Heptachlor	0.52	0.004	0.520	0.00422	0.298	0.00325	0.0
Hexachlorocyclohexane (*gamma*) [Lindane]	1.126	0.08	1.13	0.0845	0.645	0.0651	0.
Lead	24	0.92	129	5.29	73.6	4.07	
Malathion	N/A	0.01	N/A	0.0106	N/A	0.00813	0.
Mercury	2.4	1.3	2.40	1.37	1.38	1.06	
Methoxychlor	N/A	0.03	N/A	0.0317	N/A	0.0244	0.
Mirex	N/A	0.001	N/A	0.00106	N/A	0.000813	0.0
Nickel	216	24.0	500	58.6	286	45.2	
Nonylphenol	28	6.6	28.0	6.97	16.0	5.37	
Parathion (ethyl)	0.065	0.013	0.0650	0.0137	0.0372	0.0106	0.
Pentachlorophenol	15.9	12.2	15.9	12.9	9.14	9.95	
Phenanthrene	30	30	30.0	31.7	17.2	24.4	
Polychlorinated Biphenyls [PCBs]	2.0	0.014	2.00	0.0148	1.15	0.0114	0.
Selenium	20	5	20.0	5.28	11.5	4.07	
Silver	0.8	N/A	18.7	N/A	10.7	N/A	
Toxaphene	0.78	0.0002	0.780	0.000211	0.447	0.000163	0.00
Tributyltin [TBT]	0.13	0.024	0.130	0.0253	0.0745	0.0195	0.
2,4,5 Trichlorophenol	136	64	136	67.6	77.9	52.0	
Zinc	54	54	189	202	108	155	

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*Water and Fish Criterion (µg/L)*	*Fish Only Criterion (µg/L)*	*Incidental Fish Criterion (µg/L)*	*WLAh (µg/L)*	*LTAh (µg/L)*	*Daily Avg. (µg/L)*	*Da Ma (µg*
Acrylonitrile	1.0	115	1150	125	116	170	
Aldrin	1.146E-05	1.147E-05	1.147E-04	0.0000125	0.0000116	0.0000170	0.000
Anthracene	1109	1317	13170	1430	1330	1955	
Antimony	6	1071	10710	1163	1082	1590	
Arsenic	10	N/A	N/A	N/A	N/A	N/A	

Barium	2000	N/A	N/A	N/A	N/A	N/A	
Benzene	5	581	5810	631	587	862	
Benzidine	0.0015	0.107	1.07	0.116	0.108	0.158	0
Benzo(*a*)anthracene	0.024	0.025	0.25	0.0272	0.0253	0.0371	0.
Benzo(*a*)pyrene	0.0025	0.0025	0.025	0.00272	0.00253	0.00371	0.0
Bis(chloromethyl)ether	0.0024	0.2745	2.745	0.298	0.277	0.407	0
Bis(2-chloroethyl)ether	0.60	42.83	428.3	46.5	43.3	63.5	
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	6	7.55	75.5	8.20	7.63	11.2	
Bromodichloromethane [Dichlorobromomethane]	10.2	275	2750	299	278	408	
Bromoform [Tribromomethane]	66.9	1060	10600	1151	1071	1574	
Cadmium	5	N/A	N/A	N/A	N/A	N/A	
Carbon Tetrachloride	4.5	46	460	50.0	46.5	68.3	
Chlordane	0.0025	0.0025	0.025	0.00272	0.00253	0.00371	0.0
Chlorobenzene	100	2737	27370	2973	2765	4064	
Chlorodibromomethane [Dibromochloromethane]	7.5	183	1830	199	185	271	
Chloroform [Trichloromethane]	70	7697	76970	8360	7775	11429	2
Chromium (hexavalent)	62	502	5020	545	507	745	
Chrysene	2.45	2.52	25.2	2.74	2.55	3.74	
Cresols [Methylphenols]	1041	9301	93010	10103	9395	13811	2
Cyanide (free)	200	N/A	N/A	N/A	N/A	N/A	
4,4'-DDD	0.002	0.002	0.02	0.00217	0.00202	0.00296	0.0
4,4'-DDE	0.00013	0.00013	0.0013	0.000141	0.000131	0.000193	0.00
4,4'-DDT	0.0004	0.0004	0.004	0.000434	0.000404	0.000593	0.0
2,4'-D	70	N/A	N/A	N/A	N/A	N/A	
Danitol [Fenpropathrin]	262	473	4730	514	478	702	
1,2-Dibromoethane [Ethylene Dibromide]	0.17	4.24	42.4	4.61	4.28	6.29	
m-Dichlorobenzene [1,3-Dichlorobenzene]	322	595	5950	646	601	883	
o-Dichlorobenzene [1,2-Dichlorobenzene]	600	3299	32990	3583	3332	4898	1
p-Dichlorobenzene [1,4-Dichlorobenzene]	75	N/A	N/A	N/A	N/A	N/A	
3,3'-Dichlorobenzidine	0.79	2.24	22.4	2.43	2.26	3.32	
1,2-Dichloroethane	5	364	3640	395	368	540	
1,1-Dichloroethylene [1,1-Dichloroethene]	7	55114	551140	59864	55673	81839	17
Dichloromethane [Methylene Chloride]	5	13333	133330	14482	13468	19798	4
1,2-Dichloropropane	5	259	2590	281	262	384	
1,3-Dichloropropene [1,3-Dichloropropylene]	2.8	119	1190	129	120	176	
Dicofol [Kelthane]	0.30	0.30	3	0.326	0.303	0.445	0
Dieldrin	2.0E-05	2.0E-05	2.0E-04	0.0000217	0.0000202	0.0000296	0.000
2,4-Dimethylphenol	444	8436	84360	9163	8522	12526	2
Di-*n*-Butyl Phthalate	88.9	92.4	924	100	93.3	137	
Dioxins/Furans [TCDD Equivalents]	7.80E-08	7.97E-08	7.97E-07	8.66E-08	8.05E-08	1.18E-07	2.50
Endrin	0.02	0.02	0.2	0.0217	0.0202	0.0296	0.
Epichlorohydrin	53.5	2013	20130	2186	2033	2989	
Ethylbenzene	700	1867	18670	2028	1886	2772	
Ethylene Glycol	46744	1.68E+07	1.68E+08	18247757	16970414	24946508	5277
Fluoride	4000	N/A	N/A	N/A	N/A	N/A	
Heptachlor	8.0E-05	0.0001	0.001	0.000109	0.000101	0.000148	0.00
Heptachlor Epoxide	0.00029	0.00029	0.0029	0.000315	0.000293	0.000430	0.00
Hexachlorobenzene	0.00068	0.00068	0.0068	0.000739	0.000687	0.00100	0.0
Hexachlorobutadiene	0.21	0.22	2.2	0.239	0.222	0.326	0
Hexachlorocyclohexane (*alpha*)	0.0078	0.0084	0.084	0.00912	0.00849	0.0124	0.
Hexachlorocyclohexane (*beta*)	0.15	0.26	2.6	0.282	0.263	0.386	0
Hexachlorocyclohexane (*gamma*) [Lindane]	0.2	0.341	3.41	0.370	0.344	0.506	
Hexachlorocyclopentadiene	10.7	11.6	116	12.6	11.7	17.2	
Hexachloroethane	1.84	2.33	23.3	2.53	2.35	3.45	

Hexachlorophene	2.05	2.90	29	3.15	2.93	4.30	
4,4'-Isopropylidenediphenol [Bisphenol A]	1092	15982	159820	17359	16144	23731	5
Lead	1.15	3.83	38.3	22.7	21.2	31.0	
Mercury	0.0122	0.0122	0.122	0.0133	0.0123	0.0181	0.
Methoxychlor	2.92	3.0	30	3.26	3.03	4.45	
Methyl Ethyl Ketone	13865	9.92E+05	9.92E+06	1077487	1002063	1473031	311
Methyl *tert*-butyl ether [MTBE]	15	10482	104820	11385	10588	15564	3
Nickel	332	1140	11400	2871	2670	3924	
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	N/A	N/A	N/A	N/A	
Nitrobenzene	45.7	1873	18730	2034	1892	2781	
N-Nitrosodiethylamine	0.0037	2.1	21	2.28	2.12	3.11	
N-Nitroso-di-*n*-Butylamine	0.119	4.2	42	4.56	4.24	6.23	
Pentachlorobenzene	0.348	0.355	3.55	0.386	0.359	0.527	
Pentachlorophenol	0.22	0.29	2.9	0.315	0.293	0.430	0
Polychlorinated Biphenyls [PCBs]	6.4E-04	6.4E-04	6.40E-03	0.000695	0.000646	0.000950	0.0
Pyridine	23	947	9470	1029	957	1406	
Selenium	50	N/A	N/A	N/A	N/A	N/A	
1,2,4,5-Tetrachlorobenzene	0.23	0.24	2.4	0.261	0.242	0.356	0
1,1,2,2-Tetrachloroethane	1.64	26.35	263.5	28.6	26.6	39.1	
Tetrachloroethylene [Tetrachloroethylene]	5	280	2800	304	283	415	
Thallium	0.12	0.23	2.3	0.250	0.232	0.341	0
Toluene	1000	N/A	N/A	N/A	N/A	N/A	
Toxaphene	0.011	0.011	0.11	0.0119	0.0111	0.0163	0.
2,4,5-TP [Silvex]	50	369	3690	401	373	547	
1,1,1-Trichloroethane	200	784354	7843540	851946	792310	1164696	246
1,1,2-Trichloroethane	5	166	1660	180	168	246	
Trichloroethylene [Trichloroethene]	5	71.9	719	78.1	72.6	106	
2,4,5-Trichlorophenol	1039	1867	18670	2028	1886	2772	
TTHM [Sum of Total Trihalomethanes]	80	N/A	N/A	N/A	N/A	N/A	
Vinyl Chloride	0.23	16.5	165	17.9	16.7	24.5	

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	237	288
Cadmium	0.429	0.521
Carbaryl	1.17	1.43
Chlordane	0.00334	0.00406
Chlorpyrifos	0.0343	0.0416
Chromium (trivalent)	143	173
Chromium (hexavalent)	8.86	10.7
Copper	10.2	12.4
Cyanide (free)	8.95	10.8
4,4'-DDT	0.000836	0.00101
Demeton	0.0836	0.101
Diazinon	0.100	0.121
Dicofol [Kelthane]	16.5	20.1
Dieldrin	0.00167	0.00203
Diuron	58.5	71.1
Endosulfan I (*alpha*)	0.0468	0.0568

Endosulfan II (*beta*)	0.0468	0.0568
Endosulfan sulfate	0.0468	0.0568
Endrin	0.00167	0.00203
Guthion [Azinphos Methyl]	0.00836	0.0101
Heptachlor	0.00334	0.00406
Hexachlorocyclohexane (*gamma*) [Lindane]	0.0669	0.0812
Lead	4.19	5.08
Malathion	0.00836	0.0101
Mercury	1.08	1.32
Methoxychlor	0.0251	0.0304
Mirex	0.000836	0.00101
Nickel	46.4	56.4
Nonylphenol	5.52	6.70
Parathion (ethyl)	0.0108	0.0132
Pentachlorophenol	9.40	11.4
Phenanthrene	17.6	21.4
Polychlorinated Biphenyls [PCBs]	0.0117	0.0142
Selenium	4.18	5.08
Silver	11.0	13.3
Toxaphene	0.000167	0.000203
Tributyltin [TBT]	0.0200	0.0243
2,4,5 Trichlorophenol	53.5	65.0
Zinc	111	135

Human Health	***70% of Daily Avg.***	***85% of Daily Avg.***
Parameter	***(µg/L)***	***(µg/L)***
Acrylonitrile	119	145
Aldrin	0.0000119	0.0000144
Anthracene	1368	1662
Antimony	1113	1351
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	603	733
Benzidine	0.111	0.135
Benzo(*a*)anthracene	0.0259	0.0315
Benzo(*a*)pyrene	0.00259	0.00315
Bis(chloromethyl)ether	0.285	0.346
Bis(2-chloroethyl)ether	44.5	54.0
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	7.84	9.52
Bromodichloromethane [Dichlorobromomethane]	285	347
Bromoform [Tribromomethane]	1101	1337
Cadmium	N/A	N/A
Carbon Tetrachloride	47.8	58.0
Chlordane	0.00259	0.00315
Chlorobenzene	2844	3454
Chlorodibromomethane [Dibromochloromethane]	190	230
Chloroform [Trichloromethane]	8000	9714
Chromium (hexavalent)	521	633
Chrysene	2.61	3.18
Cresols [Methylphenols]	9667	11739
Cyanide (free)	N/A	N/A
4,4'-DDD	0.00207	0.00252
4,4'-DDE	0.000135	0.000164

4,4'-DDT	0.000415	0.000504
2,4'-D	N/A	N/A
Danitol [Fenpropathrin]	491	597
1,2-Dibromoethane [Ethylene Dibromide]	4.40	5.35
m-Dichlorobenzene [1,3-Dichlorobenzene]	618	750
o-Dichlorobenzene [1,2-Dichlorobenzene]	3429	4163
p-Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A
3,3'-Dichlorobenzidine	2.32	2.82
1,2-Dichloroethane	378	459
1,1-Dichloroethylene [1,1-Dichloroethene]	57287	69563
Dichloromethane [Methylene Chloride]	13858	16828
1,2-Dichloropropane	269	326
1,3-Dichloropropene [1,3-Dichloropropylene]	123	150
Dicofol [Kelthane]	0.311	0.378
Dieldrin	0.0000207	0.0000252
2,4-Dimethylphenol	8768	10647
Di-*n*-Butyl Phthalate	96.0	116
Dioxins/Furans [TCDD Equivalents]	8.28E-08	1.00E-07
Endrin	0.0207	0.0252
Epichlorohydrin	2092	2540
Ethylbenzene	1940	2356
Ethylene Glycol	17462555	21204532
Fluoride	N/A	N/A
Heptachlor	0.000103	0.000126
Heptachlor Epoxide	0.000301	0.000366
Hexachlorobenzene	0.000706	0.000858
Hexachlorobutadiene	0.228	0.277
Hexachlorocyclohexane (*alpha*)	0.00873	0.0106
Hexachlorocyclohexane (*beta*)	0.270	0.328
Hexachlorocyclohexane (*gamma*) [Lindane]	0.354	0.430
Hexachlorocyclopentadiene	12.0	14.6
Hexachloroethane	2.42	2.94
Hexachlorophene	3.01	3.66
4,4'-Isopropylidenediphenol [Bisphenol A]	16612	20172
Lead	21.7	26.4
Mercury	0.0126	0.0153
Methoxychlor	3.11	3.78
Methyl Ethyl Ketone	1031122	1252077
Methyl *tert*-butyl ether [MTBE]	10895	13230
Nickel	2747	3335
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	1946	2364
N-Nitrosodiethylamine	2.18	2.65
N-Nitroso-di-*n*-Butylamine	4.36	5.30
Pentachlorobenzene	0.369	0.448
Pentachlorophenol	0.301	0.366
Polychlorinated Biphenyls [PCBs]	0.000665	0.000807
Pyridine	984	1195
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.249	0.302
1,1,2,2-Tetrachloroethane	27.3	33.2
Tetrachloroethylene [Tetrachloroethylene]	291	353
Thallium	0.239	0.290
Toluene	N/A	N/A

Toxaphene	0.0114	0.0138
2,4,5-TP [Silvex]	383	465
1,1,1-Trichloroethane	815287	989991
1,1,2-Trichloroethane	172	209
Trichloroethylene [Trichloroethene]	74.7	90.7
2,4,5-Trichlorophenol	1940	2356
TTHM [Sum of Total Trihalomethanes]	N/A	N/A
Vinyl Chloride	17.1	20.8

Attachment B1: Calculated Water Quality Based Effluent Limitations

TEXTOX MENU #3 - PERENNIAL STREAM OR RIVER

HUMAN HEALTH ONLY

The water quality-based effluent limitations developed below are calculated using:

Table 2, 2018 Texas Surface Water Quality Standards for Human Health
"Procedures to Implement the Texas Surface Water Quality Standards," TCEQ, June 2010

PERMIT INFORMATION

Permittee Name:	West Harris County MUD No. 84
TPDES Permit No.:	WQ0013689001
Outfall No.:	001
Prepared by:	Sonia Bhuiya
Date:	

DISCHARGE INFORMATION

Receiving Waterbody:	Whiteoak Bayou Above Tidal
Segment No.:	1017
TSS (mg/L):	10
Effluent Flow for Human Health (MGD):	1.5
Harmonic Mean Flow (cfs):	10.1
% Effluent for Human Health:	18.68
Human Health Criterion (select: PWS or FISH)	**FISH**

CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE):

Stream/River Metal	*Intercept (b)*	*Slope (m)*	*Partition Coefficient (Kp)*	*Dissolved Fraction (Cd/Ct)*	*Source*	*Water Effect Ratio (WER)*	*Source*
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	89125.09	0.529		1.00	Assumed
Cadmium	6.60	-1.13	295120.92	0.253		1.00	Assumed
Chromium (total)	6.52	-0.93	389045.14	0.204		1.00	Assumed
Chromium (trivalent)	6.52	-0.93	389045.14	0.204		1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.02	-0.74	190546.07	0.344		1.00	Assumed
Lead	6.45	-0.80	446683.59	0.183		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	5.69	-0.57	131825.67	0.431		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	223872.11	0.309		1.00	Assumed
Zinc	6.10	-0.70	251188.64	0.285		1.00	Assumed

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*Water and Fish Criterion (µg/L)*	*Fish Only Criterion (µg/L)*	*WLAh (µg/L)*	*LTAh (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Acrylonitrile	1.0	115	615	572	840	1778
Aldrin	1.146E-05	1.147E-05	0.0000614	0.0000571	0.0000839	0.000177
Anthracene	1109	1317	7048	6555	9635	20386
Antimony	6	1071	5732	5331	7836	16579
Arsenic	10	N/A	N/A	N/A	N/A	N/A
Barium	2000	N/A	N/A	N/A	N/A	N/A
Benzene	5	581	3109	2891	4249	8991

Benzidine	0.0015	0.107	0.573	0.533	0.783	1.65
Benzo(*a*)anthracene	0.024	0.025	0.134	0.125	0.183	0.388
Benzo(*a*)pyrene	0.0025	0.0025	0.0134	0.0125	0.0183	0.0388
Bis(chloromethyl)ether	0.0024	0.2745	1.47	1.37	2.01	4.26
Bis(2-chloroethyl)ether	0.60	42.83	229	213	313	662
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	6	7.55	40.4	37.6	55.2	116
Bromodichloromethane [Dichlorobromomethane]	10.2	275	1472	1369	2012	4257
Bromoform [Tribromomethane]	66.9	1060	5673	5276	7755	16408
Cadmium	5	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	4.5	46	246	229	336	712
Chlordane	0.0025	0.0025	0.0134	0.0125	0.0183	0.0388
Chlorobenzene	100	2737	14648	13623	20025	42367
Chlorodibromomethane [Dibromochloromethane]	7.5	183	979	910	1337	2830
Chloroform [Trichloromethane]	70	7697	41193	38309	56314	119140
Chromium (hexavalent)	62	502	2687	2499	3673	7771
Chrysene	2.45	2.52	13.5	12.6	18.5	39.1
Cresols [Methylphenols]	1041	9301	49778	46294	68052	143974
Cyanide (free)	200	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.002	0.002	0.0107	0.00995	0.0146	0.0309
4,4'-DDE	0.00013	0.00013	0.000696	0.000647	0.000951	0.00201
4,4'-DDT	0.0004	0.0004	0.00214	0.00199	0.00292	0.00618
2,4'-D	70	N/A	N/A	N/A	N/A	N/A
Danitol [Fenpropathrin]	262	473	2531	2354	3460	7320
1,2-Dibromoethane [Ethylene Dibromide]	0.17	4.24	22.7	21.1	31.0	65.6
m-Dichlorobenzene [1,3-Dichlorobenzene]	322	595	3184	2961	4352	9208
o-Dichlorobenzene [1,2-Dichlorobenzene]	600	3299	17656	16420	24137	51066
p-Dichlorobenzene [1,4-Dichlorobenzene]	75	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	0.79	2.24	12.0	11.2	16.4	34.8
1,2-Dichloroethane	5	364	1948	1812	2663	5635
1,1-Dichloroethylene [1,1-Dichloroethene]	7	55114	294964	274317	403245	853125
Dichloromethane [Methylene Chloride]	5	13333	71357	66362	97552	206385
1,2-Dichloropropane	5	259	1386	1289	1894	4008
1,3-Dichloropropene [1,3-Dichloropropylene]	2.8	119	637	592	870	1841
Dicofol [Kelthane]	0.30	0.30	1.61	1.50	2.20	4.66
Dieldrin	2.0E-05	2.0E-05	0.000107	0.0000995	0.000146	0.000309
2,4-Dimethylphenol	444	8436	45149	41989	61723	130585
Di-*n*-Butyl Phthalate	88.9	92.4	495	460	676	1430
Dioxins/Furans [TCDD Equivalents]	7.80E-08	7.97E-08	4.27E-07	3.97E-07	5.83E-07	0.0000012
Endrin	0.02	0.02	0.107	0.0995	0.146	0.309
Epichlorohydrin	53.5	2013	10773	10019	14727	31159
Ethylbenzene	700	1867	9992	9293	13660	28901
Ethyl Glycol	46744	1.68E+07	89911718	83617898	122918310	260051662
Fluoride	4000	N/A	N/A	N/A	N/A	N/A
Heptachlor	8.0E-05	0.0001	0.000535	0.000498	0.000732	0.00154
Heptachlor Epoxide	0.00029	0.00029	0.00155	0.00144	0.00211	0.00447
Hexachlorobenzene	0.00068	0.00068	0.00364	0.00339	0.00498	0.0105
Hexachlorobutadiene	0.21	0.22	1.18	1.10	1.61	3.42
Hexachlorocyclohexane (*alpha*)	0.0078	0.0084	0.0450	0.0419	0.0615	0.130
Hexachlorocyclohexane (*beta*)	0.15	0.26	1.39	1.29	1.89	4.01
Hexachlorocyclohexane (*gamma*) [Lindane]	0.2	0.341	1.82	1.69	2.48	5.25
Hexachlorocyclopentadiene	10.7	11.6	62.1	57.8	84.9	179
Hexachloroethane	1.84	2.33	12.5	11.6	17.0	36.0
Hexachlorophene	2.05	2.90	15.5	14.4	21.1	44.7
4,4'-Isopropylidenediphenol [Bisphenol A]	1092	15982	85534	79547	116934	247391

Lead	1.15	3.83	112	104	152	323
Mercury	0.0122	0.0122	0.0653	0.0607	0.0892	0.188
Methoxychlor	2.92	3.0	16.1	15.0	22.0	46.6
Methyl Ethyl Ketone	13865	9.92E+05	5309073	4937438	7258033	15355432
Methyl *tert*-butyl ether [MTBE]	15	10482	56098	52171	76691	162251
Nickel	332	1140	14144	13154	19336	40908
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	45.7	1873	10024	9322	13703	28991
N-Nitrosodiethylamine	0.0037	2.1	11.2	10.4	15.2	32.3
N-Nitroso-di-*n*-Butylamine	0.119	4.2	22.5	20.9	30.7	64.9
Pentachlorobenzene	0.348	0.355	1.90	1.77	2.60	5.50
Pentachlorophenol	0.22	0.29	1.55	1.44	2.11	4.47
Polychlorinated Biphenyls [PCBs]	6.4E-04	6.4E-04	0.00343	0.00319	0.00468	0.00992
Pyridine	23	947	5068	4713	6928	14657
Selenium	50	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.23	0.24	1.28	1.19	1.74	3.70
1,1,2,2-Tetrachloroethane	1.64	26.35	141	131	192	407
Tetrachloroethylene [Tetrachloroethylene]	5	280	1499	1394	2049	4335
Thallium	0.12	0.23	1.23	1.14	1.67	3.54
Toluene	1000	N/A	N/A	N/A	N/A	N/A
Toxaphene	0.011	0.011	0.0589	0.0548	0.0805	0.170
2,4,5-TP [Silvex]	50	369	1975	1837	2700	5713
1,1,1-Trichloroethane	200	784354	4197775	3903931	5738778	12141225
1,1,2-Trichloroethane	5	166	888	826	1214	2568
Trichloroethylene [Trichloroethene]	5	71.9	385	358	526	1113
2,4,5-Trichlorophenol	1039	1867	9992	9293	13660	28901
TTHM [Sum of Total Trihalomethanes]	80	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	0.23	16.5	88.3	82.1	120	255

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS:

Human Health	***70% of Daily Avg.***	***85% of Daily Avg.***
Parameter	***(µg/L)***	***(µg/L)***
Acrylonitrile	588	714
Aldrin	0.0000587	0.0000713
Anthracene	6744	8189
Antimony	5485	6660
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	2974	3611
Benzidine	0.548	0.665
Benzo(*a*)anthracene	0.128	0.155
Benzo(*a*)pyrene	0.0128	0.0155
Bis(chloromethyl)ether	1.40	1.70
Bis(2-chloroethyl)ether	219	266
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	38.6	46.9
Bromodichloromethane [Dichlorobromomethane]	1408	1710
Bromoform [Tribromomethane]	5428	6591
Cadmium	N/A	N/A
Carbon Tetrachloride	235	285
Chlordane	0.0128	0.0155
Chlorobenzene	14017	17021
Chlorodibromomethane [Dibromochloromethane]	935	1136

Chloroform [Trichloromethane]	39419	47866
Chromium (hexavalent)	2571	3122
Chrysene	12.9	15.7
Cresols [Methylphenols]	47636	57844
Cyanide (free)	N/A	N/A
4,4'-DDD	0.0102	0.0124
4,4'-DDE	0.000665	0.000808
4,4'-DDT	0.00204	0.00248
2,4'-D	N/A	N/A
Danitol [Fenpropathrin]	2422	2941
1,2-Dibromoethane [Ethylene Dibromide]	21.7	26.3
m-Dichlorobenzene [1,3-Dichlorobenzene]	3046	3699
o-Dichlorobenzene [1,2-Dichlorobenzene]	16895	20516
p-Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A
3,3'-Dichlorobenzidine	11.4	13.9
1,2-Dichloroethane	1864	2263
1,1-Dichloroethylene [1,1-Dichloroethene]	282271	342758
Dichloromethane [Methylene Chloride]	68286	82919
1,2-Dichloropropane	1325	1609
1,3-Dichloropropene [1,3-Dichloropropylene]	609	739
Dicofol [Kelthane]	1.54	1.87
Dieldrin	0.000102	0.000124
2,4-Dimethylphenol	43206	52464
Di-*n*-Butyl Phthalate	473	574
Dioxins/Furans [TCDD Equivalents]	4.08E-07	4.95E-07
Endrin	0.102	0.124
Epichlorohydrin	10308	12517
Ethylbenzene	9562	11611
Ethyl Glycol	86042817	104480563
Fluoride	N/A	N/A
Heptachlor	0.000512	0.000622
Heptachlor Epoxide	0.00147	0.00179
Hexachlorobenzene	0.00348	0.00423
Hexachlorobutadiene	1.12	1.36
Hexachlorocyclohexane (*alpha*)	0.0430	0.0522
Hexachlorocyclohexane (*beta*)	1.32	1.60
Hexachlorocyclohexane (*gamma*) [Lindane]	1.73	2.10
Hexachlorocyclopentadiene	59.4	72.1
Hexachloroethane	11.9	14.4
Hexachlorophene	14.7	17.9
4,4'-Isopropylidenediphenol [Bisphenol A]	81853	99393
Lead	106	129
Mercury	0.0624	0.0758
Methoxychlor	15.4	18.7
Methyl Ethyl Ketone	5080623	6169328
Methyl *tert*-butyl ether [MTBE]	53683	65187
Nickel	13535	16435
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	9592	11647
N-Nitrosodiethylamine	10.6	12.9
N-Nitroso-di-*n*-Butylamine	21.4	26.0
Pentachlorobenzene	1.82	2.21
Pentachlorophenol	1.47	1.79
Polychlorinated Biphenyls [PCBs]	0.00327	0.00397

Pyridine	4849	5888
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	1.21	1.47
1,1,2,2-Tetrachloroethane	134	163
Tetrachloroethylene [Tetrachloroethylene]	1434	1741
Thallium	1.16	1.41
Toluene	N/A	N/A
Toxaphene	0.0563	0.0684
2,4,5-TP [Silvex]	1890	2295
1,1,1-Trichloroethane	4017144	4877961
1,1,2-Trichloroethane	849	1031
Trichloroethylene [Trichloroethene]	368	447
2,4,5-Trichlorophenol	9562	11611
TTHM [Sum of Total Trihalomethanes]	N/A	N/A
Vinyl Chloride	84.0	102

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 6, 2024

Dear Applicant:

Re: Confirmation of Submission of the Renewal without changes for Public Domestic Wastewater Authorization.

This is an acknowledgement that you have successfully completed Renewal without changes for the Public Domestic Wastewater authorization.

ER Account Number: ER105026
Application Reference Number: 650007
Authorization Number: WQ0013689001
Site Name: West Harris County Mud No 11 WWTF
Regulated Entity: RN102998374 - West Harris County Mud 11
Customer(s): CN600740013 - West Harris County Municipal Utility District 11

Please be aware that TCEQ staff may contact your designated contact for any additional information.

If you have any questions, you may contact the Applications Review and Processing Team by email at WQ-ARPTeam@tceq.texas.gov or by telephone at (512) 239-4671.

Sincerely,
Applications Review and Processing Team
Water Quality Division

Texas Commission on Environmental Quality

Update Domestic or Industrial Individual Permit

WQ0013689001

Site Information (Regulated Entity)

What is the name of the site to be authorized?	WEST HARRIS COUNTY MUD NO 11 WWTF
Does the site have a physical address?	Yes
Physical Address	
Number and Street	8665 W SAM HOUSTON PKWY N
City	HOUSTON
State	TX
ZIP	77040
County	HARRIS
Latitude (N) (##.######)	29.897222
Longitude (W) (-###.######)	-95.550833
Primary SIC Code	4952
Secondary SIC Code	
Primary NAICS Code	221320
Secondary NAICS Code	
Regulated Entity Site Information	
What is the Regulated Entity's Number (RN)?	RN102998374
What is the name of the Regulated Entity (RE)?	WEST HARRIS COUNTY MUD 11
Does the RE site have a physical address?	No
Physical Address	
Because there is no physical address, describe how to locate this site:	8665 W Sam Houston Tollway, Houston TX
City	HOUSTON
State	TX
ZIP	77040
County	HARRIS
Latitude (N) (##.######)	
Longitude (W) (-###.######)	
Facility NAICS Code	
What is the primary business of this entity?	DOMESTIC

West Ha-Customer (Applicant) Information (Owner)

How is this applicant associated with this site?	Owner

What is the applicant's Customer Number (CN)?	CN600740013
Type of Customer	Other Government
Full legal name of the applicant:	
Legal Name	West Harris County Municipal Utility District 11
Texas SOS Filing Number	
Federal Tax ID	
State Franchise Tax ID	
State Sales Tax ID	
Local Tax ID	
DUNS Number	
Number of Employees	0-20
Independently Owned and Operated?	
I certify that the full legal name of the entity applying for this permit has been provided and is legally authorized to do business in Texas.	Yes
Responsible Authority Contact	
Organization Name	West Harris County Municipal Utility District 11
Prefix	MR
First	ANDREW
Middle	C
Last	JOHNSON
Suffix	
Credentials	
Title	PRESIDENT
Responsible Authority Mailing Address	
Enter new address or copy one from list:	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	10000 MEMORIAL DR STE 260
Routing (such as Mail Code, Dept., or Attn:)	
City	HOUSTON
State	TX
ZIP	77024
Phone (###-###-####)	7139510800
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	7139519605
E-mail	RYOUNG@YOUNGANDBROOKS.COM

Billing Contact

Responsible contact for receiving billing statements:

Select the permittee that is responsible for payment of the annual fee.	CN600740013, West Harris County Municipal Utility District 11
Organization Name	WEST HARRIS COUNTY MUD 11
Prefix	
First	
Middle	
Last	
Suffix	
Credentials	
Title	
Enter new address or copy one from list:	

Mailing Address

Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	3401 LOUISIANA ST STE 400
Routing (such as Mail Code, Dept., or Attn:)	
City	HOUSTON
State	TX
ZIP	77002
Phone (###-###-####)	7137591368
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	7137591264
E-mail	WENDI_DEVITA@MCRUZ.COM

Application Contact

Person TCEQ should contact for questions about this application:

Same as another contact?	
Organization Name	JACOBS ENGINEERING GROUP INC
Prefix	MR
First	SHAWN
Middle	
Last	SHARKEY
Suffix	
Credentials	PE
Title	DISTRICT ENGINEER
Enter new address or copy one from list:	

Mailing Address

Address Type	Domestic

Mailing Address (include Suite or Bldg. here, if applicable)	818 TOWN AND COUNTRY BLVD STE 500
Routing (such as Mail Code, Dept., or Attn:)	
City	HOUSTON
State	TX
ZIP	77024
Phone (###-###-####)	7135820132
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	2817218700
E-mail	SHAWN.SHARKEY@JACOBS.COM

Technical Contact

Person TCEQ should contact for questions about this application:

Same as another contact?	Application Contact
Organization Name	JACOBS ENGINEERING GROUP INC
Prefix	MR
First	SHAWN
Middle	
Last	SHARKEY
Suffix	
Credentials	PE
Title	DISTRICT ENGINEER
Enter new address or copy one from list:	

Mailing Address

Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	818 TOWN AND COUNTRY BLVD STE 500
Routing (such as Mail Code, Dept., or Attn:)	
City	HOUSTON
State	TX
ZIP	77024
Phone (###-###-####)	7135820132
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	2817218700
E-mail	SHAWN.SHARKEY@JACOBS.COM

DMR Contact

Person responsible for submitting Discharge Monitoring Report Forms:	
Same as another contact?	
Organization Name	Si Environmental LLC
Prefix	
First	Nathan
Middle	
Last	White
Suffix	
Credentials	
Title	
Enter new address or copy one from list:	
Mailing Address:	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	9826 WHITHORN DR
Routing (such as Mail Code, Dept., or Attn:)	
City	HOUSTON
State	TX
ZIP	77095
Phone (###-###-####)	2818079500
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	2818079299
E-mail	NWHITE@sienviro.COM

Section 1# Permit Contact

Permit Contact#: 1

Person TCEQ should contact throughout the permit term.

1) Same as another contact?	CN600740013, West Harris County Municipal Utility District 11
2) Organization Name	West Harris County Municipal Utility District 11
3) Prefix	MR
4) First	ANDREW
5) Middle	C
6) Last	JOHNSON
7) Suffix	
8) Credentials	
9) Title	PRESIDENT

Mailing Address

10) Enter new address or copy one from list	
11) Address Type	Domestic
11.1) Mailing Address (include Suite or Bldg. here, if applicable)	10000 MEMORIAL DR STE 260
11.2) Routing (such as Mail Code, Dept., or Attn:)	
11.3) City	HOUSTON
11.4) State	TX
11.5) ZIP	77024
12) Phone (###-###-####)	7139510800
13) Extension	
14) Alternate Phone (###-###-####)	
15) Fax (###-###-####)	
16) E-mail	ryoung@youngandbrooks.com

Owner Information

Owner of Treatment Facility

1) Prefix	
2) First and Last Name	
3) Organization Name	West Harris County Municipal Utility District 11
4) Mailing Address	10000 Memorial Drive, Suite 500
5) City	Houston
6) State	TX
7) Zip Code	77024
8) Phone (###-###-####)	7139510800
9) Extension	
10) Email	ryoung@youngandbrooks.com
11) What is ownership of the treatment facility?	Public

Owner of Land (where treatment facility is or will be)

12) Prefix	
13) First and Last Name	
14) Organization Name	West Harris County Municipal Utility District 11
15) Mailing Address	10000 Memorial Drive, Suite 500
16) City	Houston
17) State	TX
18) Zip Code	77024
19) Phone (###-###-####)	7139510800
20) Extension	
21) Email	ryoung@youngandbrooks.com

22) Is the landowner the same person as the facility owner or co-applicant?	Yes

General Information Renewal-Amendment

1) Current authorization expiration date:	09/30/2024
2) Current Facility operational status:	Active
3) Is the facility located on or does the treated effluent cross American Indian Land?	No
4) What is the application type that you are seeking?	Renewal without changes
5) Current Authorization type:	Public Domestic Wastewater
5.1) What is the proposed total flow in MGD discharged at the facility?	1.5
5.2) Select the applicable fee	>= 1.0 MGD - Renewal - $2,015
6) What is the classification for your authorization?	TPDES
6.1) What is the EPA Identification Number?	TX0111937
6.2) Is the wastewater treatment facility location in the existing permit accurate?	Yes
6.3) Are the point(s) of discharge and the discharge route(s) in the existing permit correct?	Yes
6.4) City nearest the outfall(s):	Houston
6.5) County where the outfalls are located:	HARRIS
6.6) 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
6.6.1) What is your right-of-way authorization status?	Authorization Granted
6.7) Is the daily average discharge at your facility of 5 MGD or more?	No
7) Did any person formerly employed by the TCEQ represent your company and get paid for service regarding this application?	No

Public Notice Information

Individual Publishing the Notices

1) Prefix	
2) First and Last Name	Shawn Sharkey
3) Credential	PE
4) Title	
5) Organization Name	
6) Mailing Address	818 TOWN AND COUNTRY BLVD
7) Address Line 2	Suite 500
8) City	HOUSTON
9) State	TX
10) Zip Code	77024
11) Phone (###-###-####)	7135820132

12) Extension	
13) Fax (###-###-####)	
14) Email	shawn.sharkey@jacobs.com

Contact person to be listed in the Notices

15) Prefix	
16) First and Last Name	Shawn Sharkey
17) Credential	PE
18) Title	
19) Organization Name	
20) Phone (###-###-####)	7135820132
21) Fax (###-###-####)	
22) Email	shawn.sharkey@jacobs.com

Bilingual Notice Requirements

23) 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
23.1) Are the students who attend either the elementary school or the middle school enrolled in a bilingual education program at that school?	Yes
23.2) Do the students at these schools attend a bilingual education program at another location?	No
23.3) 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)?	No
23.4) Which language is required by the bilingual program?	Spanish

Section 1# Public Viewing Information

County#: 1

1) County	HARRIS
2) Public building name	Si Environmental Customer Service Office
3) Location within the building	
4) Physical Address of Building	9431 Rio Grande Drive
5) City	Houston
6) Contact Name	
7) Phone (###-###-####)	2818079500
8) Extension	
9) Is the location open to the public?	Yes

Plain Language

1) Plain Language

[File Properties]

File Name	LANG_Plain Language Form-WHCMUD 11 WWTP Permit Renewal (04-25-2024-SPS).pdf
Hash	6783CAEFABDEA35C2BCB499303C38A0A39DD04A53E2643F595AC53BBE045DCDC
MIME-Type	application/pdf

Supplemental Permit Information Form

1) Supplemental Permit Information Form (SPIF)

[File Properties]

File Name	SPIF_SPIF-WHCMUD 11 WWTP Permit Renewal (04-25-2024-SPS).pdf
Hash	376672E9C3D34F823EC34285EF878B5FEA8C58AA708C61AAECF0B84CE1FE3CA1
MIME-Type	application/pdf

Domestic Attachments

1) Attach an 8.5"x11", reproduced portion of the most current and original USGS Topographic Quadrangle Map(s) that meets the 1:24,000 scale.

[File Properties]

File Name	MAP_Admin Report USGS Map-WHCMUD 11 WWTP Permit Renewal (04-25-2024-SPS).pdf
Hash	A774F03C13CBE499CEEDB2B670CAC2B902901E352F4E6311E25DBFA7A1A8D8E4
MIME-Type	application/pdf

[File Properties]

File Name	MAP_SPIF USGS Map-WHCMUD 11 WWTP Permit Renewal (04-22-2024-SPS).pdf
Hash	6F24DEEC5845DE5DFBD357FDD2E604261D707C02289C377EB1224A14E754A6AE
MIME-Type	application/pdf

2) I confirm that all required sections of Technical Report 1.0 are complete and will be included in the Technical Attachment.	Yes
2.1) I confirm that Worksheet 2.0 (Receiving Waters) is complete and included in the Technical Attachment.	Yes
2.2) Are you planning to include Worksheet 2.1 (Stream Physical Characteristics) in the Technical Attachment?	No
2.3) Are you planning to include Worksheet 4.0 (Pollutant Analyses Requirements) in the Technical Attachment?	Yes
2.4) Are you planning to include Worksheet 5.0 (Toxicity Testing Requirements) in the Technical Attachment?	Yes

2.5) I confirm that Worksheet 6.0 (Industrial Waste Contribution) is complete and included in the Technical Attachment.	Yes
2.6) Are you planning to include Worksheet 7.0 (Class V Injection Well Inventory/Authorization Form) in the Technical Attachment?	No

2.7) Technical Attachment

[File Properties]

File Name	TECH_SIGNED Domestic Technical Report 1_0-WHCMUD 11 WWTP Permit Renewal (04-22-2024-SPS).pdf
Hash	7E36037A49BB895502569F94AE93436D6640611BC2435EB9E3D34356E11B8E6B
MIME-Type	application/pdf

3) Buffer Zone Map

[File Properties]

File Name	BUFF_ZM_WHCMUD 11 WWTP Buffer Zone Map.pdf
Hash	D327321073A43C9566430D317A1CCBAC1EC402E26F78C8294B322A83D959D352
MIME-Type	application/pdf

4) Flow Diagram

[File Properties]

File Name	FLDIA_Flow Diagram-WHCMUD 11 WWTP Permit Renewal (04-22-2024-SPS).pdf
Hash	BA0539027C2E4909A84ABB473FB73D1483744453E63FCC55E1981ACC7C62B9A9
MIME-Type	application/pdf

5) Site Drawing

[File Properties]

File Name	SITEDR_Site Plan-WHCMUD 11 WWTP Permit Renewal (04-22-2024-SPS).pdf
Hash	A95E2BCA6F0BF5CA72CA98201A3E0A58559DFDC5222C1DA027126EB6FC470E91
MIME-Type	application/pdf

[File Properties]

File Name	SITEDR_Service Area Map-WHCMUD 11 WWTP Permit Renewal (04-22-2024-SPS).pdf
Hash	537376D99DD943B201E3083EDBA50EE246A5BC385ECE081B5DB5E7D4AE7D3CCA
MIME-Type	application/pdf

6) Design Calculations

[File Properties]

File Name	DES_CAL_Design Calculations-WHCMUD 11 WWTP Permit Renewal (04-22-2024-SPS).pdf

Hash	4748E3D921C92A66C7A74870665B696233696CD5DA85893444BBDD4033659A01
MIME-Type	application/pdf

7) Solids Management Plan

8) Water Balance

[File Properties]

File Name	WB_Example Water Balance.pdf
Hash	A32A2F543120918A9C8070C64EC67EBF95CBEFCA4CA8AE28D1FED02D264ED783
MIME-Type	application/pdf

9) Other Attachments

[File Properties]

File Name	OTHER_Sludge Disposal Data-WHCMUD 11 WWTP Permit Renewal (04-24-2024-TWS).pdf
Hash	CE783DF993FBF427464C020387905F2FCF3C44AFDABF96B2D0CBA2BC5BE4C551
MIME-Type	application/pdf

[File Properties]

File Name	OTHER_Lab Analyses-WHCMUD 11 WWTP Permit Renewal (04-22-2024-SPS).pdf
Hash	D864B08022735A96030BC57E423CA61E6E1C8A6B730F83AC0217CE2A4B42E2AD
MIME-Type	application/pdf

[File Properties]

File Name	OTHER_Worksheet 3_0 Sec 6-WHCMUD 11 WWTP Permit Renewal (04-22-2024-SPS).pdf
Hash	AEE9B27B04842B5D1E3BFDE7516C6D944B3E144E1A8B2615A6F82CF95A8EA8AA
MIME-Type	application/pdf

Certification

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

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.

1. I am Andrew C Johnson, the owner of the STEERS account ER105105.
2. I have the authority to sign this data on behalf of the applicant named above.
3. I have personally examined the foregoing and am familiar with its content and the content of any attachments, and based upon my personal knowledge and/or inquiry of any individual responsible for information contained herein, that this information is true, accurate, and complete.

4. I further certify that I have not violated any term in my TCEQ STEERS participation agreement and that I have no reason to believe that the confidentiality or use of my password has been compromised at any time.
5. I understand that use of my password constitutes an electronic signature legally equivalent to my written signature.
6. I also understand that the attestations of fact contained herein pertain to the implementation, oversight and enforcement of a state and/or federal environmental program and must be true and complete to the best of my knowledge.
7. I am aware that criminal penalties may be imposed for statements or omissions that I know or have reason to believe are untrue or misleading.
8. I am knowingly and intentionally signing Update Domestic or Industrial Individual Permit WQ0013689001.
9. My signature indicates that I am in agreement with the information on this form, and authorize its submittal to the TCEQ.

OWNER Signature: Andrew C Johnson OWNER

Customer Number:	CN600740013
Legal Name:	West Harris County Municipal Utility District 11
Account Number:	ER105105
Signature IP Address:	50.188.79.41
Signature Date:	2024-04-29
Signature Hash:	958BE0E42F2FC190A76D4EAD19205CF960A956A277BD6C7F24A4BC0CECB9F4CD
Form Hash Code at time of Signature:	9D85D661EE9B09353BA6B97772647DA4877F40B24BC15F63CA49DEC4687E3A52

Fee Payment

Transaction by:	The application fee payment transaction was made by SHAWN SHARKEY
Paid by:	The application fee was paid by SHAWN SHARKEY
Fee Amount:	$2000.00
Paid Date:	The application fee was paid on 2024-04-24
Transaction/Voucher number:	The transaction number is 582EA000607821 and the voucher number is 702802

Submission

Reference Number:	The application reference number is 650007
Submitted by:	The application was submitted by ER105026/Shawn P Sharkey
Submitted Timestamp:	The application was submitted on 2024-05-06 at 18:30:22 CDT
Submitted From:	The application was submitted from IP address 98.199.126.150
Confirmation Number:	The confirmation number is 538898
Steers Version:	The STEERS version is 6.74
Permit Number:	The permit number is WQ0013689001

Additional Information

Application Creator: This account was created by Shawn P Sharkey

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: West Harris County Municipal Utility District No. 11

   Permit No. WQ00 13689001 EPA ID No. TX 0111937

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

   8665 West Sam Houston Parkway North; Houston, Texas 77040

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: Shawn Sharkey

Credential (P.E, P.G., Ph.D., etc.): PE

Title: District Engineer

Mailing Address: 818 Town & Country Boulevard, Suite 500

City, State, Zip Code: Houston, TX 77024

Phone No.: 713-582-0132 Ext.: N/A Fax No.: 281-721-8700

E-mail Address: shawn.sharkey@jacobs.com

2. List the county in which the facility is located: Harris
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.

To Harris County Flood Control District (HCFCD) Ditch E-200-00-00; thence to HCFCD Ditch E141-00-00; thence to White Oak Bayou Above Tidal in Segment No. 1017 of the San Jacinto River Basin.

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 wastewater treatment plant, mowed grass, and trees.

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.

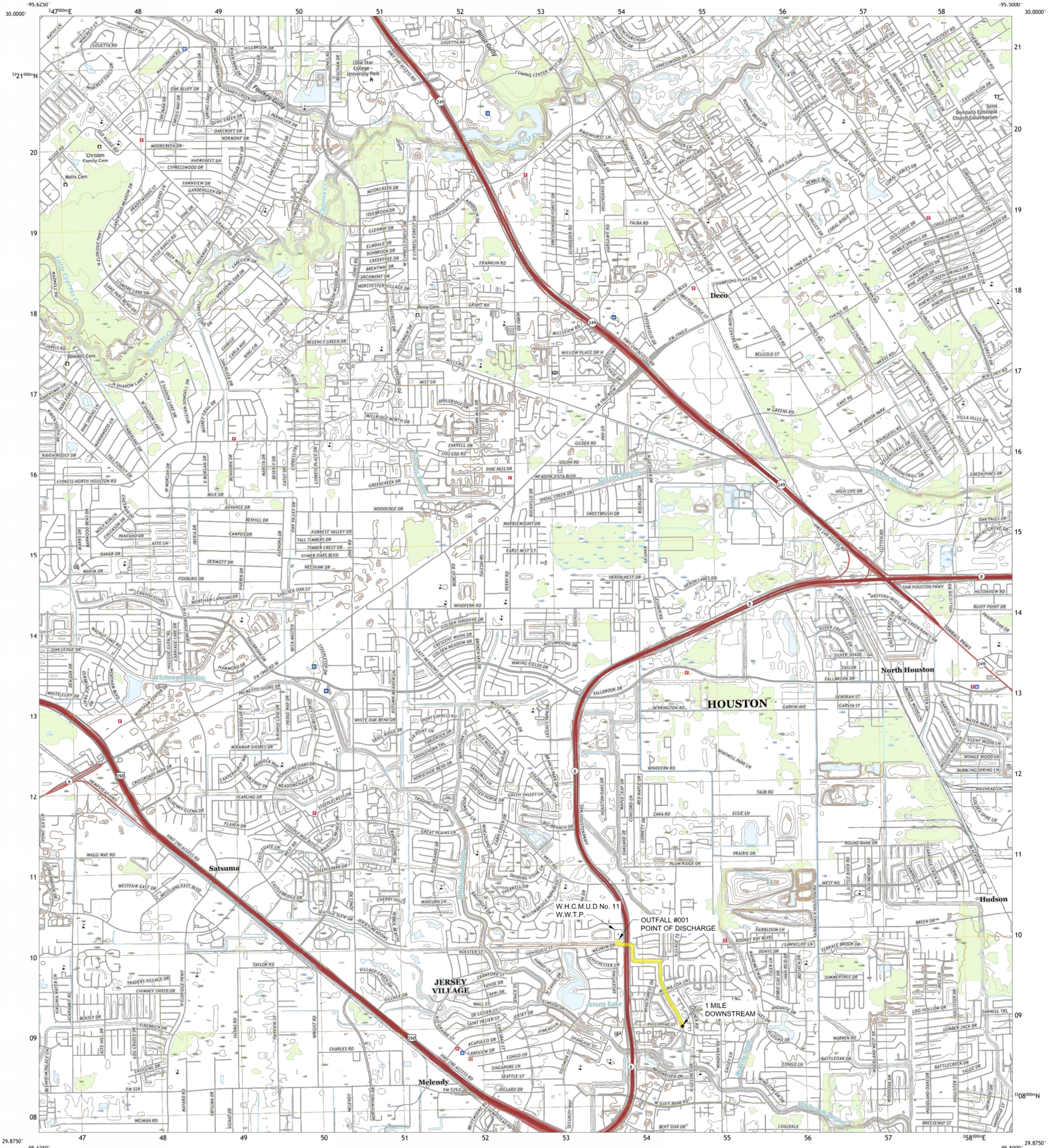
N/A

USGS
science for a changing world

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

The National Map
US Topo

SATSUMA QUADRANGLE
TEXAS - HARRIS COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid: Universal Transverse Mercator, Zone 15R
This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery....NAIP, September 2016 - November 2016
Roads....U.S. Census Bureau, 2015 - 2019
Names....GNIS, 1979 - 2022
Hydrography....National Hydrography Dataset, 2002 - 2018
Contours....National Elevation Dataset, 2010
Boundaries....Multiple sources; see metadata file 2019 - 2021
Wetlands....FWS National Wetlands Inventory Not Available

MN
GN
2°29′ 44 MILS
1°17′ 23 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
TP
Grid Zone Designation
15R

SCALE 1:24 000

KILOMETERS 1 0.5 0 1 2
METERS 1000 500 0 1000 2000
MILES 1 0.5 0 1
FEET 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

CONTOUR INTERVAL 5 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard.

TEXAS
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

1 Rose Hill
2 Tomball
3 Spring
4 Cypress
5 Aldine
6 Addicks
7 Hedwig Village
8 Houston Heights

ADJOINING QUADRANGLES

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

SATSUMA, TX
2022

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 West Harris County Municipal Utility District No. 11 (CN600740013) operates the West Harris County Municipal Utility District No. 11 Wastewater Treatment Facility (RN102998374). an activated sludge plant designed with single state nitrification criteria. The facility is located at 8665 West Sam Houston Parkway North, in Houston, Harris County, Texas 77040.

This application is for a renewal to discharge at an annual average flow of 1,500,000 gallons per day of treated domestic water via Harris County Flood Control District (HCFCD) Ditch E-200-00-00; thence to HCFCD Ditch E141-00-00; thence to White Oak Bayou Above Tidal in Segment No. 1017 of the San Jacinto River Basin.

Discharges from the facility are expected to contain five-day carbonaceous biochemical oxygen demand, total suspended solids, ammonia nitrogen, total copper, total dissolve solids, and Escherichia coli. Additional potential pollutants are included in the Domestic Technical Report 1.0, Section 7. Domestic wastewater is treated by an activated sludge process plant

and the treatment units include bar screens, aeration basins, secondary clarifiers, sludge digesters, and chlorine contact chambers.

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.

El West Harris County Municipal Utility District No. 11 (CN600740013) opera el West Harris County Municipal Utility District No. 11 Wastewater Treatment Facility (RN102998374), una planta de lodos activados diseñada con criterios de nitrificación de estado único. La instalación está ubicado en 8665 West Sam Houston Parkway North, en Houston, Condado de Harris, Texas 77040. Esta solicitud es para una renovación para descargar a un flujo promedio anual de 1,500,000 galones por día de agua doméstica tratada a través de la Harris County Flood Control District (HCFCD) No. E-200-00-00; de allí a HCFCD Ditch E141-00-00; de allí a White Oak Bayou Above Tidal en el Segmento No. 1017 de la Cuenca del Río San Jacinto. Se espera que las descargas de la instalación contengan demanda bioquímica de oxígeno carbonoso de cinco días, sólidos suspendidos totales, nitrógeno amoniacal, cobre total, sólidos disueltos totales y Escherichia coli. Los contaminantes potenciales adicionales se incluyen en el Informe técnico doméstico 1.0, Sección 7. Las aguas residuales domésticas son tratadas por una planta de proceso de lodos activados y las unidades de tratamiento incluyen filtros de barras, tanques de aireación, clarificadores secundarios, digestores de lodos, y cámaras de contacto con cloro.

INSTRUCTIONS

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

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

Example

Individual Industrial Wastewater Application

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

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

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

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

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

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

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY
The National Map US Topo
SATSUMA QUADRANGLE
TEXAS - HARRIS COUNTY
7.5-MINUTE SERIES
W.H.C.M.U.D No. 11
DISTRICT BOUNDARY
W.H.C.M.U.D No. 11
WATER PLANT No. 1
W.H.C.M.U.D No. 11
W.W.T.P.
WATER WELL
OUTFALL #001
POINT OF DISCHARGE
1 MILE RADIUS
WATER WELL
3 MILES
DOWNSTREAM
HOUSTON
North Houston
Deco
Satsuma
Hudson
JERSEY
VILLAGE
Melendy
Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 15R
This map is not a legal document. Boundaries may be
generalized for this map scale. Private lands within government
reservations may not be shown. Obtain permission before
entering private lands.
Imagery NAIP, September 2016 - November 2016
Roads U.S. Census Bureau, 2015 - 2019
Names GNIS, 1979 - 2022
Hydrography National Hydrography Dataset, 2002 - 2018
Contours National Elevation Dataset, 2010
Boundaries Multiple sources; see metadata file 2019 - 2021
Wetlands FWS National Wetlands Inventory Not Available
UTM GRID AND 2019 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET
SCALE 1:24 000
CONTOUR INTERVAL 5 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988
This map was produced to conform with the
National Geospatial Program US Topo Product Standard.
ROAD CLASSIFICATION
Expressway
Local Connector
Secondary Hwy
Local Road
Ramp
4WD
Interstate Route
US Route
State Route
1 Rose Hill
2 Tomball
3 Spring
4 Cypress
5 Aldine
6 Addicks
7 Hedwig Village
8 Houston Heights
ADJOINING QUADRANGLES
SATSUMA, TX
2022

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION

DOMESTIC TECHNICAL REPORT 1.0

The Following Is Required For All Applications

Renewal, New, And Amendment

Section 1. Permitted or Proposed Flows (Instructions Page 51)

A. Existing/Interim I Phase

Design Flow (MGD): 1.5

2-Hr Peak Flow (MGD): 6.0

Estimated construction start date: N/A - Existing

Estimated waste disposal start date: N/A - Existing

B. Interim II Phase

Design Flow (MGD): N/A

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

Estimated construction start date: N/A

Estimated waste disposal start date: N/A

C. Final Phase

Design Flow (MGD): 1.5

2-Hr Peak Flow (MGD): 6.0

Estimated construction start date: N/A - Existing

Estimated waste disposal start date: N/A - Existing

D. Current operating phase: Existing Phase

Provide the startup date of the facility: N/A

Section 2. Treatment Process (Instructions Page 51)

A. Treatment process description

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 in the permit, a description of *each phase* must be provided**. Process description:

The existing treatment process utilizes the single stage nitrification modification of the activated sludge process plant operated in a complex mode. Treatment units include a lift station, influent fine screen with overflow bar screen, two aeration basins, two final clarifiers, two chlorine contactors, a dechlorination chamber and three aerobic sludge digesters. The wasted sludge is disposed to an offsite permitted facility by wet hauling and ultimate disposal by land application.

Port or pipe diameter at the discharge point, in inches: 24 inches

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)
Aeration Basin #1	1	70 ft. x 29.4 ft. x 21.15 ft. (SWD)
Aeration Basin #2	1	80 ft. x 22 ft. x 21.2 ft. (SWD)
Circular Clarifier #1	1	70 ft. (dia.) 10.86 ft. (SWD)
Circular Clarifier #2	1	70 ft. (dia.) 13.86 ft. (SWD)
Digester	3	50 ft. x 20 ft. x 18 ft. (SWD)
Chlorine Contact Chamber #1 with Addition	1 plus addition	61 ft. x 12 ft. x 8.9 ft (SWD) with 5 ft. x 4 ft. x 8.9 ft. (SWD) addition
Chlorine Contact Chamber #2	1	105 ft. x 5 ft. x 8.9 ft (SWD)

C. Process flow diagrams

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

Attachment: 3

Section 3. Site Drawing (Instructions Page 52)

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: 4

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

The existing treatment facility serves the entirety of West Harris County Municipal Utility District No. 11 (PWS ID No. 1012858) which consists of approximately 995.77 acres in Harris County, Texas.

Section 4. Unbuilt Phases (Instructions Page 52)

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 53)

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 53)

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: 02/13/2007, 12/29/2010

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.

Copies of TCEQ approval letters dated 02/13/2007 and 12/29/2010 are included as Attachment 5.

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 ☒ Separate grit or grease waste facility

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

2. Grit and grease processing

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

Click here to enter text.

3. Grit disposal

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

Yes ☐ No ☐

If No, contact the TCEQ Municipal Solid Waste team at 512-239-0000. Note: A registration or permit is required for grit disposal. Grit shall not be combined with treatment plant sludge. See the instruction booklet for additional information on grit disposal requirements and restrictions.

Describe the method of grit disposal.

Click here to enter text.

4. Grease and decanted liquid disposal

Note: A registration or permit is required for grease disposal. Grease shall not be combined with treatment plant sludge. For more information, contact the TCEQ Municipal Solid Waste team at 512-239-0000.

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

Click here to enter text.

E. Stormwater management

1. Applicability

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

Yes ☒ No ☐

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

Yes ☐ No ☒

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

2. MSGP coverage

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

Yes ☒ No ☐

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

TXR05 R636 or TXRNE N/A

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

Yes ☐ No ☐

3. Conditional exclusion

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

Yes ☐ No ☐

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

Click here to enter text.

4. Existing coverage in individual permit

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

Yes ☐ No ☐

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

Click here to enter text

5. Zero stormwater discharge

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

Yes ☐ No ☐

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

Click here to enter text

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

6. Request for coverage in individual permit

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

Yes ☐ No ☐

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

the treatment plant headworks and indirectly discharge it to water in the state.

Click here to enter text.

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

F. Discharges to the Lake Houston Watershed

Does the facility discharge in the Lake Houston watershed?
Yes ☐ No ☒

If yes, a Sewage Sludge Solids Management Plan is required. See Example 5 in the instructions.

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

1. Acceptance of sludge from other WWTPs

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

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

N/A

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 the facility accepting or will it 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.

There is one paperboard box setup manufacturer that discharges pretreated flexographic print machine wash down wastewater to the sewer. Approximately 300 gallons per week of ink. Operated before last permit and there are no changes since issuance of last permit.

Section 7. Pollutant Analysis of Treated Effluent (Instructions Page 58)

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). **W*ater treatment facilities*** discharging filter backwash water, complete Table 1.0(3).

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	2.03	2.03	1	Composite	02/14/2024 5:00 AM
Total Suspended Solids, mg/l	2.95	2.95	1	Composite	02/14/2024 5:00 AM
Ammonia Nitrogen, mg/l	<0.05	<0.05	1	Composite	02/14/2024 5:00 AM
Nitrate Nitrogen, mg/l	<50.0	<50.0	1	Composite	02/14/2024 5:00 AM
Total Kjeldahl Nitrogen, mg/l	<1.00	<1.00	1	Composite	02/14/2024 5:00 AM
Sulfate, mg/l	55.4	55.4	1	Composite	02/14/2024 5:00 AM
Chloride, mg/l	122	122	1	Composite	02/14/2024 5:00 AM

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
Total Phosphorus, mg/l	2.52	2.52	1	Composite	02/14/2024 5:00 AM
pH, standard units	7.33	7.33	1	Composite	02/14/2024 0:00 AM
Dissolved Oxygen*, mg/l	7.14	7.14	1	Composite	02/14/2024 0:00 AM
Chlorine Residual, mg/l	<0.25	<0.25	1	Composite	02/14/2024 8:50 AM
E.coli (CFU/100ml) freshwater	40.8	40.8	1	Composite	02/14/2024 8:50 AM
Entercocci (CFU/100ml) saltwater	N/A	N/A	N/A	N/A	N/A
Total Dissolved Solids, mg/l	364	364	1	Composite	02/14/2024 5:00 AM
Electrical Conductivity, µmohs/cm, †	1090	1090	1	Composite	02/14/2024 5:00 AM
Oil & Grease, mg/l	<5.00	<5.00	1	Composite	02/14/2024 8:50 AM
Alkalinity ($CaCO_3$)*, mg/l	191	191	1	Composite	02/14/2024 5:00 AM

*TPDES permits only

†TLAP permits only

Table 1.0(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	N/A				
Total Dissolved Solids, mg/l	N/A				

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
pH, standard units	N/A				
Fluoride, mg/l	N/A				
Aluminum, mg/l	N/A				
Alkalinity ($CaCO_3$), mg/l	N/A				

Section 8. Facility Operator (Instructions Page 60)

Facility Operator Name: Ivan Zapata

Facility Operator's License Classification and Level: B - Wastewater

Facility Operator's License Number: WW0050044

Section 9. Sewage Sludge Management and Disposal (Instructions Page 60)

A. Sludge disposal method

Identify the current or anticipated sludge disposal method or methods from the following list. Check all that apply.

☐ Permitted landfill

☐ Permitted or Registered land application site for beneficial use

☐ Land application for beneficial use authorized in the wastewater permit

☐ Permitted sludge processing facility

☐ Marketing and distribution as authorized in the wastewater permit

☐ Composting as authorized in the wastewater permit

☐ Permitted surface disposal site (sludge monofill)

☐ Surface disposal site (sludge monofill) authorized in the wastewater permit

☒ Transported to another permitted wastewater treatment plant or

permitted sludge processing facility. If you selected this method, a written statement or contractual agreement from the wastewater treatment plant or permitted sludge processing facility accepting the sludge must be included with this application.

☐ Other: Click here to enter text.

B. Sludge disposal site

Disposal site name: McCarty Road Landfill

TCEQ permit or registration number: 261-B

County where disposal site is located: Harris

C. Sludge transportation method

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

Name of the hauler: Trinity Wastewater Solutions

Hauler registration number: TCEQ Transporter No. 24738

Sludge is transported as a:

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

Section 10. Permit Authorization for Sewage Sludge Disposal (Instructions Page 60)

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 61)

Does this facility include sewage sludge lagoons?

Yes ☐ No ☒

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

A. Location information

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

- Original General Highway (County) Map:

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

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

  Attachment: Click here to enter text.
- Site map:

  Attachment: Click here to enter text.

Discuss in a description if any of the following exist within the lagoon area.

Check all that apply.

☐ Overlap a designated 100-year frequency flood plain

☐ Soils with flooding classification

☐ Overlap an unstable area

☐ Wetlands

☐ Located less than 60 meters from a fault

☐ None of the above

Attachment: Click here to enter text

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

Click here to enter text

B. Temporary storage information

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

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

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

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

Phosphorus, mg/kg: Click here to enter text

Potassium, mg/kg: Click here to enter text

pH, standard units: Click here to enter text

Ammonia Nitrogen mg/kg: Click here to enter text

Arsenic: Click here to enter text

Cadmium: Click here to enter text

Chromium: Click here to enter text

Copper: Click here to enter text

Lead: Click here to enter text

Mercury: Click here to enter text

Molybdenum: Click here to enter text

Nickel: Click here to enter text

Selenium: Click here to enter text

Zinc: Click here to enter text

Total PCBs: Click here to enter text

Provide the following information:

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

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

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

C. Liner information

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

Yes ☐ No ☐

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

Click here to enter text

D. Site development plan

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

Click here to enter text

Attach the following documents to the application.

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

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

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

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

  Attachment: Click here to enter text

- Description of the method of controlling infiltration of groundwater and surface water from entering the site

  Attachment: Click here to enter text.

- Procedures to prevent the occurrence of nuisance conditions

  Attachment: Click here to enter text.

E. Groundwater monitoring

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

Yes ☐ No ☐

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

Attachment: Click here to enter text.

Section 12. Authorizations/Compliance/Enforcement (Instructions Page 63)

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:

N/A

B. Permittee enforcement status

Is the permittee currently under enforcement for this facility?

Yes ☐ No ☒

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

Yes ☐ No ☒

If yes to either question, provide a brief summary of the enforcement, the

implementation schedule, and the current status:

Click here to enter text.

Section 13. RCRA/CERCLA Wastes (Instructions Page 63)

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 64)

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: Andrew C. Johnson

Title: President

Signature: 

Date: 3-18-2024

DOMESTIC TECHNICAL REPORT WORKSHEET 2.0

RECEIVING WATERS

The following is required for all TPDES permit applications

Section 1. Domestic Drinking Water Supply (Instructions Page 73)

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 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 73)

Does the facility discharge into tidally affected waters?

Yes ☐ No ☒

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

A. Receiving water outfall

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

B. Oyster waters

Are there oyster waters in the vicinity of the discharge?

Yes ☐ No ☐

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

Click here to enter text

C. Sea grasses

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

Yes ☐ No ☐

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

Click here to enter text

Section 3. Classified Segments (Instructions Page 73)

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 75)

Name of the immediate receiving waters: HCFCD Unit #E200-00-00, E#141-00-00, #E100-00-00

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 here to enter text

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

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

☒ Man-made Channel or Ditch

☐ Open Bay

☐ Tidal Stream, Bayou, or Marsh

☐ Other, specify: Click here 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 here 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.

White Oak Bayou

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.

Riparian vegetation and perennial pools present.

Date and time of observation: Tuesday, March 19, 2024, 1:38 PM

Was the water body influenced by stormwater runoff during observations?

Yes ☐ No ☒

Section 5. General Characteristics of the Waterbody (Instructions Page 74)

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
- ☒ Upstream discharges
- ☐ Septic tanks
- ☐ Urban runoff
- ☐ Agricultural runoff
- ☐ Other(s), specify Click here to enter text

B. Waterbody uses

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

- ☐ Livestock watering
- ☐ Irrigation withdrawal
- ☐ Fishing
- ☐ Contact recreation
- ☐ Non-contact recreation
- ☐ Navigation

☐ Domestic water supply ☐ Industrial water supply

☐ Park activities ☒ Other(s), specify Improved drainage

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 WORKSHEET 3.0

LAND DISPOSAL OF EFFLUENT

The following is required for all permit applications

Renewal, New, and Amendments

Section 1. Type of Disposal System (Instructions Page 77)

Identify the method of land disposal:

- ☐ Surface application
- ☐ Irrigation
- ☐ Drip irrigation system
- ☐ Evaporation
- ☐ Evapotranspiration beds
- ☐ Subsurface application
- ☐ Subsurface soils absorption
- ☐ Subsurface area drip dispersal system
- ☒ Other (describe in detail): Liquid returns to the treatment process, solid sludge is trucked to a permitted disposal facility.

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

For existing authorizations, provide Registration Number: **N/A**

Section 2. Land Application Site(s) (Instructions Page 77)

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

Table 3.0(1) – Land Application Site Crops

Crop Type & Land Use	Irrigation Area (acres)	Effluent Application (GPD)	Public Access? Y/N
N/A			

Crop Type & Land Use	Irrigation Area (acres)	Effluent Application (GPD)	Public Access? Y/N

Section 3. Storage and Evaporation Lagoons/Ponds (Instructions Page 77)

Table 3.0(2) – Storage and Evaporation Ponds

Pond Number	Surface Area (acres)	Storage Volume (acre-feet)	Dimensions	Liner Type
N/A				

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

Attachment: N/A

Section 4. Flood and Runoff Protection (Instructions Page 77)

Is the land application site within the 100-year frequency flood level?

Yes ☐ No ☐

If yes, describe how the site will be protected from inundation.

N/A

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

N/A

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

N/A

Section 5. Annual Cropping Plan (Instructions Page 77)

Attach an Annual Cropping Plan which includes a discussion of each of the following items. If not applicable, provide a detailed explanation indicating why.

Attachment: N/A

- Soils map with crops
- Cool and warm season plant species
- Crop yield goals
- Crop growing season
- Crop nutrient requirements
- Additional fertilizer requirements
- Minimum/maximum harvest height (for grass crops)
- Supplemental watering requirements
- Crop salt tolerances
- Harvesting method/number of harvests
- Justification for not removing existing vegetation to be irrigated

Section 6. Well and Map Information (Instructions Page 78)

Attach a USGS map with the following information shown and labeled. If not applicable, provide a detailed explanation (on a separate page) indicating why.

Attachment: N/A

- The boundaries of the land application site(s)
- Waste disposal or treatment facility site(s)

- On-site buildings
- Buffer zones
- Effluent storage and tailwater control facilities
- All water wells within 1 mile of the disposal site or property boundaries
- All springs and seeps onsite and within 500 feet of the property boundaries
- All surface waters in the state onsite and within 500 feet of the property boundaries
- All faults and sinkholes onsite and within 500 feet of the property

List and cross reference all water wells shown on the USGS map in the following table. Attach additional pages as necessary to include all of the wells.

Table 3.0(3) – Water Well Data

Well ID	Well Use	Producing? Y/N	Open, cased, capped, or plugged?	Proposed Best Management Practice
N/A			Choose an item.	
			Choose an item.	
			Choose an item.	
			Choose an item.	
			Choose an item.	

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

Attachment: N/A

Section 7. Groundwater Quality (Instructions Page 79)

Attach a Groundwater Quality Technical Report which assesses the impact of the wastewater disposal system on groundwater. This report shall include an evaluation of the water wells (including the information in the well table provided in Item 6. above), the wastewater application rate, and pond liners.

Indicate by a check mark that this report is provided.

Attachment: N/A

Are groundwater monitoring wells available onsite? Yes ☐ No ☐

Do you plan to install ground water monitoring wells or lysimeters around the land application site? Yes ☐ No ☐

If yes, then provide the proposed location of the monitoring wells or lysimeters on a site map.

Attachment: N/A

Section 8. Soil Map and Soil Analyses (Instructions Page 79)

A. Soil map

Attach a USDA Soil Survey map that shows the area to be used for effluent disposal.

Attachment: N/A

B. Soil analyses

Attach the laboratory results sheets from the soil analyses. **Note**: for renewal applications, the current annual soil analyses required by the permit are acceptable as long as the test date is less than one year prior to the submission of the application.

Attachment: N/A

List all USDA designated soil series on the proposed land application site. Attach additional pages as necessary.

Table 3.0(4) – Soil Data

Soil Series	Depth from Surface	Permeability	Available Water Capacity	Curve Number
N/A				

Soil Series	Depth from Surface	Permeability	Available Water Capacity	Curve Number

Section 9. Effluent Monitoring Data (Instructions Page 80)

Is the facility in operation?

Yes ☒ No ☐

If no, this section is not applicable and the worksheet is complete.

If yes, provide the effluent monitoring data for the parameters regulated in the existing permit. If a parameter is not regulated in the existing permit, enter N/A.

Table 3.0(5) – Effluent Monitoring Data

Date	30 Day Avg Flow MGD	BOD_5 mg/l	TSS mg/l	pH	Chlorine Residual mg/l	Acres irrigated
N/A						

Date	30 Day Avg Flow MGD	BOD_5 mg/l	TSS mg/l	pH	Chlorine Residual mg/l	Acres irrigated

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

N/A

DOMESTIC WORKSHEET 3.1

SURFACE LAND DISPOSAL OF EFFLUENT

The following is required for new and major amendment applications. Renewal and minor amendments applicants may be asked for the worksheet on a case by case basis.

Section 1. Surface Disposal (Instructions Page 81)

Complete the item that applies for the method of disposal being used.

A. Irrigation

Area under irrigation, in acres: N/A

Design application frequency:

hours/day N/A **And** days/week N/A

Land grade (slope):

average percent (%):N/A

maximum percent (%):N/A

Design application rate in acre-feet/acre/year: N/A

Design total nitrogen loading rate, in lbs N/acre/year: N/A

Soil conductivity (mmhos/cm): N/A

Method of application: N/A

Attach a separate engineering report with the water balance and storage volume calculations, method of application, irrigation efficiency, and nitrogen balance.

Attachment: N/A

B. Evaporation ponds

Daily average effluent flow into ponds, in gallons per day: N/A

Attach a separate engineering report with the water balance and storage volume calculations.

Attachment: N/A

C. Evapotranspiration beds

Number of beds: 0

Area of bed(s), in acres: N/A

Depth of bed(s), in feet: N/A

Void ratio of soil in the beds: N/A

Storage volume within the beds, in acre-feet: N/A

Attach a separate engineering report with the water balance and storage volume calculations, and a description of the lining.

Attachment: N/A

D. Overland flow

Area used for application, in acres: 0

Slopes for application area, percent (%): N/A

Design application rate, in gpm/foot of slope width: N/A

Slope length, in feet: N/A

Design BOD_5 loading rate, in lbs BOD_5/acre/day: N/A

Design application frequency:

hours/day: N/A **And** days/week: N/A

Attach a separate engineering report with the method of application and design requirements according to *30 TAC Chapter 217*.

Attachment: N/A

Section 2. Edwards Aquifer (Instructions Page 82)

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

Yes ☐ No ☒

If yes, attach a report concerning the recharge zone.

Attachment: N/A

DOMESTIC WORKSHEET 3.2

SUBSURFACE LAND DISPOSAL OF EFFLUENT

The following is required for new and major amendment applications. Renewal and minor amendments may require the worksheet on a case by case basis.

NOTE: All applicants proposing new/amended subsurface disposal MUST complete and submit Worksheet 7.0. This worksheet applies to any subsurface disposal system that does not meet the definition of a subsurface area drip dispersal system as defined in *30 TAC Chapter 222, Subsurface Area Drip Dispersal System.*

Section 1. Subsurface Application (Instructions Page 83)

Identify the type of system:

☐ Conventional Gravity Drainfield, Beds, or Trenches (new systems must be less than 5,000 GPD)

☐ Low Pressure Dosing

☒ Other, specify: None

Application area, in acres: N/A

Area of drainfield, in square feet: N/A

Application rate, in gal/square foot/day: N/A

Depth to groundwater, in feet: N/A

Area of trench, in square feet: N/A

Dosing duration per area, in hours: N/A

Number of beds: 0

Dosing amount per area, in inches/day: N/A

Infiltration rate, in inches/hour: N/A

Storage volume, in gallons: N/A

Area of bed(s), in square feet: N/A

Soil Classification: N/A

Attach a separate engineering report with the information required in *30 TAC § 309.20,* excluding the requirements of *§* 309.20 b(3)(A) and (B) design analysis which may be asked for on a case by case basis. Include a description of the schedule of dosing basin rotation.

Attachment: N/A

Section 2. Edwards Aquifer (Instructions Page 83)

Is the subsurface system located on the Edwards Aquifer Recharge Zone as mapped by the TCEQ?

Yes ☐ No ☐ Not Applicable

Is the subsurface system located on the Edwards Aquifer Transition Zone as mapped by the TCEQ?

Yes ☐ No ☐ Not Applicable

If yes to either question, the subsurface system may be prohibited by *30 TAC §213.8*. Please call the Municipal Permits Team, at 512-239-4671, to schedule a pre-application meeting.

DOMESTIC WORKSHEET 3.3

SUBSURFACE AREA DRIP DISPERSAL SYSTEM (SADDS) LAND DISPOSAL OF EFFLUENT

The following is required for new and major amendment subsurface area drip dispersal system applications. Renewal and minor amendments may require the worksheet on a case by case basis.

NOTE: All applicants proposing new or amended subsurface disposal MUST complete and submit Worksheet 7.0. This worksheet applies to any subsurface disposal system that meets the definition of a subsurface area drip dispersal system as defined in *30 TAC Chapter 222, Subsurface Area Drip Dispersal System.*

Section 1. Administrative Information (Instructions Page 84)

A. Provide the legal name of all corporations or other business entities managed, owned, or otherwise closely related to the owner of the treatment facility.

N/A

B. Is the owner of the land where the treatment facility is located the same as the owner of the treatment facility?

Yes ☒ No ☐

If **no**, provide the legal name of all corporations or other business entities managed, owned, or otherwise closely related to the owner of the land where the treatment facility is located.

N/A

C. Owner of the subsurface area drip dispersal system:

N/A

D. Is the owner of the subsurface area drip dispersal system the same as the owner of the wastewater treatment facility or the site where the wastewater treatment facility is located?

Yes ☐ No ☐ Not Applicable

If **no**, identify the names of all corporations or other business entities managed, owned, or otherwise closely related to the entity identified in Item 1.C.

N/A

E. Owner of the land where the subsurface area drip dispersal system is located:

N/A

F. Is the owner of the land where the subsurface area drip dispersal system is located the same as owner of the wastewater treatment facility, the site where the wastewater treatment facility is located, or the owner of the subsurface area drip dispersal system?

Yes ☐ No ☐ Not Applicable

If **no**, identify the name of all corporations or other business entities managed, owned, or otherwise closely related to the entity identified in item 1.E.

N/A

Section 2. Subsurface Area Drip Dispersal System (Instructions Page 84)

A. Type of system

☐ Subsurface Drip Irrigation

☐ Surface Drip Irrigation

☒ Other, specify: None

B. Irrigation operations

Application area, in acres: N/A

Infiltration Rate, in inches/hour: N/A

Average slope of the application area, percent (%): N/A

Maximum slope of the application area, percent (%): N/A

Storage volume, in gallons: N/A

Major soil series: N/A

Depth to groundwater, in feet: N/A

C. Application rate

Is the facility located **west** of the boundary shown in *30 TAC § 222.83* **and** also using a vegetative cover of non-native grasses over seeded with cool

season grasses during the winter months (October-March)?

Yes ☐ No ☐ Not Applicable

If yes, then the facility may propose a hydraulic application rate not to exceed 0.1 gal/square foot/day.

Is the facility located **east** of the boundary shown in *30 TAC § 222.83* **or** in any part of the state when the vegetative cover is any crop other than non-native grasses?

Yes ☐ No ☐ Not Applicable

If **yes**, the facility must use the formula in *30 TAC §222.83* to calculate the maximum hydraulic application rate.

Do you plan to submit an alternative method to calculate the hydraulic application rate for approval by the executive director?

Yes ☐ No ☐ Not Applicable

Hydraulic application rate, in gal/square foot/day: N/A

Nitrogen application rate, in lbs/gal/day: N/A

D. Dosing information

Number of doses per day: 0

Dosing duration per area, in hours: N/A

Rest period between doses, in hours: N/A

Dosing amount per area, in inches/day: N/A

Number of zones: 0

Does the proposed subsurface drip irrigation system use tree vegetative cover as a crop?

Yes ☐ No ☐ Not Applicable

If **yes**, provide a vegetation survey by a certified arborist. Please call the Water Quality Assessment Team at (512) 239-4671 to schedule a pre-application meeting.

Attachment: N/A

Section 3. Required Plans (Instructions Page 84)

A. Recharge feature plan

Attach a Recharge Feature Plan with all information required in *30 TAC §222.79*.

Attachment: N/A

B. Soil evaluation

Attach a Soil Evaluation with all information required in *30 TAC §222.73*.

Attachment: N/A

C. Site preparation plan

Attach a Site Preparation Plan with all information required in *30 TAC §222.75*.

Attachment: N/A

D. Soil sampling/testing

Attach soil sampling and testing that includes all information required in *30 TAC §222.157*.

Attachment: N/A

Section 4. Floodway Designation (Instructions Page 85)

A. Site location

Is the existing/proposed land application site within a designated floodway?

Yes ☐ No ☐ Not Applicable

B. Flood map

Attach either the FEMA flood map or alternate information used to determine the floodway.

Attachment: N/A

Section 5. Surface Waters in the State (Instructions Page 85)

A. Buffer Map

Attach a map showing appropriate buffers on surface waters in the state, water wells, and springs/seeps.

Attachment: N/A

B. Buffer variance request

Do you plan to request a buffer variance from water wells or waters in the state?

Yes ☐ No ☐ Not Applicable

If yes, then attach the additional information required in *30 TAC § 222.81(c).*

Attachment: N/A

Section 6. Edwards Aquifer (Instructions Page 85)

A. Is the SADDS located on the Edwards Aquifer Recharge Zone as mapped by the TCEQ?

Yes ☐ No ☐ Not Applicable

B. Is the SADDS located on the Edwards Aquifer Transition Zone as mapped by the TCEQ?

Yes ☐ No ☐ Not Applicable

If yes to either question, then the SADDS may be prohibited by *30 TAC §213.8*. Please call the Municipal Permits Team at 512-239-4671 to schedule a pre-application meeting.

DOMESTIC WORKSHEET 4.0

POLLUTANT ANALYSES 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 for minor amendments without renewal

Section 1. Toxic Pollutants (Instructions Page 87)

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

Grab ☒ Composite ☒

Date and time sample(s) collected: 02/14/2024, 5:00 AM, 8:15 AM

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	3	50
Aldrin	<0.01	<0.01	1	0.01
Aluminum	18.3	18.3	1	2.5
Anthracene	<10.0	<10.0	1	10
Antimony	<5.0	<5.0	1	5
Arsenic	3.54	3.54	1	0.5
Barium	139	139	1	3
Benzene	<10.0	<10.0	3	10
Benzidine	<50.0	<50.0	1	50
Benzo(a)anthracene	<5.0	<5.0	1	5

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
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	14.4	14.4	3	10
Bromoform	<10.0	<10.0	3	10
Cadmium	<1.00	<1.00	1	1
Carbon Tetrachloride	<2.00	<2.00	3	2
Carbaryl	<1.22	<1.22	1	5
Chlordane*	<0.1	<0.1	1	0.2
Chlorobenzene	<10.0	<10.0	3	10
Chlorodibromomethane	<10.0	<10.0	3	10
Chloroform	25.2	25.2	3	10
Chlorpyrifos	<0.0512	<0.0512	1	0.05
Chromium (Total)	<3.00	<3.00	1	3
Chromium (Tri) **(*1)**	<0.006	<0.006	1	N/A
Chromium (Hex)	5.30	5.30	1	3
Copper	10.0	10.0	1	2
Chrysene	<5.00	<5.00	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

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
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)	<0.205	<0.205	1	0.20
Diazinon	<0.512	<0.512	1	0.5/0.1
1,2-Dibromoethane	<10.0	<10.0	3	10
m-Dichlorobenzene	<10.0	<10.0	3	10
o-Dichlorobenzene	<10.0	<10.0	3	10
p-Dichlorobenzene	<10.0	<10.0	3	10
3,3'-Dichlorobenzidine	<5.00	<5.00	1	5
1,2-Dichloroethane	<10.0	<10.0	3	10
1,1-Dichloroethylene	<10.0	<10.0	3	10
Dichloromethane	<20.0	<20.0	3	20
1,2-Dichloropropane	<10.0	<10.0	3	10
1,3-Dichloropropene	<10.0	<10.0	3	10
Dicofol	<1.00	<1.00	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

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Diuron	<0.0457	<0.0457	1	0.09
Endosulfan I (alpha)	<0.01	<0.01	1	0.01
Endosulfan II (beta)	<0.02	<0.02	1	0.02
Endosulfan Sulfate	<0.10	<0.10	1	0.1
Endrin	<0.02	<0.02	1	0.02
Ethylbenzene	<10.0	<10.0	3	10
Fluoride	925	925	3	500
Guthion	<0.102	<0.102	1	0.1
Heptachlor	<0.01	<0.01	1	0.01
Heptachlor Epoxide	<0.01	<0.01	1	0.01
Hexachlorobenzene	<5.00	<5.00	1	5
Hexachlorobutadiene	<10.00	<10.00	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	<0.50	<0.50	1	0.5
Malathion	<0.102	<0.102	1	0.1

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Mercury	<0.005	<0.005	3	0.005
Methoxychlor	<2.00	<2.00	1	2
Methyl Ethyl Ketone	<50.0	<50.0	1	50
Mirex	<0.02	<0.02	1	0.02
Nickel	<2.00	<2.00	1	2
Nitrate-Nitrogen	17600	17600	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)	<0.102	<0.102	1	0.1
Pentachlorobenzene	<20.0	<20.0	1	20
Pentachlorophenol	<5.00	<5.00	1	5
Phenanthrene	<10.0	<10.0	1	10
Polychlorinated Biphenyls (PCB's) **(*3)**	<0.2	<0.2	1	0.2
Pyridine	<20.0	<20.0	1	20
Selenium	<5.00	<5.00	1	5
Silver	<0.50	<0.50	1	0.5
1,2,4,5-Tetrachlorobenzene	<10.0	<10.0	1	20
1,1,2,2-Tetrachloroethane	<10.0	<10.0	1	10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Tetrachloroethylene	<10.0	<10.0	1	10
Thallium	<0.05	<0.05	1	0.5
Toluene	<10.0	<10.0	1	10
Toxaphene	<0.03	<0.03	1	0.3
2,4,5-TP (Silvex)	<0.03	<0.03	1	0.3
Tributyltin (see instructions for explanation)	N/A	N/A	N/A	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	<10.0	<10.0	1	50
TTHM (Total Trihalomethanes)	43.2	43.2	3	10
Vinyl Chloride	<10.0	<10.0	3	10
Zinc	36.8	36.8	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: 02/14/2024, 5:00 AM, 8:15 AM

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

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Antimony	<5.00	<5.00	1	5
Arsenic	3.54	3.54	1	0.5
Beryllium	<0.50	<0.50	1	0.5
Cadmium	<1.00	<1.00	1	1
Chromium (Total)	<3.00	<3.00	1	3
Chromium (Hex)	5.3	5.3	1	3
Chromium (Tri) (*1)	<0.006	<0.006	1	N/A
Copper	10.0	10.0	1	2
Lead	<0.50	<0.50	1	0.5
Mercury	<0.005	<0.005	3	0.005
Nickel	<2.00	<2.00	1	2
Selenium	<5.00	<5.00	1	5
Silver	<0.50	<0.50	1	0.5
Thallium	<0.50	<0.50	1	0.5
Zinc	36.8	36.8	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	<17.0	<17.0	3	50
Acrylonitrile	<50.0	<50.0	3	50
Benzene	<10.00	<10.00	3	10
Bromoform	<10.00	<10.00	3	10
Carbon Tetrachloride	<2.00	<2.00	3	2
Chlorobenzene	<10.00	<10.00	3	10
Chlorodibromomethane	<10.00	<10.00	3	10
Chloroethane	<50.00	<50.00	3	50
2-Chloroethylvinyl Ether	<10.00	<10.00	3	10
Chloroform	25.2	25.2	3	10
Dichlorobromomethane [Bromodichloromethane]	14.4	14.4	3	10
1,1-Dichloroethane	<10.00	<10.00	3	10
1,2-Dichloroethane	<10.00	<10.00	3	10
1,1-Dichloroethylene	<10.00	<10.00	3	10
1,2-Dichloropropane	<10.00	<10.00	3	10
1,3-Dichloropropylene [1,3-Dichloropropene]	<10.00	<10.00	3	10
1,2-Trans-Dichloroethylene	<10.00	<10.00	3	10
Ethylbenzene	<10.00	<10.00	3	10
Methyl Bromide	<50.00	<50.00	3	50
Methyl Chloride	<50.00	<50.00	3	50
Methylene Chloride	<20.00	<20.00	3	20
1,1,2,2-Tetrachloroethane	<10.00	<10.00	3	10
Tetrachloroethylene	<10.00	<10.00	3	10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Toluene	<10.00	<10.00	3	10
1,1,1-Trichloroethane	<10.00	<10.00	3	10
1,1,2-Trichloroethane	<10.00	<10.00	3	10
Trichloroethylene	<10.00	<10.00	3	10
Vinyl Chloride	<10.00	<10.00	3	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	<10.00	<10.00	1	10
2,4-Dichlorophenol	<10.00	<10.00	1	10
2,4-Dimethylphenol	<10.00	<10.00	1	10
4,6-Dinitro-o-Cresol	<50.00	<50.00	1	50
2,4-Dinitrophenol	<50.00	<50.00	1	50
2-Nitrophenol	<20.00	<20.00	1	20
4-Nitrophenol	<50.00	<50.00	1	50
P-Chloro-m-Cresol	<10.00	<10.00	1	10
Pentalchlorophenol	<5.00	<5.00	1	5
Phenol	<10.00	<10.00	1	10
2,4,6-Trichlorophenol	<10.00	<10.00	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	<10.00	<10.00	1	10
Acenaphthylene	<10.00	<10.00	1	10
Anthracene	<10.00	<10.00	1	10
Benzidine	<50.00	<50.00	1	50
Benzo(a)Anthracene	<5.00	<5.00	1	5
Benzo(a)Pyrene	<5.00	<5.00	1	5
3,4-Benzofluoranthene	<5.00	<5.00	1	10
Benzo(ghi)Perylene	<20.00	<20.00	1	20
Benzo(k)Fluoranthene	<5.00	<5.00	1	5
Bis(2-Chloroethoxy)Methane	<10.00	<10.00	1	10
Bis(2-Chloroethyl)Ether	<10.00	<10.00	1	10
Bis(2-Chloroisopropyl)Ether	<10.00	<10.00	1	10
Bis(2-Ethylhexyl)Phthalate	<10.00	<10.00	1	10
4-Bromophenyl Phenyl Ether	<10.00	<10.00	1	10
Butyl benzyl Phthalate	<10.00	<10.00	1	10
2-Chloronaphthalene	<10.00	<10.00	1	10
4-Chlorophenyl phenyl ether	<10.00	<10.00	1	10
Chrysene	<5.00	<5.00	1	5
Dibenzo(a,h)Anthracene	<5.00	<5.00	1	5
1,2-(o)Dichlorobenzene	<10.00	<10.00	1	10
1,3-(m)Dichlorobenzene	<10.00	<10.00	1	10
1,4-(p)Dichlorobenzene	<10.00	<10.00	1	10
3,3-Dichlorobenzidine	<5.00	<5.00	1	5
Diethyl Phthalate	<10.00	<10.00	1	10
Dimethyl Phthalate	<10.00	<10.00	1	10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Di-n-Butyl Phthalate	<10.00	<10.00	1	10
2,4-Dinitrotoluene	<10.00	<10.00	1	10
2,6-Dinitrotoluene	<10.00	<10.00	1	10
Di-n-Octyl Phthalate	<10.00	<10.00	1	10
1,2-Diphenylhydrazine (as Azo-benzene)	<20.00	<20.00	1	20
Fluoranthene	<10.00	<10.00	1	10
Fluorene	<10.00	<10.00	1	10
Hexachlorobenzene	<5.00	<5.00	1	5
Hexachlorobutadiene	<10.00	<10.00	1	10
Hexachlorocyclo-pentadiene	<10.00	<10.00	1	10
Hexachloroethane	<20.00	<20.00	1	20
Indeno(1,2,3-cd)pyrene	<5.00	<5.00	1	5
Isophorone	<10.00	<10.00	1	10
Naphthalene	<10.00	<10.00	1	10
Nitrobenzene	<10.00	<10.00	1	10
N-Nitrosodimethylamine	<50.00	<50.00	1	50
N-Nitrosodi-n-Propylamine	<20.00	<20.00	1	20
N-Nitrosodiphenylamine	<20.00	<20.00	1	20
Phenanthrene	<10.00	<10.00	1	10
Pyrene	<10.00	<10.00	1	10
1,2,4-Trichlorobenzene	<10.00	<10.00	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	<0.1	<0.1	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

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
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

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

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

Grab ☐ Composite ☐

Date and time sample(s) collected: Click here to enter text.

TABLE 4.0(2)F - DIOXIN/FURAN COMPOUNDS

Compound	Toxic Equivalency Factors	Wastewater Concentration (ppq)	Wastewater Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Equivalents (ppt)	MAL (ppq)
2,3,7,8 TCDD	1					10
1,2,3,7,8	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	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					0.5
PCB 81	0.0003					0.5

Compound	Toxic Equivalency Factors	Wastewater Concentration (ppq)	Wastewater Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Equivalents (ppt)	MAL (ppq)
PCB 126	0.1					0.5
PCB 169	0.03					0.5
Total						

DOMESTIC WORKSHEET 5.0

TOXICITY TESTING REQUIREMENTS

The following is required for facilities with a currently-operating design flow greater than or equal to 1.0 MGD, with an EPA-approved pretreatment program (or those that are required to have one under 40 CFR Part 403), or are required by the TCEQ to perform Whole Effluent Toxicity testing. This worksheet is not required for minor amendments without renewal.

Section 1. Required Tests (Instructions Page 97)

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: 20

48-hour Acute: 9

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
N/A	Table 1 submitted to the TCEQ with the DMRs.		

DOMESTIC WORKSHEET 6.0

INDUSTRIAL WASTE CONTRIBUTION

The following is required for all publicly owned treatment works (POTWs)

Section 1. All POTWs (Instructions Page 99)

A. Industrial users

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

Average Daily Flows, in MGD: 0

Significant IUs – non-categorical:

Number of IUs: 0

Average Daily Flows, in MGD: 0

Other IUs:

Number of IUs: 1

Average Daily Flows, in MGD: 0.000043 (300 Gal per week)

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.

Section 2. POTWs with Approved Programs or Those Required to Develop a Program (Instructions Page 100)

A. Substantial modifications

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

Yes ☐ No ☐

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

Click here to enter text

B. Non-substantial modifications

Have there been any **non-substantial modifications** to the approved pretreatment program that have not been submitted to TCEQ for review and acceptance?

Yes ☐ No ☐

If yes, identify all non-substantial modifications that have not been submitted to TCEQ, including the purpose of the modification.

Click here to enter text

C. Effluent parameters above the MAL

In Table 6.0(1), list all parameters measured above the MAL in the POTW's effluent monitoring during the last three years. Submit an attachment if necessary.

Table 6.0(1) – Parameters Above the MAL

Pollutant	Concentration	MAL	Units	Date

D. Industrial user interruptions

Has any SIU, CIU, or other IU caused or contributed to any problems (excluding interferences or pass throughs) at your POTW in the past three years?

Yes ☐ No ☐

If yes, identify the industry, describe each episode, including dates, duration, description of the problems, and probable pollutants.

Click here to enter text

Section 3. Significant Industrial User (SIU) Information and Categorical Industrial User (CIU) (Instructions Page 100)

A. General information

Company Name: N/A

SIC Code: Click here to enter text

Telephone number: Click here to enter text Fax number: Click here to enter text

Contact name: Click here to enter text

Address: Click here to enter text

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

B. Process information

Describe the industrial processes or other activities that affect or contribute to the SIU(s) or CIU(s) discharge (i.e., process and non-process wastewater).

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 ☐ N/A

Is the SIU or CIU subject to categorical pretreatment standards found in *40 CFR Parts 405-471*?

Yes ☐ No ☐ N/A

If subject to categorical pretreatment standards, indicate the applicable category and subcategory for each categorical process.

Category: N/A
Subcategories: Click here to enter text.

Category: Click here to enter text.
Subcategories: Click here to enter text.

Category: Click here to enter text.
Subcategories: Click here to enter text.

Category: Click here to enter text.
Subcategories: Click here to enter text.

Category: Click here to enter text.
Subcategories: Click here to enter text.

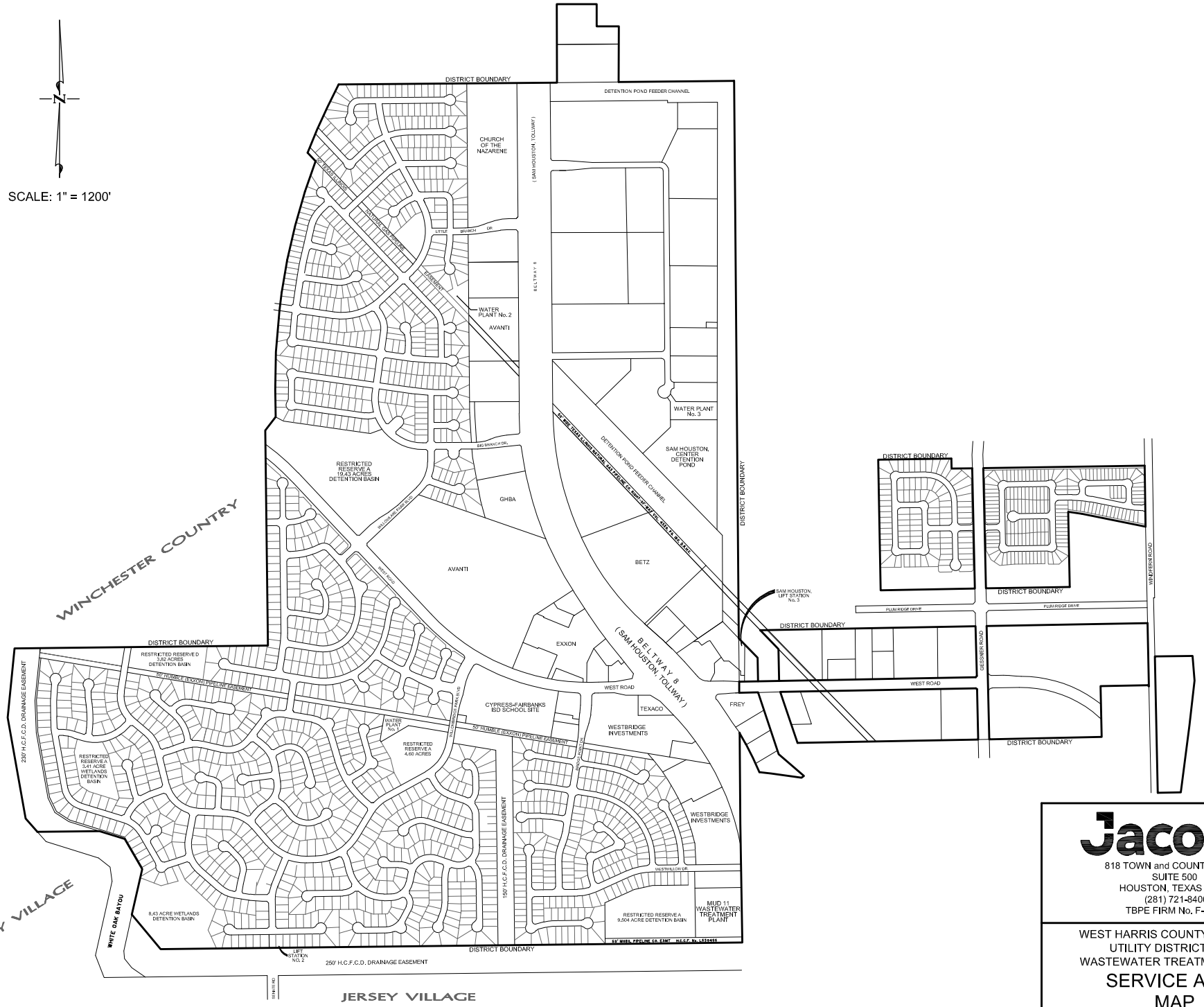
F. Industrial user interruptions

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 ☐ Not Applicable

If yes, identify the SIU, describe each episode, including dates, duration, description of problems, and probable pollutants.

N/A



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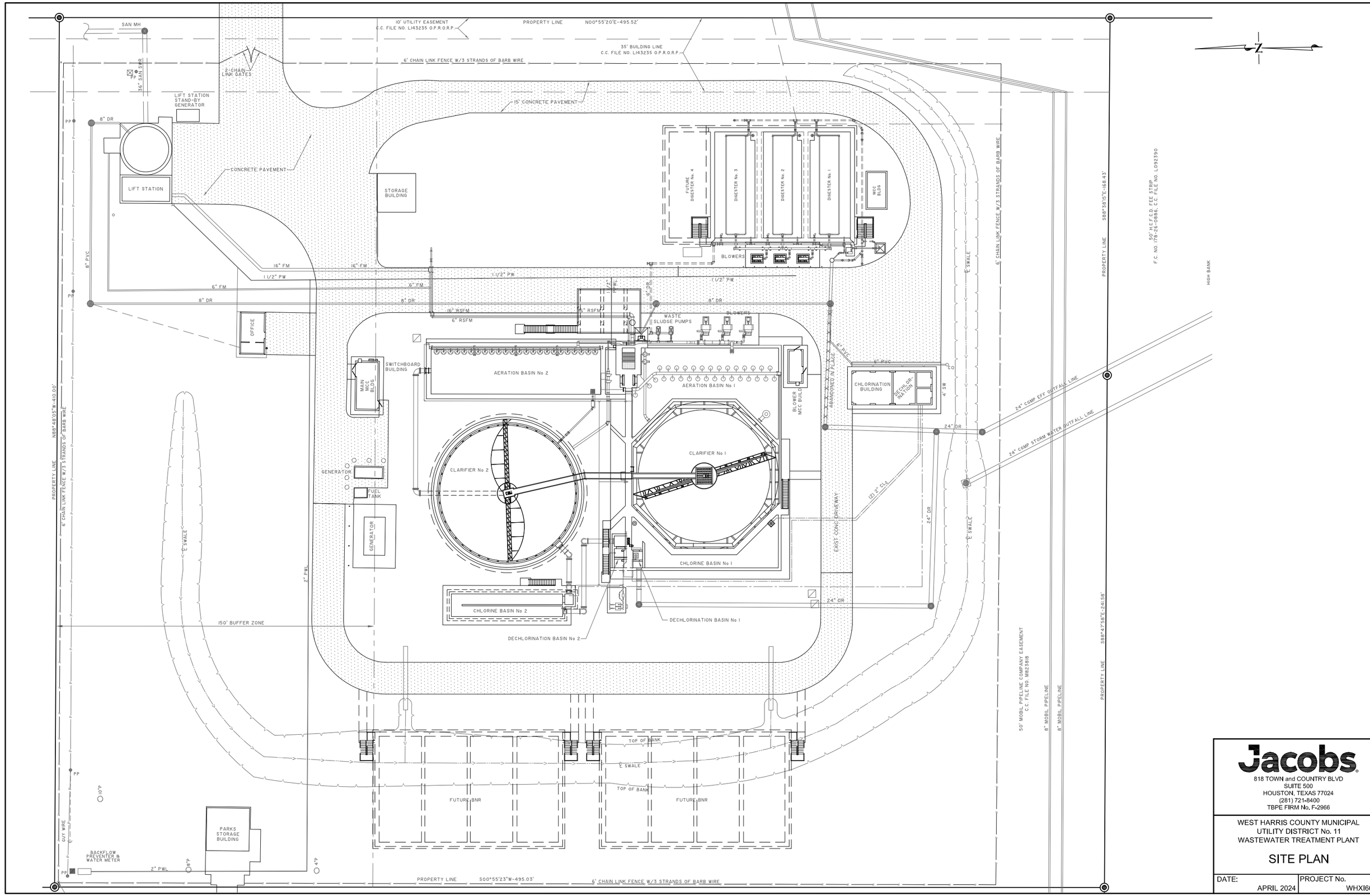
HOUSTON, TEXAS 77024
(281) 721-8400
TBPE FIRM No. F-2966

WEST HARRIS COUNTY MUNICIPAL
UTILITY DISTRICT No. 11
WASTEWATER TREATMENT PLANT

SERVICE AREA MAP

DATE:	PROJECT No.
APRIL 2024	WHXI6083



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WEST HARRIS COUNTY MUNICIPAL
UTILITY DISTRICT No. 11
WASTEWATER TREATMENT PLANT

SITE PLAN

DATE: APRIL 2024

PROJECT No. WHXI6083

SCALE: 1" = 60'

SAM HOUSTON TOLLWAY - BELTWAY 8
(300' R.O.W.)

10' UTILITY ESM'T H.C.C.F. No. L143232

20' S.S.E. H.C.C.F. No. P954611

120.5'

BUILDING

NEW QUEST
RESTRICTED RESERVE "B"
RESTRICTED TO COMMERCIAL USE
F.C. No. 529124, H.C.M.R.

50' MOBIL PIPELINE COMPANY EASEMENT
H.C.C.F. No. M623818
H.C.C.F. No. K739025
VOL. 1167 PG. 107 H.C.D.R.

50' DRAINAGE EASEMENT
FILM CODE No. 108-68-0866
C.C. FILE No. L530455

50' DRAINAGE EASEMENT
FILM CODE No. 108-68-0866
C.C. FILE No. L530455

RESERVE "A"
(RESTRICTED TO WASTEWATER
TREATMENT PLANT PURPOSES ONLY)
4.66 ACRES
203,005 SQ. FT.

26.4'

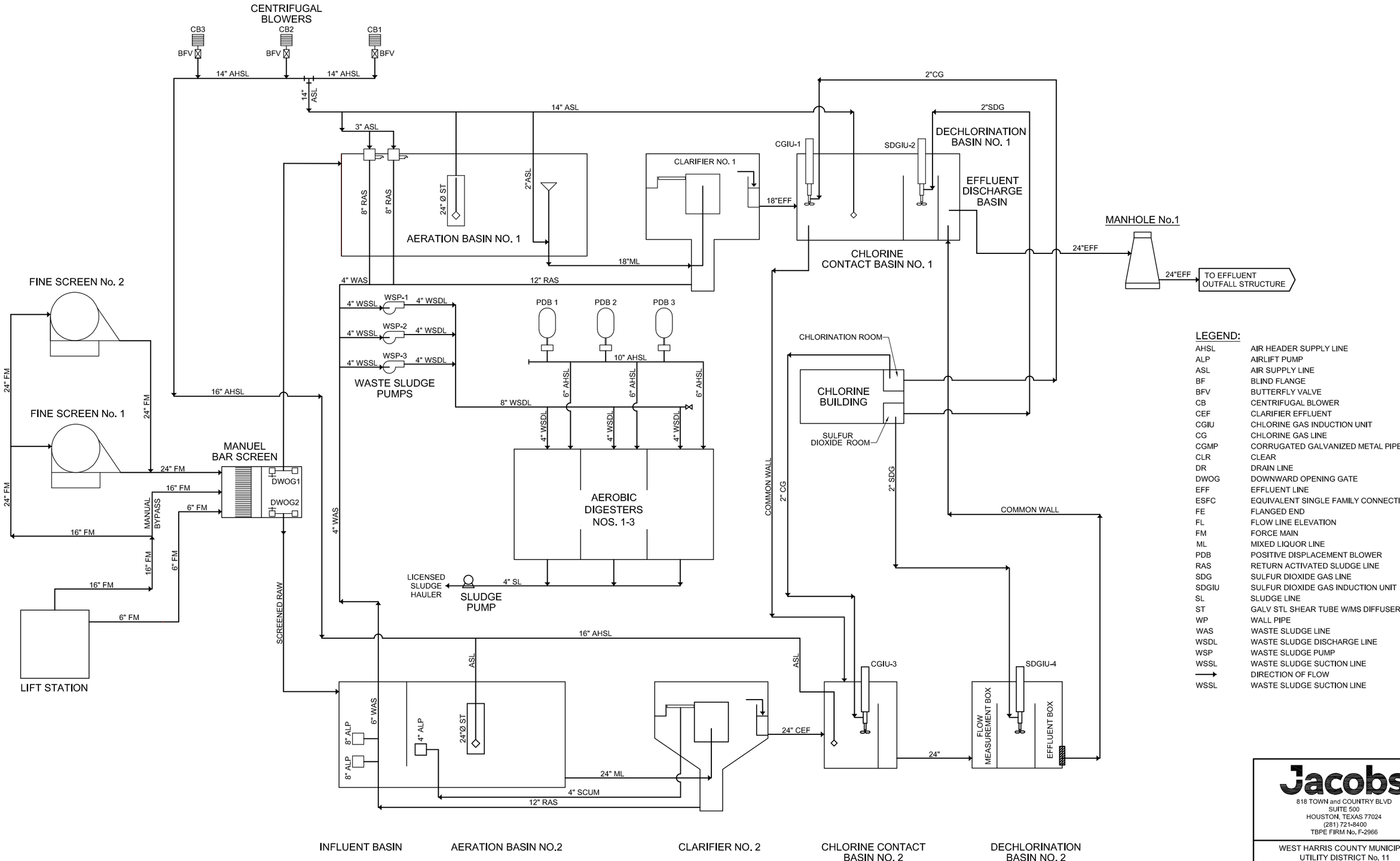
150' BUFFER ZONE

RESTRICTED RESERVE "A"
RESTRICTED TO DETENTION PURPOSES
F.C. No. 381035, H.C.M.R.

JACOBS™
5995 ROGERDALE ROAD
HOUSTON, TX 77072-3495
832.351.7230 832.351.7766 FAX

WEST HARRIS COUNTY
MUNICIPAL UTILITY DISTRICT No. 11
WASTEWATER TREATMENT PLANT

BUFFER ZONE MAP



LEGEND:

AHSL	AIR HEADER SUPPLY LINE
ALP	AIRLIFT PUMP
ASL	AIR SUPPLY LINE
BF	BLIND FLANGE
BFV	BUTTERFLY VALVE
CB	CENTRIFUGAL BLOWER
CEF	CLARIFIER EFFLUENT
CGIU	CHLORINE GAS INDUCTION UNIT
CG	CHLORINE GAS LINE
CGMP	CORRUGATED GALVANIZED METAL PIPE
CLR	CLEAR
DR	DRAIN LINE
DWOG	DOWNWARD OPENING GATE
EFF	EFFLUENT LINE
ESFC	EQUIVALENT SINGLE FAMILY CONNECTION
FE	FLANGED END
FL	FLOW LINE ELEVATION
FM	FORCE MAIN
ML	MIXED LIQUOR LINE
PDB	POSITIVE DISPLACEMENT BLOWER
RAS	RETURN ACTIVATED SLUDGE LINE
SDG	SULFUR DIOXIDE GAS LINE
SDGIU	SULFUR DIOXIDE GAS INDUCTION UNIT
SL	SLUDGE LINE
ST	GALV STL SHEAR TUBE W/MS DIFFUSER
WP	WALL PIPE
WAS	WASTE SLUDGE LINE
WSDL	WASTE SLUDGE DISCHARGE LINE
WSP	WASTE SLUDGE PUMP
WSSL	WASTE SLUDGE SUCTION LINE
→	DIRECTION OF FLOW
WSSL	WASTE SLUDGE SUCTION LINE

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WEST HARRIS COUNTY MUNICIPAL UTILITY DISTRICT No. 11
WASTEWATER TREATMENT PLANT

PROCESS FLOW DIAGRAM

DATE: APRIL 2024

PROJECT No. WHXI6083

West Harris County MUD 11
WWTP Process Design Calculations

Jacobs Engineering Group Inc.

Project:	West Harris County MUD 11	Description:	1.5 MGD WWTP
JEG Job Number:	WHXI6090.01-WWTP		
Design By:	HES		
Checked By:	VHW		
Date:	8/15/2011		

Final Process Calculations (Based on TCEQ Criteria Only)

Design Parameters

Influent Flow Characteristics - The hydraulic design of the facility must ensure that the plant will operate under the most extreme conditions anticipated. The plant process and hydraulic design for this facility are as follows:

Average Design Flow	1.5	MGD	Influent BOD_5	215	mg / l
Peaking Factor	4		Influent BOD5	2690	lbs / day
Peak Flow	6	MGD			

Process Design - The treatment plant has been designed to produce an effluent quality in compliance with the proposed permitted parameters of : $CBOD_5$ = 10 mg/l; TSS = 15 mg/l; NH_3-N = 3 mg/l; Dissolved Oxygen = 4 mg/l; Chlorine Residual = 1 mg/l after 20

BOD_5	S_e	10	mg/L
TSS	TSS_e	15	mg/L
NH_3-N	N_e	3	mg/L

The anticipated operating ranges for MLSS and RASS in mg/l are 3,000 mg/l and 9,000 mg/l, respectively.

Aeration Basin

TCEQ Maximum Organic Loading 35 lbs BOD / day / 1000 cu. ft.

Aeration Volume Required 76,847 cu. ft.

Volume Provided:

Aeration Basin No. 1 (Equivalent)				Aeration Basin No. 2			
Length	70	ft		Length	80	ft	
Width	29.4	ft		Width	22	ft	
Depth	21.15	ft		Depth	21.2	ft	
# Tanks	1			# Tanks	1		
Volume	43,527	cu. ft.		Volume	37,312	cu. ft.	
Capacity	0.850	MDG Average Flow		Capacity	0.728	MDG Average Flow	
BOD Loading	1448.2	lb/day		BOD Loading	1241.4	lb/day	
Air Req (Process)	3186.1	lb/day		Air Req (Process)	2731.2	lb/day	
Air Req (Process)	1794	scfm		Air Req (Process)	1538	scfm	
Air Req (Mixing)	871	scfm		Air Req (Mixing)	746	scfm	
Depth of Diffusers	15.5	ft (max)	6.7 psig	Depth of Diffusers	15.5	ft (max)	6.7 psig
	14.2	ft (avg)	6.1 psig		14.2	ft (avg)	6.1 psig
No. Diff. needed @ 60 scfm/Diffuser			30	No. Diff. needed @ 60 scfm/Diffuser			26
No. Exist Diffusers			31	No. Proposed Diffusers			24

Total Volume	80,839	cu. ft.
Volume greater than required	YES	
Organic Loading	33.27	lbs BOD5/day
Transfer Efficiency (clean water)	11%	
	0.65	
Transfer Efficiency (wastewater)	7.2%	
Total Air Required	3,332	SCFM

West Harris County MUD 11
WWTP Process Design Calculations

Jacobs Engineering Group Inc.

Project:	West Harris County MUD 11	Description:	1.5 MGD WWTP
JEG Job Number:	WHXI6090.01-WWTP		
Design By:	HES		
Checked By:	VHW		
Date:	8/15/2011		

Final Process Calculations (Based on TCEQ Criteria Only)

Clarifier

TCEQ Maximum surface Loading (Qave)	600	gal / day / sq. ft. at average daily flow
TCEQ Maximum surface Loading (Qpk)	1200	gal / day / sq. ft. at peak flow
TCEQ Minimum detention time (Qave)	3	hours at average daily flow
TCEQ Minimum detention time (Qpk)	1.5	hours at peak flow
TCEQ Maximum weir Loading (Qpk)	20,000	gal/day/ft

Surface area required	5,000	sq. ft.	79.8 ft. min. dia. for one clarifier
Volume required	50,134	cu. ft.	56.4 ft. min. dia. for two clarifiers

Clarifiers Provided:

Clarifier No. 1			Clarifier No. 2		
Diameter	70	ft	Diameter	70	ft
SWD	10.86	ft	SWD	13.86	ft
Surface area	3848	sq. ft.	Surface area	3848	sq. ft.
Volume	41,794	cu. ft.	Volume	53,340	cu. ft.
Capacity	1.155	MDG Average Flow	Capacity	1.155	MDG Average Flow

Plant RAS Required (TCEQ)			RAS Required (TCEQ)		
200 GPD/SF	Min. =	535 gpm	200 GPD/SF	Min. =	535 gpm
400 GPD/SF	Max. =	1069 gpm	400 GPD/SF	Max. =	1069 gpm

Total Surface Area for both plants	7,697	sq. ft.	Greater than required?	YES
Total volume for both plants	95,134	cu. ft.	Greater than required?	YES

Clarifier Surface Loading (Qave)	194.88	GPD/SF
Clarifier Surface Loading (Qpk)	779.53	GPD/SF
Clarifier Detention Time (Qave)	11.39	Hours
Clarifier Detention Time (Qpk)	2.85	Hours

Weir Length	439.82	Ft.		
Weir Loading	13,641.85	GPD/LF	Less than maximum allowed?	YES

Digesters

TCEQ Required design volume	20	cu. ft. / lb BOD / day
TCEQ Minimum sludge retention time	15	Days
Volume required	53,793	cu. ft.

Volume Provided:

Digester No. 1			Digester No. 2		
Length	110	ft	Length	91	ft
Width	28	ft	Width	24	ft
Depth	10.5	ft	Depth	10.5	ft
# Tanks	1		# Tanks	1	
Volume	32,340	cu. ft.	Volume	22,932	cu. ft.
Capacity	0.902	MDG Average Flow	Capacity	0.639	MDG Average Flow

Digester No. 3		
Length	18	ft
Width	21	ft
Depth	10.5	ft
# Tanks	1	
Volume	3,969	cu. ft.
Capacity	0.111	MDG Average Flow

Total Volume for both plants	59,241	cu. ft.
Volume greater than required	YES	
Organic Loading	22.03	CF/lb BOD5/day
TCEQ Aeration required for Digesters	30.00	CFM/1000 CF/day
Total Air Required for Digesters	1,777	scfm
Existing	2,000	scfm
Number of Blowers	3	
Digester Aeration Available (1 standby)	4,000	scfm
Volume greater than required	YES	

West Harris County MUD 11
WWTP Process Design Calculations

Jacobs Engineering Group Inc.

Project:	West Harris County MUD 11	Description:	1.5 MGD WWTP
JEG Job Number:	WHXI6090.01-WWTP		
Design By:	HES		
Checked By:	VHW		
Date:	8/15/2011		

Final Process Calculations (Based on TCEQ Criteria Only)

Chlorine Contact Chamber

TCEQ Minimum detention time (Qpk)	20	min
TCEQ Minimum volume (Qpk)	11,141	cu. ft.

CCT No. 1 (Equivalent)			CCT No. 2		
Length	61	ft	Length	105	ft
Width	12	ft	Width	5	ft
Depth	8.9	ft	Depth	8.9	ft
# Tanks	1		# Tanks	1	
Volume	6,515	cu. ft.	Volume	4,673	cu. ft.
Capacity	0.877	MDG Average Flow	Capacity	0.629	MDG Average Flow
Air Required	130	scfm	Air Required	93	scfm

CCT No. 1 Addition			CCT No. 1 Addition		
Length	5	ft	Length	6	ft
Width	4	ft	Width	5	ft
Depth	8.9	ft	Depth	8.9	ft
# Tanks	1		# Tanks	1	
Volume	178	cu. ft.	Volume	267	cu. ft.
Capacity	0.024	MDG Average Flow	Capacity	0.036	MDG Average Flow

Total CCT Capacity		
Volume	5,118	cu. ft.
Capacity	0.689	MDG Average Flow

Total Volume	11,632	cu. ft			
Detention Time	20.08	Minutes	Greater than required?	YES	
Depth of Diffusers	8.0	ft (avg)	3.5 psig	Depth of Diffusers	8.0 ft (avg) 3.5 psig
No. Diff. needed @ 10 scfm/Diffuser	13			No. Diff. needed @ 10 scfm/Diffuser	9
No. Exist Diffusers	15		Provide 4 diffusers per channel every 10 feet and 1 at the end of the channel		

Chlorine Disinfection

Design Maximum chlorine dose	8	mg / l
Typical chlorine dose	4	mg / l
Cylinder size	2000	lbs
Withdrawal factor	8	(Use 1.0 for 150 # cylinder and 8.0 for 2000 # cylinders)
Low Ambient Temp	40	Use 65 for indoor storage, and 40 for outdoor storage

Chlorine required at low flow	25.0	lbs per day @ 25% design flow	(1:10 turndown)
Chlorine required at design flow	100.1	lbs per day	
Chlorine required at peak flow	133.4	lbs per day	
Maximum chlorine required	167	lbs per day	(includes safety factor)

Use two (2) 200 PPD chlorinators. One automatic for design flows and one manual for peak flows.

Max. withdrawal rate per cylinder	320	lbs per day (Formula for vacuum systems only)
No. of Cylinders required per bank	1	(To meet Max. Chlorine Demand)
One bank of cylinders will last	20	days at average flow and typical chlorine usage

West Harris County MUD 11
WWTP Process Design Calculations

Jacobs Engineering Group Inc.

Project:	West Harris County MUD 11	Description:	1.5 MGD WWTP
JEG Job Number:	WHXI6090.01-WWTP		
Design By:	HES		
Checked By:	VHW		
Date:	8/15/2011		

Final Process Calculations (Based on TCEQ Criteria Only)

Sulfur Dioxide Dechlorination

Design Maximum SO2 dose	4	mg / l	
Typical SO2 dose	3	mg / l	
Cylinder size	2000	lbs	
Withdrawal factor	8	(Use 1.0 for 150 # cylinder and 8.0 for 2000 # cylinders)	
Low Ambient Temp	40	Use 65 for indoor storage, and 40 for outdoor storage	
SO2 required at low flow	12.5	lbs per day @ 25% design flow	(1:10 turndown)
SO2 required at design flow	50.0	lbs per day	
SO2 required at peak flow	66.7	lbs per day	
Maximum SO2 required	83	lbs per day	(includes safety factor)

Use two (2) 100 PPD chlorinators. One automatic for design flows and one manual for peak flows.

Max. withdrawal rate per cylinder	320	lbs per day (Formula for vacuum systems only)
No. of Cylinders required per bank	1	(To meet Max. SO2 Demand)
One bank of cylinders will last	40	days at average flow and typical SO2 usage

Air Requirements

Air requirements for aeration basins	2.2	lb oxygen per lb BOD
Air requirements for digesters	30	SCFM /1000 cu. ft.
Minimum mixing requirements	20	SCFM /1000 cu. ft.
Diffuser transfer efficiency (Enviroquip shear tube)	11.0%	(In clean water)
	0.65	
Diffuser transfer efficiency (Enviroquip shear tube)	7.2%	(In wastewater)
Air required in aeration basin =	5917.2	lbs/day O2
Air required in aeration basin =	3332	SCFM

$$\frac{\{(\text{lb BOD})*(\text{lb Oxygen / lb BOD})\}}{(\text{T.E.})\,(\text{lb Oxygen / lb air})\,(\text{lb air / cu. ft.})\,(\text{min / day})}$$

Verify mixing requirements:		41	OK
Air required for post aeration	(CCT No. 1)	150	SCFM
Air required for air lifts	(Digesters No. 1 & No. 2)	80	SCFM
Air required for post aeration	(CCT No. 2)	160	SCFM Provide Regenerative Blowers
Air required for air lifts	(Digesters No. 1 & No. 2)	0	SCFM
Total air required for Centrifugal Blowers		3,562	SCFM
Maximum water depth over diffuser		15.5	feet
Pressure at top of drop leg		6.7	psi
Pressure loss in piping		0.8	psi
Pressure @ Blowers		7.5	psi
Air flow per Blower @ required pressure		2,100	SCFM
Blowers required w/o standby		1.7	
Blower(s) required scfm		1462	SCFM
Blower provided, scfm	2 Blower	2100.0	SCFM
Air required for digesters:		1777	SCFM

Lift Station Pumps

Two existing 8" LS pumps (1.0 mgd O&M Manual) are Aurora-Hydromatic model SL8
1430 gpm; 42.4 TDH; 870 rpm; 25 HP; minimum efficiency 76%
One additional 6" pump was added in 1996: 20 HP Flygt model 3152; impeller #432

Need pumps to handle:	ADF	1.5 mgd	(1042 gpm)
	Peak	6.0 mgd	(4167 gpm)

1.) 6" pump as a "very small" jockey pump: 800 gpm.
2.) 8" pump as a "small" pump: 1430 gpm.
3.) Two 2740 gpm pumps, one operating and one standby.

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TCEQ TX-C24-00086

April 10, 2024

LABORATORY REPORT

Wendy Rambin
SI Environmental - Cypress
9826 Whithorn Drive
Houston, TX 77095

Report ID: 20240410151355DLH

The following test results meet all NELAP requirements for analytes for which certification is available. Any deviations from our quality system will be noted in the case narrative. All analyses performed by North Water District Laboratory Services, Inc. unless noted.

For questions regarding this report, contact Monica Martin at 936-321-6060.

Sincerely,

Deena Higginbotham For Aundra Noe
Project Manager

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TCEQ TX-C24-00086

SI Environmental - Cypress
9826 Whithorn Drive
Houston, TX 77095

Reported:
04/10/2024 15:13

Laboratory Sample Results

WHC MUD 11 - Outfall 001 3 Part Grab Composite 1 **Sample Matrix:** **Waste Water**

Client Sample ID: **18 Mohm DI** **Date Collected:** **02/13/2024 8:10**
Lab Sample ID: **24B3033-01** **Collected by:** **Terry May**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
Metals, Total EPA 1631E	Mercury	A	<0.00500	ug/L	U	1	0.00250	0.00500	BHB3318	02/21/2024 11:07	LPC

Client Sample ID: **Outfall 001 3 Part Grab** **Date Collected:** **02/13/2024 8:05**
Lab Sample ID: **24B3033-02** **Collected by:** **Terry May**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
Metals, Total EPA 1631E	Mercury	A	<0.00500	ug/L	U	1	0.00250	0.00500	BHB3318	02/21/2024 11:12	LPC

Client Sample ID: **18 Mohm DI** **Date Collected:** **02/13/2024 12:05**
Lab Sample ID: **24B3034-01** **Collected by:** **Tyler Henderson**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
Metals, Total EPA 1631E	Mercury	A	<0.00500	ug/L	U	1	0.00250	0.00500	BHB3318	02/21/2024 11:36	LPC

Client Sample ID: **Outfall 001 3 Part Grab** **Date Collected:** **02/13/2024 12:05**
Lab Sample ID: **24B3034-02** **Collected by:** **Tyler Henderson**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
Metals, Total EPA 1631E	Mercury	A	<0.00500	ug/L	U	1	0.00250	0.00500	BHB3318	02/21/2024 11:48	LPC

Client Sample ID: **Outfall 001** **Date Collected:** **02/14/2024 8:50**
Lab Sample ID: **24B3473-01** **Collected by:** **Jose Gutierrez**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
Field Calc	Flow Field	N	0.772	MGD		1	0.00	0.00	BHB2518	02/14/2024 08:50	JG
Field SM 4500-Cl G	Total Residual Chlorine	A	<0.25	mg/L	U	1	0.25	0.25	BHB2518	02/14/2024 08:50	JG
General Chemistry SM 4500-CN^- G	Amenable Cyanide	A	<10.0	ug/L	U	1	5.00	10.0	BHB3603	02/21/2024 15:14	TBB
General Chemistry EPA 1664A	n-Hexane Extractable Material (O&G)	A	<5.00	mg/L	U	1	5.00	5.00	BHB3604	02/21/2024 08:54	IDC
General Chemistry SM 4500-CN^- C	Total Cyanide	A	<10.0	ug/L	U	1	5.00	10.0	BHB3603	02/21/2024 15:14	TBB
Microbiology SM 9223 B (Colilert	Escherichia coli (E. coli)	A	40.8	MPN/100 mL		1	1.00	1.00	BHB2477	02/15/2024 16:56	JKB

Client Sample ID: **Outfall 001 Sampler** **Date Collected:** **02/14/2024 5:00**
Lab Sample ID: **24B3473-02** **Collected by:** **Jose Gutierrez**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
General Chemistry SM 2320 B	Alkalinity as CaCO3	A	191	mg/L		1	10.0	10.0	BHB2570	02/15/2024 18:31	AKA
General Chemistry EPA 350.1	Ammonia as N	A	<0.0500	mg/L	U	1	0.0200	0.0500	BHB2760	02/16/2024 11:28	GJG
General Chemistry SM 5210 B	Carbonaceous BOD (CBOD)	A	<2.03	mg/L	U	1.01352.03		2.03	BHB2576	02/20/2024 09:38	AMM
General Chemistry SM 2510 B	Conductivity	A	1090	umhos/cm @ 25 °C		1	2.00	2.00	BHB2570	02/15/2024 18:31	AKA
General Chemistry EPA 300.0	Fluoride	A	0.925	mg/L		1	0.0105	0.250	BHB2394	02/14/2024 23:24	ORP
General Chemistry EPA 300.0	Nitrite as N	A	<50.0	ug/L	U	1	5.10	50.0	BHB2394	02/14/2024 23:24	ORP

* A = Accredited, N = Not Accredited or Accreditation not available

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SI Environmental - Cypress
9826 Whithorn Drive
Houston, TX 77095

Reported:
04/10/2024 15:13

Laboratory Sample Results
(Continued)

WHC MUD 11 - Large Permit Renewal **Sample Matrix:** **Waste Water**

Client Sample ID: **Outfall 001 Sampler (Continued)** **Date Collected:** **02/14/2024 5:00**
Lab Sample ID: **24B3473-02** **Collected by:** **Jose Gutierrez**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
General Chemistry SM 2540 C	Residue-filterable (TDS)	A	364	mg/L		1	10.0	10.0	BHB2893	02/20/2024 11:52	JRU
General Chemistry SM 2540 D	Residue-nonfilterable (TSS)	A	2.95	mg/L		1	1.00	1.00	BHB2660	02/16/2024 11:15	KIO
General Chemistry EPA 300.0	Sulfate	A	55.4	mg/L		1	0.0341	1.00	BHB2394	02/14/2024 23:24	ORP
General Chemistry SM 4500-NH3 C	Total Kjeldahl Nitrogen - (TKN)	A	<1.00	mg/L	U	1	0.100	1.00	BHB3025	02/19/2024 09:15	GIW
General Chemistry EPA 365.1	Total Phosphorus	A	2.52	mg/L		1	0.117	0.200	BHB3036	02/21/2024 08:49	TBB
Metals, Dissolved SM 3500-Cr B	Chromium (VI)	A	5.30	ug/L		1	1.50	3.00	BHC0379	03/04/2024 17:33	NAZ
Metals, Total EPA 200.8	Aluminum	A	18.3	ug/L		1	0.167	2.50	BHB2557	02/23/2024 10:41	JKC
Metals, Total EPA 200.8	Antimony	A	<5.00	ug/L	U	1	0.0589	5.00	BHB2557	02/16/2024 13:16	JKC
Metals, Total EPA 200.8	Arsenic	A	3.54	ug/L		1	0.0468	0.500	BHB2557	02/16/2024 10:57	FAA
Metals, Total EPA 200.8	Barium	A	139	ug/L		1	0.0200	3.00	BHB2557	02/16/2024 13:16	JKC
Metals, Total EPA 200.8	Beryllium	A	<0.500	ug/L	U	1	0.0137	0.500	BHB2557	02/16/2024 13:16	JKC
Metals, Total EPA 200.8	Cadmium	A	<1.00	ug/L	U	1	0.00798	1.00	BHB2557	02/16/2024 13:16	JKC
Metals, Total EPA 200.8	Chromium	A	<3.00	ug/L	U	1	0.0839	3.00	BHB2557	02/16/2024 13:16	JKC
Metals, Total Calc	Chromium (III)		<0.00600	mg/L		1	0.00158	0.00600	[CALC]	03/04/2024 17:33	NAZ
Metals, Total EPA 200.8	Copper	A	10.0	ug/L		1	0.182	2.00	BHB2557	02/23/2024 10:41	JKC
Metals, Total EPA 200.8	Lead	A	<0.500	ug/L	U	1	0.0120	0.500	BHB2557	02/16/2024 13:16	JKC
Metals, Total EPA 200.8	Nickel	A	<2.00	ug/L	U	1	0.0398	2.00	BHB2557	02/23/2024 10:41	JKC
Metals, Total EPA 200.8	Selenium	A	<5.00	ug/L	U	1	0.354	5.00	BHB2557	02/27/2024 11:19	FAA
Metals, Total EPA 200.8	Silver	A	<0.500	ug/L	U	1	0.00467	0.500	BHB2557	02/16/2024 13:16	JKC
Metals, Total EPA 200.8	Thallium	A	<0.500	ug/L	U	1	0.0617	0.500	BHB2557	02/16/2024 13:16	JKC
Metals, Total EPA 200.8	Zinc	A	36.8	ug/L		1	0.207	5.00	BHB2557	02/16/2024 13:16	JKC
EPA 608.3	*Surrogate: 2,4,5,6 Tetrachloro-m-xylene-surr*	*127%*		*25.2-154*							
Organics by GC SM 6640 B	2,4-D	A	<0.700	ug/L	U, C+	2	0.234	0.700	BHB3281	03/02/2024 06:55	KRB
Organics by GC EPA 608.3	4,4'-DDD	A	<0.100	ug/L	U	1	0.00200	0.100	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 608.3	4,4'-DDE	A	<0.100	ug/L	U	1	0.00100	0.100	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 608.3	4,4'-DDT	A	<0.0200	ug/L	U	1	0.00900	0.0200	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 608.3	Aldrin	A	<0.0100	ug/L	U	1	0.00100	0.0100	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 608.3	alpha-BHC (alpha-Hexachlorocyclohexane)	A	<0.0500	ug/L	U	1	0.00300	0.0500	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 608	Aroclor-1016 (PCB-1016)	A	<0.200	ug/L	C+, U	1	0.00800	0.200	BHB4001	03/13/2024 20:02	KRB
Organics by GC EPA 608	Aroclor-1221 (PCB-1221)	A	<0.200	ug/L	U	1	0.00800	0.200	BHB4001	03/13/2024 20:02	em
Organics by GC EPA 608	Aroclor-1232 (PCB-1232)	A	<0.200	ug/L	U	1	0.00800	0.200	BHB4001	03/13/2024 20:02	em
Organics by GC EPA 608	Aroclor-1242 (PCB-1242)	A	<0.200	ug/L	U	1	0.00800	0.200	BHB4001	03/13/2024 20:02	em
Organics by GC EPA 608	Aroclor-1248 (PCB-1248)	A	<0.200	ug/L	U	1	0.00800	0.200	BHB4001	03/13/2024 20:02	em
Organics by GC EPA 608	Aroclor-1254 (PCB-1254)	A	<0.200	ug/L	U	1	0.00800	0.200	BHB4001	03/13/2024 20:02	em
Organics by GC EPA 608	Aroclor-1260 (PCB-1260)	A	<0.200	ug/L	C+, U	1	0.00800	0.200	BHB4001	03/13/2024 20:02	KRB

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Reported:
04/10/2024 15:13

Laboratory Sample Results
(Continued)

WHC MUD 11 - Large Permit Renewal **Sample Matrix:** **Waste Water**

Client Sample ID: **Outfall 001 Sampler (Continued)** **Date Collected:** **02/14/2024 5:00**
Lab Sample ID: **24B3473-02** **Collected by:** **Jose Gutierrez**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
Organics by GC EPA 1657	Azinphos-methyl (Guthion)	A	<0.102	ug/L	U	1	0.0341	0.102	BHB3236	02/23/2024 02:17	KRB
Organics by GC EPA 608.3	beta-BHC (beta-Hexachlorocyclohexane)	A	<0.0500	ug/L	C+, U	1	0.00600	0.0500	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 608.3	Chlordane (Total)	A	<0.100	ug/L	U	1	0.00500	0.100	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 1657	Chlorpyrifos	A	<0.0512	ug/L	U	1	0.0263	0.0512	BHB3236	02/23/2024 02:17	KRB
Organics by GC EPA 608.3	cis-Chlordane (alpha-Chlordane)	A	<0.100	ug/L	U	1	0.00500	0.100	BHB3651	03/05/2024 06:53	SHU
SM 6640 B	*Surrogate: DCAA-surr*	*159% S*		*70-130*							
EPA 608.3	*Surrogate: Decachlorobiphenyl-surr*	*64.3%*		*41.2-118*							
Organics by GC EPA 608.3	delta-BHC	A	<0.0500	ug/L	C+, U	1	0.00300	0.0500	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 1657	Demeton	A	<0.205	ug/L	U	1	0.0132	0.205	BHB3236	02/23/2024 02:17	KRB
Organics by GC EPA 1657	Diazinon	A	<0.512	ug/L	U	1	0.0330	0.512	BHB3236	02/23/2024 02:17	KRB
Organics by GC EPA 608.3	Dieldrin	A	<0.0200	ug/L	C+, U	1	0.00100	0.0200	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 608.3	Endosulfan I	A	<0.0100	ug/L	C+, U	1	0.00400	0.0100	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 608.3	Endosulfan II	A	<0.0200	ug/L	C+, U	1	0.00100	0.0200	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 608.3	Endosulfan sulfate	A	<0.100	ug/L	C+, U	1	0.0100	0.100	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 608.3	Endrin	A	<0.0200	ug/L	C+, U	1	0.00200	0.0200	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 608.3	Endrin aldehyde	A	<0.100	ug/L	U	1	0.00700	0.100	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 608.3	gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)	A	<0.0500	ug/L	C+, U	1	0.00100	0.0500	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 608.3	gamma-Chlordane	A	<0.100	ug/L	C+, U	1	0.00500	0.100	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 608.3	Heptachlor	A	<0.0100	ug/L	U	1	0.00200	0.0100	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 608.3	Heptachlor epoxide	A	<0.0100	ug/L	C+, U	1	0.00400	0.0100	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 1657	Malathion	A	<0.102	ug/L	U	1	0.0136	0.102	BHB3236	02/23/2024 02:17	KRB
Organics by GC EPA 608.3	Methoxychlor	A	<2.00	ug/L	U	1	0.0100	2.00	BHB3651	03/05/2024 06:53	SHU
Organics by GC EPA 1657	Parathion, ethyl	A	<0.102	ug/L	U	1	0.0212	0.102	BHB3236	02/23/2024 02:17	KRB
Organics by GC EPA 608	PCBs, Total	A	<0.200	ug/L	C+, U	1	0.00800	0.200	BHB4001	03/13/2024 20:02	KRB
Organics by GC SM 6640 B	Silvex (2,4,5-TP)	A	<0.300	ug/L	U	2	0.236	0.300	BHB3281	03/02/2024 06:55	KRB
EPA 1657	*Surrogate: Tributyl Phosphate-surr*	*119%*		*40-120*							
EPA 1657	*Surrogate: Triphenyl Phosphate-surr*	*69.8%*		*40-120*							
EPA 625.1	*Surrogate: 2,4,6-Tribromophenol-surr*	*79.9%*		*33.6-139*							
EPA 625.1	*Surrogate: 2-Fluorobiphenyl-surr*	*62.8%*		*32.2-138*							

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Laboratory Sample Results
(Continued)

WHC MUD 11 - Large Permit Renewal **Sample Matrix:** **Waste Water**

Client Sample ID: **Outfall 001 Sampler (Continued)** **Date Collected:** **02/14/2024 5:00**
Lab Sample ID: **24B3473-02** **Collected by:** **Jose Gutierrez**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
EPA 625.1	*Surrogate: 2-Fluorophenol-surr*	*77.0%*		*32.7-137*							
Semivolatile Organic Compounds by	3,3'-Dichlorobenzidine	A	<5.00	ug/L	U	1	3.87	5.00	BHB3403	03/05/2024 23:41	KRB
Semivolatile Organic Compounds by	Benzidine	A	<50.0	ug/L	U	1	11.8	50.0	BHB3403	03/05/2024 23:41	KRB
EPA 625.1	*Surrogate: Nitrobenzene-d5-surr*	*98.0%*		*31.2-136*							
ASTM D7065	*Surrogate: n-NP-surr*	*78.8%*		*60-140*							
Semivolatile Organic Compounds by	Nonylphenol	N	<333	ug/L	U	2	5.99	333	BHB2763	02/20/2024 04:08	KRB
EPA 625.1	*Surrogate: Phenol-d5-surr*	*88.2%*		*28.9-155*							
EPA 625.1	*Surrogate: p-Terphenyl-d14-surr*	*67.1%*		*37.6-117*							

Client Sample ID: **Outfall 001 Sampler** **Date Collected:** **02/14/2024 5:00**
Lab Sample ID: **24B3473-02RE1** **Collected by:** **Jose Gutierrez**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
General Chemistry EPA 300.0	Chloride (Rerun)	A	122	mg/L		5	0.172	5.00	BHB2679	02/15/2024 15:26	ORP
General Chemistry EPA 300.0	Nitrate as N (Rerun)	A	17600	ug/L		5	71.0	500	BHB2679	02/15/2024 15:26	ORP
EPA 608.3	*Surrogate: 2,4,5,6 Tetrachloro-m-xylene-surr*	*112%*		*25.2-154*							
EPA 608.3	*Surrogate: Decachlorobiphenyl-surr (Rerun)*	*84.3%*		*41.2-118*							
Organics by GC EPA 608.3	Dicofol (Rerun)	A	<1.00	ug/L	C, U	1	0.120	1.00	BHB3651	03/14/2024 22:28	KRB
Organics by GC EPA 608.3	Mirex (Rerun)	A	<0.0200	ug/L	C+, U	1	0.0100	0.0200	BHB3651	03/14/2024 22:28	KRB
Organics by GC EPA 608.3	Toxaphene (Chlorinated Camphene) (Rerun)	A	<0.300	ug/L	U	1	0.100	0.300	BHB3651	03/14/2024 22:28	KRB
Semivolatile Organic Compounds by	1,2,4,5-Tetrachlorobenzene (Rerun)	A	<10.0	ug/L	U	1	0.0760	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by	1,2-Diphenylhydrazine (Rerun)	A	<20.0	ug/L	U	1	0.250	20.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by	2,4,5-Trichlorophenol (Rerun)	A	<10.0	ug/L	U	1	0.210	10.0	BHB3403	03/08/2024 20:46	KRB
EPA 625.1	*Surrogate: 2,4,6-Tribromophenol-surr (Rerun)*	*87.2%*		*33.6-139*							
Semivolatile Organic Compounds by	2,4,6-Trichlorophenol (Rerun)	A	<10.0	ug/L	U	1	0.385	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by	2,4-Dinitrotoluene (2,4-DNT) (Rerun)	A	<10.0	ug/L	U	1	0.0530	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by	2,6-Dinitrotoluene (2,6-DNT) (Rerun)	A	<10.0	ug/L	U	1	0.584	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by	2-Chloronaphthalene (Rerun)	A	<10.0	ug/L	U	1	0.123	10.0	BHB3403	03/08/2024 20:46	KRB

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Laboratory Sample Results
(Continued)

WHC MUD 11 - Large Permit Renewal | **Sample Matrix:** **Waste Water**

Client Sample ID: **Outfall 001 Sampler (Continued)** | **Date Collected:** **02/14/2024 5:00**
Lab Sample ID: **24B3473-02RE1** | **Collected by:** **Jose Gutierrez**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
EPA 625.1	*Surrogate: 2-Fluorobiphenyl-surr (Rerun)*	*76.1%*		*32.2-138*							
EPA 625.1	*Surrogate: 2-Fluorophenol-surr (Rerun)*	*81.6%*		*32.7-137*							
Semivolatile Organic Compounds by [illegible]	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylph (Rerun)	A	<50.0	ug/L	U	1	0.511	50.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	2-Nitrophenol (Rerun)	A	<20.0	ug/L	U	1	0.218	20.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	4-Bromophenyl phenyl ether (BDE-3) (Rerun)	A	<10.0	ug/L	U	1	0.0682	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	4-Chloro-3-methylphenol (Rerun)	A	<10.0	ug/L	U	1	0.218	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	4-Chlorophenyl phenylether (Rerun)	A	<10.0	ug/L	U	1	0.207	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	4-Nitrophenol (Rerun)	A	<50.0	ug/L	U	1	2.40	50.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Acenaphthene (Rerun)	A	<10.0	ug/L	U	1	0.0776	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Acenaphthylene (Rerun)	A	<10.0	ug/L	U	1	0.0594	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Anthracene (Rerun)	A	<10.0	ug/L	U	1	0.0532	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Benzo(a)anthracene (Rerun)	A	<5.00	ug/L	U	1	0.0738	5.00	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Benzo(a)pyrene (Rerun)	A	<5.00	ug/L	U	1	0.143	5.00	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	benzo(b&k)fluoranthene (Rerun)	A	<5.00	ug/L	U	1	0.118	5.00	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Benzo(g,h,i)perylene (Rerun)	A	<20.0	ug/L	U	1	0.112	20.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Bis(2-ethylhexyl)phthalate (Rerun)	A	<10.0	ug/L	U	1	0.500	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Butyl benzyl phthalate (Rerun)	A	<10.0	ug/L	U	1	0.123	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Chrysene (Rerun)	A	<5.00	ug/L	U	1	0.0573	5.00	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Dibenzo(a,h)anthracene (Rerun)	A	<5.00	ug/L	U	1	0.152	5.00	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Diethyl phthalate (Rerun)	A	<10.0	ug/L	U	1	0.150	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Dimethyl phthalate (Rerun)	A	<10.0	ug/L	U	1	0.0869	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Di-n-butyl phthalate (Rerun)	A	<10.0	ug/L	U	1	0.505	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Di-n-octyl phthalate (Rerun)	A	<10.0	ug/L	U	1	0.163	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Fluoranthene (Rerun)	A	<10.0	ug/L	U	1	0.0676	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Fluorene (Rerun)	A	<10.0	ug/L	U	1	0.0589	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Hexachlorobenzene (Rerun)	A	<5.00	ug/L	U	1	0.0629	5.00	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Hexachlorobutadiene (Rerun)	A	<10.0	ug/L	U	1	0.0697	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Indeno(1,2,3-cd) pyrene (Rerun)	A	<5.00	ug/L	U	1	0.126	5.00	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Naphthalene (Rerun)	A	<10.0	ug/L	U	1	0.0742	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	n-Nitrosodimethylamine (Rerun)	A	<50.0	ug/L	U	1	1.24	50.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	n-Nitroso-di-n-butylamine (Rerun)	A	<20.0	ug/L	U	1	1.87	20.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by [illegible]	Pentachlorobenzene (Rerun)	A	<20.0	ug/L	U	1	0.0514	20.0	BHB3403	03/08/2024 20:46	KRB

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Laboratory Sample Results
(Continued)

WHC MUD 11 - Large Permit Renewal **Sample Matrix:** **Waste Water**

Client Sample ID: **Outfall 001 Sampler (Continued)** **Date Collected:** **02/14/2024 5:00**
Lab Sample ID: **24B3473-02RE1** **Collected by:** **Jose Gutierrez**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
Semivolatile Organic Compounds by	Pentachlorophenol (Rerun)	A	<5.00	ug/L	U	1	0.437	5.00	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by	Phenanthrene (Rerun)	A	<10.0	ug/L	U	1	0.0816	10.0	BHB3403	03/08/2024 20:46	KRB
EPA 625.1	*Surrogate: p-Terphenyl-d14-surr (Rerun)*	*75.6%*		*37.6-117*							
Semivolatile Organic Compounds by	Pyrene (Rerun)	A	<10.0	ug/L	U	1	0.0848	10.0	BHB3403	03/08/2024 20:46	KRB
Semivolatile Organic Compounds by	Pyridine (Rerun)	A	<20.0	ug/L	U	1	4.40	20.0	BHB3403	03/08/2024 20:46	KRB

Client Sample ID: **Outfall 001 Sampler** **Date Collected:** **02/14/2024 5:00**
Lab Sample ID: **24B3473-02RE2** **Collected by:** **Jose Gutierrez**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
EPA 608.3	*Surrogate: 2,4,5,6 Tetrachloro-m-xylene-surr*	*127% HR*		*25.2-154*							
EPA 608.3	*Surrogate: Decachlorobiphenyl-surr (Rerun)*	*69.0% HR*		*41.2-118*							
Organics by GC EPA 608.3	Dicofol (Rerun)	A	<1.00	ug/L	U, C+	1	0.120	1.00	BHB3651	04/03/2024 00:42	shu
Semivolatile Organic Compounds by	1,2,4-Trichlorobenzene (Rerun)	A	<10.0	ug/L	U	1	0.0943	10.0	BHB3403	03/11/2024 00:23	KRB
Semivolatile Organic Compounds by	2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methy (Rerun)	A	<10.0	ug/L	U	1	0.129	10.0	BHB3403	03/11/2024 00:23	KRB
EPA 625.1	*Surrogate: 2,4,6-Tribromophenol-surr (Rerur*	*89.0%*		*33.6-139*							
Semivolatile Organic Compounds by	2,4-Dichlorophenol (Rerun)	A	<10.0	ug/L	U	1	0.256	10.0	BHB3403	03/11/2024 00:23	KRB
Semivolatile Organic Compounds by	2,4-Dimethylphenol (Rerun)	A	<10.0	ug/L	U	1	0.294	10.0	BHB3403	03/11/2024 00:23	KRB
Semivolatile Organic Compounds by	2,4-Dinitrophenol (Rerun)	A	<50.0	ug/L	U	1	2.85	50.0	BHB3403	03/11/2024 00:23	KRB
Semivolatile Organic Compounds by	2-Chlorophenol (Rerun)	A	<10.0	ug/L	U	1	0.147	10.0	BHB3403	03/11/2024 00:23	KRB
EPA 625.1	*Surrogate: 2-Fluorobiphenyl-surr (Rerun)*	*72.0%*		*32.2-138*							
EPA 625.1	*Surrogate: 2-Fluorophenol-surr (Rerun)*	*121%*		*32.7-137*							
Semivolatile Organic Compounds by	3,4-Methylphenol (Rerun)	A	<10.0	ug/L	U	1	0.462	10.0	BHB3403	03/11/2024 00:23	KRB
Semivolatile Organic Compounds by	bis(2-Chloroethoxy)methane (Rerun)	A	<10.0	ug/L	U	1	0.112	10.0	BHB3403	03/11/2024 00:23	KRB
Semivolatile Organic Compounds by	bis(2-Chloroethyl) ether (Rerun)	A	<10.0	ug/L	U	1	0.184	10.0	BHB3403	03/11/2024 00:23	KRB
Semivolatile Organic Compounds by	Hexachlorocyclopentadiene (Rerun)	A	<10.0	ug/L	U	1	0.250	10.0	BHB3403	03/11/2024 00:23	KRB
Semivolatile Organic Compounds by	Hexachloroethane (Rerun)	A	<20.0	ug/L	U	1	0.0644	20.0	BHB3403	03/11/2024 00:23	KRB
Semivolatile Organic Compounds by	Hexachlorophene (Rerun)	A	<10.0	ug/L	U	1	0.343	10.0	BHB3403	03/11/2024 00:23	KRB
Semivolatile Organic Compounds by	Isophorone (Rerun)	A	<10.0	ug/L	U	1	0.0853	10.0	BHB3403	03/11/2024 00:23	KRB
Semivolatile Organic Compounds by	Nitrobenzene (Rerun)	A	<10.0	ug/L	U	1	0.118	10.0	BHB3403	03/11/2024 00:23	KRB

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Laboratory Sample Results
(Continued)

WHC MUD 11 - Large Permit Renewal **Sample Matrix: Waste Water**

Client Sample ID: Outfall 001 Sampler (Continued) **Date Collected: 02/14/2024 5:00**
Lab Sample ID: 24B3473-02RE2 **Collected by: Jose Gutierrez**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
EPA 625.1	*Surrogate: Nitrobenzene-d5-surr (Rerun)*	*88.9%*		*31.2-136*							
Semivolatile Organic Compounds by GCMS EPA 625.1	n-Nitrosodiethylamine (Rerun)	A	<20.0	ug/L	U	1	0.162	20.0	BHB3403	03/11/2024 00:23	KRB
Semivolatile Organic Compounds by GCMS EPA 625.1	n-Nitrosodi-n-propylamine (Rerun)	A	<20.0	ug/L	U	1	0.445	20.0	BHB3403	03/11/2024 00:23	KRB
Semivolatile Organic Compounds by GCMS EPA 625.1	n-Nitrosodiphenylamine (Rerun)	A	<20.0	ug/L	U	1	0.0609	20.0	BHB3403	03/11/2024 00:23	KRB
Semivolatile Organic Compounds by GCMS EPA 625.1	Phenol, Total (Rerun)	A	<10.0	ug/L	U	1	0.470	10.0	BHB3403	03/11/2024 00:23	KRB
EPA 625.1	*Surrogate: Phenol-d5-surr (Rerun)*	*150%*		*28.9-155*							
EPA 625.1	*Surrogate: p-Terphenyl-d14-surr (Rerun)*	*94.9%*		*37.6-117*							

Client Sample ID: Outfall 001 3 Part Grab **Date Collected: 02/14/2024 8:30**
Lab Sample ID: 24B3473-03 **Collected by: Jose Gutierrez**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
Metals, Total EPA 1631E	Mercury	A	<0.00500	ug/L	U	1	0.00250	0.00500	BHB3318	02/21/2024 11:21	LPC

Client Sample ID: 18 Mohm DI **Date Collected: 02/14/2024 8:30**
Lab Sample ID: 24B3473-05 **Collected by: Jose Gutierrez**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
Metals, Total EPA 1631E	Mercury	A	<0.00500	ug/L	U	1	0.00250	0.00500	BHB3318	02/21/2024 11:17	LPC

Client Sample ID: Outfall 001 **Date Collected: 02/14/2024 0:00**
Lab Sample ID: 24B3476-01 **Collected by:**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
Field Hach 10360	DO Field	N	7.14	pH Units		1	1.00	1.00	BHD1906	02/14/2024 00:00	DLH
Field SM 4500-H+ B	pH	A	7.33	pH Units		1	1.00	1.00	BHD1906	02/14/2024 00:00	DLH

Client Sample ID: Outfall 001 3 Part Grab Composite **Date Collected: 02/21/2024 8:15**
Lab Sample ID: 24B4607-02 **Collected by: Jose Gutierrez**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
Volatile Organic Compounds by GCMS EPA 624.1	1,1,1-Trichloroethane	A	<10.0	ug/L	U	1	0.622	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	1,1,2,2-Tetrachloroethane	A	<10.0	ug/L	U	1	0.867	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	1,1,2-Trichloroethane	A	<10.0	ug/L	U	1	0.789	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	1,1-Dichloroethane	A	<10.0	ug/L	U	1	0.967	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	1,1-Dichloroethylene	A	<10.0	ug/L	U	1	0.849	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	1,2-Dibromoethane (EDB, Ethylene dibromide)	A	<10.0	ug/L	U	1	0.706	10.0	BHB4134	02/23/2024 20:04	EM

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Laboratory Sample Results
(Continued)

WHC MUD 11 - Large Permit Renewal - Recollect **Sample Matrix:** **Waste Water**

Client Sample ID: **Outfall 001 3 Part Grab Composite (Continued)** **Date Collected:** **02/21/2024 8:15**
Lab Sample ID: **24B4607-02** **Collected by:** **Jose Gutierrez**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
Volatile Organic Compounds by GCMS EPA 624.1	1,2-Dichlorobenzene (o-Dichlorobenzene)	A	<10.0	ug/L	U	1	0.881	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	1,2-Dichloroethane (Ethylene dichloride)	A	<10.0	ug/L	U	1	0.870	10.0	BHB4134	02/23/2024 20:04	EM
EPA 624.1	*Surrogate: 1,2-Dichloroethane-d4-surr*	*102%*		*70-130*							
Volatile Organic Compounds by GCMS EPA 624.1	1,2-Dichloropropane	A	<10.0	ug/L	U	1	0.854	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	1,3-Dichlorobenzene (m-Dichlorobenzene)	A	<10.0	ug/L	U	1	0.717	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	1,4-Dichlorobenzene (p-Dichlorobenzene)	A	<10.0	ug/L	U	1	0.641	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	2-Butanone (Methyl ethyl ketone, MEK)	A	<50.0	ug/L	U	1	7.38	50.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	2-Chloroethyl vinyl ether	A	<10.0	ug/L	U	1	3.14	10.0	BHB4134	02/23/2024 20:04	EM
EPA 624.1	*Surrogate: 4-Bromofluorobenzene-surr*	*109%*		*70-130*							
Volatile Organic Compounds by GCMS EPA 624.1	Acrolein (Propenal)	A	<17.0	ug/L	U	1	5.68	17.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	Acrylonitrile	A	<50.0	ug/L	U	1	1.60	50.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	Benzene	A	<10.0	ug/L	U	1	0.604	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	Bromodichloromethane	A	14.4	ug/L		1	0.727	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	Bromoform	A	<10.0	ug/L	U	1	0.678	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	Carbon tetrachloride	A	<2.00	ug/L	U	1	0.500	2.00	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	Chlorobenzene	A	<10.0	ug/L	U	1	0.724	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	Chlorodibromomethane	A	<10.0	ug/L	U	1	0.802	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	Chloroethane (Ethyl chloride)	A	<50.0	ug/L	U	1	1.30	50.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	Chloroform	A	25.2	ug/L		1	0.688	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	cis-1,3-Dichloropropene	A	<10.0	ug/L	U	1	0.580	10.0	BHB4134	02/23/2024 20:04	EM
EPA 624.1	*Surrogate: Dibromofluoromethane-surr*	*104%*		*70-130*							
Volatile Organic Compounds by GCMS EPA 624.1	Ethylbenzene	A	<10.0	ug/L	U	1	0.727	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	Methyl bromide (Bromomethane)	A	<50.0	ug/L	U	1	1.42	50.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	Methyl chloride (Chloromethane)	A	<50.0	ug/L	U	1	0.765	50.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	Methylene chloride (Dichloromethane)	A	<20.0	ug/L	U	1	1.60	20.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	Tetrachloroethylene (Perchloroethylene)	A	<10.0	ug/L	U	1	0.703	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	Toluene	A	<10.0	ug/L	U	1	0.649	10.0	BHB4134	02/23/2024 20:04	EM
EPA 624.1	*Surrogate: Toluene-d8-surr*	*99.5%*		*70-130*							
Volatile Organic Compounds by GCMS EPA 624.1	Total Trihalomethanes (TTHMs)	A	43.2	ug/L		1	2.00	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	trans-1,2-Dichloroethylene	A	<10.0	ug/L	U	1	0.899	10.0	BHB4134	02/23/2024 20:04	EM

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Laboratory Sample Results
(Continued)

WHC MUD 11 - Large Permit Renewal - Recollect

Sample Matrix: **Waste Water**

Client Sample ID: **Outfall 001 3 Part Grab Composite (Continued)**

Date Collected: **02/21/2024 8:15**

Lab Sample ID: **24B4607-02**

Collected by: **Jose Gutierrez**

Method	Analyte	*	Result	Units	Q	DF	SDL	LRL	Batch	Analyzed	Analyst
Volatile Organic Compounds by GCMS EPA 624.1	trans-1,3-Dichloropropylene	A	<10.0	ug/L	U	1	0.496	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	Trichloroethene (Trichloroethylene)	A	<10.0	ug/L	U	1	0.744	10.0	BHB4134	02/23/2024 20:04	EM
Volatile Organic Compounds by GCMS EPA 624.1	Vinyl chloride (Chloroethene)	A	<10.0	ug/L	U	1	1.30	10.0	BHB4134	02/23/2024 20:04	EM

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Quality Control

Volatile Organic Compounds by GCMS

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB4134 - EPA 624										
Blank (BHB4134-BLK1)					Prepared & Analyzed: 02/23/2024					
1,1,1-Trichloroethane	<10.0	U	10.0	ug/L						
1,1,2,2-Tetrachloroethane	<10.0	U	10.0	ug/L						
1,1,2-Trichloroethane	<10.0	U	10.0	ug/L						
1,1-Dichloroethane	<10.0	U	10.0	ug/L						
1,1-Dichloroethylene	<10.0	U	10.0	ug/L						
1,2-Dibromoethane (EDB, Ethylene dibromide)	<10.0	U	10.0	ug/L						
1,2-Dichlorobenzene (o-Dichlorobenzene)	<10.0	U	10.0	ug/L						
1,2-Dichloroethane (Ethylene dichloride)	<10.0	U	10.0	ug/L						
1,2-Dichloropropane	<10.0	U	10.0	ug/L						
1,3-Dichlorobenzene (m-Dichlorobenzene)	<10.0	U	10.0	ug/L						
1,4-Dichlorobenzene (p-Dichlorobenzene)	<10.0	U	10.0	ug/L						
2-Butanone (Methyl ethyl ketone, MEK)	<50.0	U	50.0	ug/L						
2-Chloroethyl vinyl ether	<10.0	U	10.0	ug/L						
Acrolein (Propenal)	<17.0	U	17.0	ug/L						
Acrylonitrile	<50.0	U	50.0	ug/L						
Benzene	<10.0	U	10.0	ug/L						
Bromodichloromethane	<10.0	U	10.0	ug/L						
Bromoform	<10.0	U	10.0	ug/L						
Carbon tetrachloride	<2.00	U	2.00	ug/L						
Chlorobenzene	<10.0	U	10.0	ug/L						
Chlorodibromomethane	<10.0	U	10.0	ug/L						
Chloroethane (Ethyl chloride)	<50.0	U	50.0	ug/L						
Chloroform	<10.0	U	10.0	ug/L						
cis-1,3-Dichloropropene	<10.0	U	10.0	ug/L						
Ethylbenzene	<10.0	U	10.0	ug/L						
Methyl bromide (Bromomethane)	<50.0	U	50.0	ug/L						
Methyl chloride (Chloromethane)	<50.0	U	50.0	ug/L						
Methylene chloride (Dichloromethane)	<20.0	U	20.0	ug/L						
Tetrachloroethylene (Perchloroethylene)	<10.0	U	10.0	ug/L						
Toluene	<10.0	U	10.0	ug/L						
Total Trihalomethanes (TTHMs)	<10.0	U	10.0	ug/L						
trans-1,2-Dichloroethylene	<10.0	U	10.0	ug/L						
trans-1,3-Dichloropropylene	<10.0	U	10.0	ug/L						
Trichloroethene (Trichloroethylene)	<10.0	U	10.0	ug/L						
Vinyl chloride (Chloroethene)	<10.0	U	10.0	ug/L						

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Quality Control
(Continued)

Volatile Organic Compounds by GCMS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB4134 - EPA 624 (Continued)										
LCS (BHB4134-BS1)					Prepared & Analyzed: 02/23/2024					
1,1,1-Trichloroethane	42.8		2.00	ug/L	50.0		85.5	70-130		
1,1,2,2-Tetrachloroethane	39.1		3.00	ug/L	50.0		78.1	60-140		
1,1,2-Trichloroethane	40.9		2.00	ug/L	50.0		81.9	70-130		
1,1-Dichloroethane	39.0		3.00	ug/L	50.0		78.1	70-130		
1,1-Dichloroethylene	40.7		3.00	ug/L	50.0		81.4	50-150		
1,2-Dibromoethane (EDB, Ethylene dibromide)	42.1		2.00	ug/L	50.0		84.3	70-130		
1,2-Dichlorobenzene (o-Dichlorobenzene)	40.2		3.00	ug/L	50.0		80.4	65-135		
1,2-Dichloroethane (Ethylene dichloride)	42.2		3.00	ug/L	50.0		84.4	70-130		
1,2-Dichloropropane	38.1		3.00	ug/L	50.0		76.2	35-165		
1,3-Dichlorobenzene (m-Dichlorobenzene)	40.4		2.00	ug/L	50.0		80.7	70-130		
1,4-Dichlorobenzene (p-Dichlorobenzene)	40.4		2.00	ug/L	50.0		80.8	65-135		
2-Butanone (Methyl ethyl ketone, MEK)	412		22.0	ug/L	500		82.5	70-130		
2-Chloroethyl vinyl ether	39.2		9.00	ug/L	50.0		78.4	0-225		
Acrolein (Propenal)	194		17.0	ug/L	250		77.8	60-140		
Acrylonitrile	41.6		5.00	ug/L	50.0		83.1	60-140		
Benzene	40.6		2.00	ug/L	50.0		81.3	65-135		
Bromodichloromethane	39.2		2.00	ug/L	50.0		78.4	65-135		
Bromoform	40.4		2.00	ug/L	50.0		80.9	70-130		
Carbon tetrachloride	43.4		1.00	ug/L	50.0		86.8	70-130		
Chlorobenzene	40.7		2.00	ug/L	50.0		81.5	65-135		
Chlorodibromomethane	40.3		2.00	ug/L	50.0		80.6	70-135		
Chloroethane (Ethyl chloride)	41.4		4.00	ug/L	50.0		82.8	40-160		
Chloroform	39.1		2.00	ug/L	50.0		78.2	70-135		
cis-1,3-Dichloropropene	40.8		2.00	ug/L	50.0		81.6	25-175		
Ethylbenzene	40.4		2.00	ug/L	50.0		80.8	60-140		
Methyl bromide (Bromomethane)	42.6		4.00	ug/L	50.0		85.1	15-185		
Methyl chloride (Chloromethane)	38.1		2.00	ug/L	50.0		76.1	0-205		
Methylene chloride (Dichloromethane)	39.8		5.00	ug/L	50.0		79.7	60-140		
Tetrachloroethylene (Perchloroethylene)	47.5		2.00	ug/L	50.0		95.1	70-130		
Toluene	41.3		2.00	ug/L	50.0		82.6	70-130		
Total Trihalomethanes (TTHMs)	159		10.0	ug/L	200		79.5	70-130		
trans-1,2-Dichloroethylene	40.2		3.00	ug/L	50.0		80.4	70-130		
trans-1,3-Dichloropropylene	41.6		1.00	ug/L	50.0		83.2	50-150		
Trichloroethene (Trichloroethylene)	41.8		2.00	ug/L	50.0		83.5	65-135		
Vinyl chloride (Chloroethene)	40.5		4.00	ug/L	50.0		81.1	5-195		
Surrogate: 1,2-Dichloroethane-d4-surr			*51.6*	*ug/L*	*50.0*		*103*	*70-130*		
Surrogate: Dibromofluoromethane-surr			*50.7*	*ug/L*	*50.0*		*101*	*70-130*		
Surrogate: Toluene-d8-surr			*49.2*	*ug/L*	*50.0*		*98.4*	*70-130*		

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Quality Control
(Continued)

Volatile Organic Compounds by GCMS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB4134 - EPA 624 (Continued)										
LCS Dup (BHB4134-BSD1)					Prepared & Analyzed: 02/23/2024					
1,1,1-Trichloroethane	40.9		2.00	ug/L	50.0		81.9	70-130	4.39	36
1,1,2,2-Tetrachloroethane	40.3		3.00	ug/L	50.0		80.7	60-140	3.23	61
1,1,2-Trichloroethane	41.1		2.00	ug/L	50.0		82.1	70-130	0.316	45
1,1-Dichloroethane	38.6		3.00	ug/L	50.0		77.2	70-130	1.15	40
1,1-Dichloroethylene	39.7		3.00	ug/L	50.0		79.4	50-150	2.44	32
1,2-Dibromoethane (EDB, Ethylene dibromide)	41.6		2.00	ug/L	50.0		83.3	70-130	1.19	30
1,2-Dichlorobenzene (o-Dichlorobenzene)	41.9		3.00	ug/L	50.0		83.8	65-135	4.14	57
1,2-Dichloroethane (Ethylene dichloride)	41.5		3.00	ug/L	50.0		82.9	70-130	1.72	49
1,2-Dichloropropane	39.1		3.00	ug/L	50.0		78.1	35-165	2.47	55
1,3-Dichlorobenzene (m-Dichlorobenzene)	41.8		2.00	ug/L	50.0		83.6	70-130	3.50	43
1,4-Dichlorobenzene (p-Dichlorobenzene)	42.5		2.00	ug/L	50.0		85.1	65-135	5.18	57
2-Butanone (Methyl ethyl ketone, MEK)	412		22.0	ug/L	500		82.4	70-130	0.105	30
2-Chloroethyl vinyl ether	40.3		9.00	ug/L	50.0		80.6	0-225	2.74	71
Acrolein (Propenal)	201		17.0	ug/L	250		80.5	60-140	3.43	60
Acrylonitrile	41.9		5.00	ug/L	50.0		83.9	60-140	0.864	60
Benzene	39.3		2.00	ug/L	50.0		78.5	65-135	3.40	61
Bromodichloromethane	38.1		2.00	ug/L	50.0		76.2	65-135	2.86	56
Bromoform	40.9		2.00	ug/L	50.0		81.8	70-130	1.16	42
Carbon tetrachloride	42.6		1.00	ug/L	50.0		85.3	70-130	1.74	41
Chlorobenzene	40.5		2.00	ug/L	50.0		81.0	65-135	0.550	53
Chlorodibromomethane	40.6		2.00	ug/L	50.0		81.2	70-135	0.682	50
Chloroethane (Ethyl chloride)	40.4		4.00	ug/L	50.0		80.8	40-160	2.41	78
Chloroform	38.7		2.00	ug/L	50.0		77.4	70-135	1.00	54
cis-1,3-Dichloropropene	40.6		2.00	ug/L	50.0		81.3	25-175	0.424	58
Ethylbenzene	40.6		2.00	ug/L	50.0		81.2	60-140	0.566	63
Methyl bromide (Bromomethane)	41.1		4.00	ug/L	50.0		82.1	15-185	3.61	61
Methyl chloride (Chloromethane)	38.5		2.00	ug/L	50.0		76.9	0-205	1.02	60
Methylene chloride (Dichloromethane)	38.5		5.00	ug/L	50.0		77.1	60-140	3.32	28
Tetrachloroethylene (Perchloroethylene)	45.0		2.00	ug/L	50.0		90.1	70-130	5.43	39
Toluene	40.2		2.00	ug/L	50.0		80.3	70-130	2.87	41
Total Trihalomethanes (TTHMs)	158		10.0	ug/L	200		79.2	70-130	0.471	30
trans-1,2-Dichloroethylene	39.5		3.00	ug/L	50.0		79.0	70-130	1.72	45
trans-1,3-Dichloropropylene	41.5		1.00	ug/L	50.0		82.9	50-150	0.392	86
Trichloroethene (Trichloroethylene)	41.8		2.00	ug/L	50.0		83.5	65-135	0.0164	48
Vinyl chloride (Chloroethene)	40.1		4.00	ug/L	50.0		80.1	5-195	1.22	66
Surrogate: 1,2-Dichloroethane-d4-surr			*50.5*	*ug/L*	*50.0*		*101*	*70-130*		
Surrogate: Dibromofluoromethane-surr			*50.0*	*ug/L*	*50.0*		*100*	*70-130*		
Surrogate: Toluene-d8-surr			*49.1*	*ug/L*	*50.0*		*98.3*	*70-130*		

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Quality Control
(Continued)

Volatile Organic Compounds by GCMS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB4134 - EPA 624 (Continued)										
Matrix Spike (BHB4134-MS1)	**Source: 24A2035-04**				Prepared & Analyzed: 02/23/2024					
1,1,1-Trichloroethane	51.2		2.00	ug/L	50.0	<2.00	102	52-162		
1,1,2,2-Tetrachloroethane	45.6		3.00	ug/L	50.0	<3.00	91.1	46-157		
1,1,2-Trichloroethane	48.5		2.00	ug/L	50.0	<2.00	97.1	52-150		
1,1-Dichloroethane	47.8		3.00	ug/L	50.0	<3.00	95.6	59-155		
1,1-Dichloroethylene	49.7		3.00	ug/L	50.0	<3.00	99.5	0-234		
1,2-Dibromoethane (EDB, Ethylene dibromide)	49.1		2.00	ug/L	50.0	<2.00	98.3	70-130		
1,2-Dichlorobenzene (o-Dichlorobenzene)	47.4		3.00	ug/L	50.0	<3.00	94.9	18-190		
1,2-Dichloroethane (Ethylene dichloride)	48.0		3.00	ug/L	50.0	<3.00	96.1	49-155		
1,2-Dichloropropane	46.2		3.00	ug/L	50.0	<3.00	92.3	0-210		
1,3-Dichlorobenzene (m-Dichlorobenzene)	47.9		2.00	ug/L	50.0	<2.00	95.9	59-156		
1,4-Dichlorobenzene (p-Dichlorobenzene)	48.1		2.00	ug/L	50.0	<2.00	96.2	18-190		
2-Butanone (Methyl ethyl ketone, MEK)	470		22.0	ug/L	500	<22.0	93.9	70-130		
2-Chloroethyl vinyl ether	46.0		9.00	ug/L	50.0	<9.00	92.0	0-305		
Acrolein (Propenal)	69.1	J1	17.0	ug/L	250	<17.0	27.6	40-160		
Acrylonitrile	50.3		5.00	ug/L	50.0	<5.00	101	40-160		
Benzene	48.6		2.00	ug/L	50.0	<2.00	97.2	37-151		
Bromodichloromethane	49.6		2.00	ug/L	50.0	1.05	97.0	35-155		
Bromoform	47.5		2.00	ug/L	50.0	<2.00	95.1	45-169		
Carbon tetrachloride	53.6		1.00	ug/L	50.0	<1.00	107	70-140		
Chlorobenzene	48.3		2.00	ug/L	50.0	<2.00	96.6	37-160		
Chlorodibromomethane	45.9		2.00	ug/L	50.0	<2.00	91.9	53-149		
Chloroethane (Ethyl chloride)	47.2		4.00	ug/L	50.0	<4.00	94.3	14-230		
Chloroform	73.3		2.00	ug/L	50.0	27.9	90.8	51-138		
cis-1,3-Dichloropropene	47.9		2.00	ug/L	50.0	<2.00	95.8	0-227		
Ethylbenzene	48.8		2.00	ug/L	50.0	<2.00	97.6	37-162		
Methyl bromide (Bromomethane)	48.6		4.00	ug/L	50.0	<4.00	97.3	0-242		
Methyl chloride (Chloromethane)	45.2		2.00	ug/L	50.0	<2.00	90.4	0-273		
Methylene chloride (Dichloromethane)	45.8		5.00	ug/L	50.0	<5.00	91.7	0-221		
Tetrachloroethylene (Perchloroethylene)	50.0		2.00	ug/L	50.0	<2.00	99.9	64-148		
Toluene	49.3		2.00	ug/L	50.0	<2.00	98.6	47-150		
Total Trihalomethanes (TTHMs)	216		10.0	ug/L	200	28.9	93.7	70-130		
trans-1,2-Dichloroethylene	48.5		3.00	ug/L	50.0	<3.00	97.1	54-156		
trans-1,3-Dichloropropylene	49.2		1.00	ug/L	50.0	<1.00	98.4	17-183		
Trichloroethene (Trichloroethylene)	50.3		2.00	ug/L	50.0	<2.00	101	70-157		
Vinyl chloride (Chloroethene)	48.8		4.00	ug/L	50.0	<4.00	97.6	0-251		
Surrogate: 1,2-Dichloroethane-d4-surr			*49.7*	*ug/L*	*50.0*		*99.4*	*70-130*		
Surrogate: Dibromofluoromethane-surr			*49.0*	*ug/L*	*50.0*		*98.0*	*70-130*		
Surrogate: Toluene-d8-surr			*49.2*	*ug/L*	*50.0*		*98.5*	*70-130*		

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Quality Control
(Continued)

Volatile Organic Compounds by GCMS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB4134 - EPA 624 (Continued)										
Matrix Spike Dup (BHB4134-MSD1)	**Source: 24A2035-04**				Prepared & Analyzed: 02/23/2024					
1,1,1-Trichloroethane	50.3		2.00	ug/L	50.0	<2.00	101	52-162	1.79	36
1,1,2,2-Tetrachloroethane	45.0		3.00	ug/L	50.0	<3.00	90.1	46-157	1.16	61
1,1,2-Trichloroethane	47.8		2.00	ug/L	50.0	<2.00	95.5	52-150	1.62	45
1,1-Dichloroethane	47.7		3.00	ug/L	50.0	<3.00	95.4	59-155	0.261	40
1,1-Dichloroethylene	48.5		3.00	ug/L	50.0	<3.00	97.0	0-234	2.49	32
1,2-Dibromoethane (EDB, Ethylene dibromide)	47.8		2.00	ug/L	50.0	<2.00	95.6	70-130	2.81	30
1,2-Dichlorobenzene (o-Dichlorobenzene)	46.7		3.00	ug/L	50.0	<3.00	93.4	18-190	1.55	57
1,2-Dichloroethane (Ethylene dichloride)	47.6		3.00	ug/L	50.0	<3.00	95.2	49-155	0.925	49
1,2-Dichloropropane	46.0		3.00	ug/L	50.0	<3.00	92.0	0-210	0.356	55
1,3-Dichlorobenzene (m-Dichlorobenzene)	47.0		2.00	ug/L	50.0	<2.00	94.0	59-156	2.01	43
1,4-Dichlorobenzene (p-Dichlorobenzene)	47.3		2.00	ug/L	50.0	<2.00	94.5	18-190	1.75	57
2-Butanone (Methyl ethyl ketone, MEK)	464		22.0	ug/L	500	<22.0	92.7	70-130	1.30	30
2-Chloroethyl vinyl ether	44.9		9.00	ug/L	50.0	<9.00	89.8	0-305	2.47	71
Acrolein (Propenal)	54.9	J1	17.0	ug/L	250	<17.0	22.0	40-160	22.9	60
Acrylonitrile	48.6		5.00	ug/L	50.0	<5.00	97.3	40-160	3.38	60
Benzene	47.8		2.00	ug/L	50.0	<2.00	95.6	37-151	1.73	61
Bromodichloromethane	47.9		2.00	ug/L	50.0	1.05	93.7	35-155	3.43	56
Bromoform	46.0		2.00	ug/L	50.0	<2.00	92.1	45-169	3.20	42
Carbon tetrachloride	52.6		1.00	ug/L	50.0	<1.00	105	70-140	1.83	41
Chlorobenzene	47.7		2.00	ug/L	50.0	<2.00	95.4	37-160	1.27	53
Chlorodibromomethane	45.4		2.00	ug/L	50.0	<2.00	90.8	53-149	1.21	50
Chloroethane (Ethyl chloride)	48.0		4.00	ug/L	50.0	<4.00	96.1	14-230	1.85	78
Chloroform	71.5		2.00	ug/L	50.0	27.9	87.3	51-138	2.44	54
cis-1,3-Dichloropropene	47.6		2.00	ug/L	50.0	<2.00	95.3	0-227	0.595	58
Ethylbenzene	47.9		2.00	ug/L	50.0	<2.00	95.7	37-162	1.92	63
Methyl bromide (Bromomethane)	48.2		4.00	ug/L	50.0	<4.00	96.5	0-242	0.828	61
Methyl chloride (Chloromethane)	44.8		2.00	ug/L	50.0	<2.00	89.5	0-273	0.995	60
Methylene chloride (Dichloromethane)	45.4		5.00	ug/L	50.0	<5.00	90.8	0-221	0.914	28
Tetrachloroethylene (Perchloroethylene)	48.7		2.00	ug/L	50.0	<2.00	97.4	64-148	2.51	39
Toluene	49.0		2.00	ug/L	50.0	<2.00	98.1	47-150	0.541	41
Total Trihalomethanes (TTHMs)	211		10.0	ug/L	200	28.9	90.9	70-130	2.57	30
trans-1,2-Dichloroethylene	48.0		3.00	ug/L	50.0	<3.00	96.1	54-156	1.01	45
trans-1,3-Dichloropropylene	47.8		1.00	ug/L	50.0	<1.00	95.6	17-183	2.96	86
Trichloroethene (Trichloroethylene)	49.5		2.00	ug/L	50.0	<2.00	99.0	70-157	1.51	48
Vinyl chloride (Chloroethene)	48.1		4.00	ug/L	50.0	<4.00	96.1	0-251	1.49	66
Surrogate: 1,2-Dichloroethane-d4-surr			*49.7*	*ug/L*	*50.0*		*99.4*	*70-130*		
Surrogate: Dibromofluoromethane-surr			*49.6*	*ug/L*	*50.0*		*99.1*	*70-130*		
Surrogate: Toluene-d8-surr			*49.3*	*ug/L*	*50.0*		*98.5*	*70-130*		

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Quality Control
(Continued)

Semivolatile Organic Compounds by GCMS

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB2763 - SW-3511										
Blank (BHB2763-BLK1)					Prepared: 02/15/2024 Analyzed: 02/19/2024					
Nonylphenol	<333	U	333	ug/L						
LCS (BHB2763-BS1)					Prepared: 02/15/2024 Analyzed: 02/19/2024					
Nonylphenol	37.2	U	333	ug/L	39.9		93.3	56-112		
Surrogate: n-NP-surr			*7.98*	*ug/L*	*7.98*		*100*	*60-140*		
LCS Dup (BHB2763-BSD1)					Prepared: 02/15/2024 Analyzed: 02/20/2024					
Nonylphenol	41.7	U	333	ug/L	39.9		105	56-112	11.4	22
Surrogate: n-NP-surr			*9.42*	*ug/L*	*7.97*		*118*	*60-140*		
Matrix Spike (BHB2763-MS1)		**Source: 24A1993-01**			Prepared: 02/15/2024 Analyzed: 02/20/2024					
Nonylphenol	36.1	U	333	ug/L	40.0	<333	90.3	56-112		
Surrogate: n-NP-surr			*6.20*	*ug/L*	*7.99*		*77.6*	*60-140*		
Matrix Spike Dup (BHB2763-MSD1)		**Source: 24A1993-01**			Prepared: 02/15/2024 Analyzed: 02/20/2024					
Nonylphenol	30.6	U	333	ug/L	40.0	<333	76.5	56-112	16.6	22
Surrogate: n-NP-surr			*5.85*	*ug/L*	*8.00*		*73.2*	*60-140*		
Batch: BHB3403 - EPA 625 LLE										
Blank (BHB3403-BLK1)					Prepared: 02/20/2024 Analyzed: 03/05/2024					
3,3'-Dichlorobenzidine	<5.00	U	5.00	ug/L						
Benzidine	<50.0	U	50.0	ug/L						
Blank (BHB3403-BLK2)					Prepared: 02/20/2024 Analyzed: 03/08/2024					
1,2,4,5-Tetrachlorobenzene	<0.300	U	0.300	ug/L						
1,2-Diphenylhydrazine	<0.750	U	0.750	ug/L						
2,4,5-Trichlorophenol	<0.700	U	0.700	ug/L						
2,4,6-Trichlorophenol	<1.20	U	1.20	ug/L						
2,4-Dinitrotoluene (2,4-DNT)	<0.200	U	0.200	ug/L						
2,6-Dinitrotoluene (2,6-DNT)	<1.80	U	1.80	ug/L						
2-Chloronaphthalene	<0.400	U	0.400	ug/L						
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylph	<1.60	U	1.60	ug/L						
2-Nitrophenol	<0.700	U	0.700	ug/L						
4-Bromophenyl phenyl ether (BDE-3)	<0.300	U	0.300	ug/L						
4-Chloro-3-methylphenol	<0.700	U	0.700	ug/L						
4-Chlorophenyl phenylether	<0.700	U	0.700	ug/L						
4-Nitrophenol	<7.20	U	7.20	ug/L						
Acenaphthene	<0.300	U	0.300	ug/L						
Acenaphthylene	<0.200	U	0.200	ug/L						
Anthracene	<0.200	U	0.200	ug/L						
Benzo(a)anthracene	<0.300	U	0.300	ug/L						
Benzo(a)pyrene	<0.500	U	0.500	ug/L						
benzo(b&k)fluoranthene	<0.400	U	0.400	ug/L						

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Quality Control
(Continued)

Semivolatile Organic Compounds by GCMS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3403 - EPA 625 LLE (Continued)										
Blank (BHB3403-BLK2)					Prepared: 02/20/2024 Analyzed: 03/08/2024					
Benzo(g,h,i)perylene	<0.400	U	0.400	ug/L						
Bis(2-ethylhexyl)phthalate	<1.50	U	1.50	ug/L						
Butyl benzyl phthalate	<0.400	U	0.400	ug/L						
Chrysene	<0.200	U	0.200	ug/L						
Dibenzo(a,h)anthracene	<0.500	U	0.500	ug/L						
Diethyl phthalate	<0.500	U	0.500	ug/L						
Dimethyl phthalate	<0.300	U	0.300	ug/L						
Di-n-butyl phthalate	<1.60	U	1.60	ug/L						
Di-n-octyl phthalate	<0.500	U	0.500	ug/L						
Fluoranthene	<0.300	U	0.300	ug/L						
Fluorene	<0.200	U	0.200	ug/L						
Hexachlorobenzene	<0.200	U	0.200	ug/L						
Hexachlorobutadiene	<0.300	U	0.300	ug/L						
Indeno(1,2,3-cd) pyrene	<0.400	U	0.400	ug/L						
Naphthalene	<0.300	U	0.300	ug/L						
n-Nitrosodimethylamine	<3.80	U	3.80	ug/L						
n-Nitroso-di-n-butylamine	<5.70	U	5.70	ug/L						
Pentachlorobenzene	<0.200	U	0.200	ug/L						
Pentachlorophenol	<1.40	U	1.40	ug/L						
Phenanthrene	<0.300	U	0.300	ug/L						
Pyrene	<0.300	U	0.300	ug/L						
Pyridine	<13.3	U	13.3	ug/L						
Blank (BHB3403-BLK3)					Prepared: 02/20/2024 Analyzed: 03/10/2024					
1,2,4-Trichlorobenzene	<0.300	U	0.300	ug/L						
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methy	<0.400	U	0.400	ug/L						
2,4-Dichlorophenol	<0.800	U	0.800	ug/L						
2,4-Dimethylphenol	<0.900	U	0.900	ug/L						
2,4-Dinitrophenol	<8.60	U	8.60	ug/L						
2-Chlorophenol	<0.500	U	0.500	ug/L						
3,4-Methylphenol	<1.40	U	1.40	ug/L						
bis(2-Chloroethoxy)methane	<0.400	U	0.400	ug/L						
bis(2-Chloroethyl) ether	<0.600	U	0.600	ug/L						
Hexachlorocyclopentadiene	<0.750	U	0.750	ug/L						
Hexachloroethane	<0.200	U	0.200	ug/L						
Hexachlorophene	<1.10	U	1.10	ug/L						
Isophorone	<0.300	U	0.300	ug/L						
Nitrobenzene	<0.400	U	0.400	ug/L						
n-Nitrosodiethylamine	<0.500	U	0.500	ug/L						
n-Nitrosodi-n-propylamine	<1.40	U	1.40	ug/L						
n-Nitrosodiphenylamine	<0.200	U	0.200	ug/L						
Phenol, Total	<1.50	U	1.50	ug/L						

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Quality Control
(Continued)

Semivolatile Organic Compounds by GCMS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3403 - EPA 625 LLE (Continued)										
BENZ LCS (BHB3403-BS1)					Prepared: 02/20/2024 Analyzed: 03/05/2024					
3,3'-Dichlorobenzidine	33.5		4.00	ug/L	50.0		67.0	0-262		
Benzidine	<16.0	U	16.0	ug/L	50.0			0-131		
Surrogate: 2,4,6-Tribromophenol-surr			*3.44*	*ug/L*	*4.00*		*86.1*	*33.6-139*		
Surrogate: 2-Fluorobiphenyl-surr			*1.45*	*ug/L*	*2.00*		*72.6*	*32.2-138*		
Surrogate: 2-Fluorophenol-surr			*3.33*	*ug/L*	*4.00*		*83.2*	*32.7-137*		
Surrogate: Nitrobenzene-d5-surr			*1.96*	*ug/L*	*2.00*		*98.1*	*31.2-136*		
Surrogate: Phenol-d5-surr			*3.68*	*ug/L*	*4.00*		*92.1*	*28.9-155*		
Surrogate: p-Terphenyl-d14-surr			*1.48*	*ug/L*	*2.00*		*73.8*	*37.6-117*		
LCS (BHB3403-BS2)					Prepared: 02/20/2024 Analyzed: 03/08/2024					
1,2,4,5-Tetrachlorobenzene	1.66		0.300	ug/L	2.00		83.1	60-140		
1,2-Diphenylhydrazine	1.88		0.750	ug/L	2.00		94.2	60-140		
2,4,5-Trichlorophenol	4.71		0.700	ug/L	4.00		118	60-140		
2,4,6-Trichlorophenol	3.62		1.20	ug/L	4.00		90.5	37-144		
2,4-Dinitrotoluene (2,4-DNT)	1.83		0.200	ug/L	2.00		91.4	39-139		
2,6-Dinitrotoluene (2,6-DNT)	2.16		1.80	ug/L	2.00		108	50-158		
2-Chloronaphthalene	1.84		0.400	ug/L	2.00		91.8	60-120		
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylph	4.75		1.60	ug/L	4.00		119	0-181		
2-Nitrophenol	3.76		0.700	ug/L	4.00		94.1	29-182		
4-Bromophenyl phenyl ether (BDE-3)	1.86		0.300	ug/L	2.00		92.8	53-127		
4-Chloro-3-methylphenol	4.47		0.700	ug/L	4.00		112	22-147		
4-Chlorophenyl phenylether	1.77		0.700	ug/L	2.00		88.7	25-158		
4-Nitrophenol	8.99		7.20	ug/L	10.0		89.9	0-132		
Acenaphthene	1.76		0.300	ug/L	2.00		87.9	47-145		
Acenaphthylene	1.70		0.200	ug/L	2.00		85.1	33-145		
Anthracene	1.96		0.200	ug/L	2.00		98.1	27-133		
Benzo(a)anthracene	1.91		0.300	ug/L	2.00		95.3	33-143		
Benzo(a)pyrene	1.95		0.500	ug/L	2.00		97.6	17-163		
benzo(b&k)fluoranthene	3.83		0.400	ug/L	4.00		95.9	60-140		
Benzo(g,h,i)perylene	2.05		0.400	ug/L	2.00		102	0-219		
Bis(2-ethylhexyl)phthalate	2.27		1.50	ug/L	2.00		113	8-158		
Butyl benzyl phthalate	2.12		0.400	ug/L	2.00		106	0-152		
Chrysene	1.56		0.200	ug/L	2.00		77.8	17-168		
Dibenzo(a,h)anthracene	1.76		0.500	ug/L	2.00		87.9	0-227		
Diethyl phthalate	2.30		0.500	ug/L	2.00		115	0-120		
Dimethyl phthalate	2.11		0.300	ug/L	2.00		106	0-120		
Di-n-butyl phthalate	2.08		1.60	ug/L	2.00		104	1-120		
Di-n-octyl phthalate	2.06		0.500	ug/L	2.00		103	4-146		
Fluoranthene	2.24		0.300	ug/L	2.00		112	26-137		
Fluorene	1.86		0.200	ug/L	2.00		92.8	59-121		
Hexachlorobenzene	1.56		0.200	ug/L	2.00		78.0	0-152		
Hexachlorobutadiene	1.11		0.300	ug/L	2.00		55.4	24-120		
Indeno(1,2,3-cd) pyrene	1.98		0.400	ug/L	2.00		98.9	0-171		
Naphthalene	1.69		0.300	ug/L	2.00		84.4	21-133		
n-Nitrosodimethylamine	2.92	U	3.80	ug/L	10.0		29.2	4.18-37.2		

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Quality Control
(Continued)

Semivolatile Organic Compounds by GCMS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3403 - EPA 625 LLE (Continued)										
LCS (BHB3403-BS2)					Prepared: 02/20/2024 Analyzed: 03/08/2024					
n-Nitroso-di-n-butylamine	2.00	U	5.70	ug/L	2.00		100	60-140		
Pentachlorobenzene	1.49		0.200	ug/L	2.00		74.6	60-140		
Pentachlorophenol	4.77		1.40	ug/L	4.00		119	14-176		
Phenanthrene	2.00		0.300	ug/L	2.00		100	54-120		
Pyrene	1.94		0.300	ug/L	2.00		97.2	52-120		
Pyridine	<13.3	U	13.3	ug/L	10.0			0-137		
Surrogate: 2,4,6-Tribromophenol-surr			*3.58*	*ug/L*	*4.00*		*89.6*	*33.6-139*		
Surrogate: 2-Fluorobiphenyl-surr			*1.50*	*ug/L*	*2.00*		*75.0*	*32.2-138*		
Surrogate: 2-Fluorophenol-surr			*4.23*	*ug/L*	*4.00*		*106*	*32.7-137*		
Surrogate: Nitrobenzene-d5-surr			*2.62*	*ug/L*	*2.00*		*131*	*31.2-136*		
Surrogate: Phenol-d5-surr			*5.67*	*ug/L*	*4.00*		*142*	*28.9-155*		
Surrogate: p-Terphenyl-d14-surr			*1.88*	*ug/L*	*2.00*		*93.9*	*37.6-117*		
LCS (BHB3403-BS3)					Prepared: 02/20/2024 Analyzed: 03/10/2024					
1,2,4-Trichlorobenzene	1.31		0.300	ug/L	2.00		65.6	44-142		
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methy	1.92		0.400	ug/L	2.00		95.8	60-140		
2,4-Dichlorophenol	4.42		0.800	ug/L	4.00		111	39-135		
2,4-Dimethylphenol	5.22	J1	0.900	ug/L	4.00		131	32-120		
2,4-Dinitrophenol	13.3		8.60	ug/L	10.0		133	0-191		
2-Chlorophenol	2.97		0.500	ug/L	4.00		74.1	23-134		
3,4-Methylphenol	8.98	L	1.40	ug/L	8.00		112	60-140		
bis(2-Chloroethoxy)methane	2.51		0.400	ug/L	2.00		126	33-184		
bis(2-Chloroethyl) ether	1.65		0.600	ug/L	2.00		82.3	12-158		
Hexachlorocyclopentadiene	1.33		0.750	ug/L	2.00		66.6	60-140		
Hexachloroethane	1.35		0.200	ug/L	2.00		67.5	40-120		
Hexachlorophene	3.33		1.10	ug/L	4.00		83.3	60-140		
Isophorone	2.27		0.300	ug/L	2.00		113	21-196		
Nitrobenzene	2.38		0.400	ug/L	2.00		119	35-180		
n-Nitrosodiethylamine	1.33		0.500	ug/L	2.00		66.6	60-140		
n-Nitrosodi-n-propylamine	2.49		1.40	ug/L	2.00		124	0-230		
n-Nitrosodiphenylamine	0.453	J1	0.200	ug/L	2.00		22.7	60-140		
Phenol, Total	5.86	J1	1.50	ug/L	4.00		147	5-120		
Surrogate: 2,4,6-Tribromophenol-surr			*3.71*	*ug/L*	*4.00*		*92.7*	*33.6-139*		
Surrogate: 2-Fluorobiphenyl-surr			*1.55*	*ug/L*	*2.00*		*77.3*	*32.2-138*		
Surrogate: 2-Fluorophenol-surr			*2.10*	*ug/L*	*4.00*		*52.4*	*32.7-137*		
Surrogate: Nitrobenzene-d5-surr			*2.25*	*ug/L*	*2.00*		*112*	*31.2-136*		
Surrogate: Phenol-d5-surr			*4.60*	*ug/L*	*4.00*		*115*	*28.9-155*		
Surrogate: p-Terphenyl-d14-surr			*2.00*	*ug/L*	*2.00*		*99.9*	*37.6-117*		

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Quality Control
(Continued)

Semivolatile Organic Compounds by GCMS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3403 - EPA 625 LLE (Continued)										
BENZ LCSD (BHB3403-BSD1)					Prepared: 02/20/2024 Analyzed: 03/05/2024					
3,3'-Dichlorobenzidine	36.4		5.00	ug/L	50.0		72.7	0-262	8.22	108
Benzidine	<50.0	U	50.0	ug/L	50.0			0-131	200	40
Surrogate: 2,4,6-Tribromophenol-surr			*3.57*	*ug/L*	*4.00*		*89.2*	*33.6-139*		
Surrogate: 2-Fluorobiphenyl-surr			*1.47*	*ug/L*	*2.00*		*73.7*	*32.2-138*		
Surrogate: 2-Fluorophenol-surr			*3.45*	*ug/L*	*4.00*		*86.3*	*32.7-137*		
Surrogate: Nitrobenzene-d5-surr			*2.03*	*ug/L*	*2.00*		*102*	*31.2-136*		
Surrogate: Phenol-d5-surr			*3.95*	*ug/L*	*4.00*		*98.8*	*28.9-155*		
Surrogate: p-Terphenyl-d14-surr			*1.60*	*ug/L*	*2.00*		*80.0*	*37.6-117*		
LCS Dup (BHB3403-BSD2)					Prepared: 02/20/2024 Analyzed: 03/08/2024					
1,2,4,5-Tetrachlorobenzene	1.34		0.300	ug/L	2.00		67.0	60-140	21.4	40
1,2-Diphenylhydrazine	1.75		0.750	ug/L	2.00		87.7	60-140	7.14	40
2,4,5-Trichlorophenol	4.42		0.700	ug/L	4.00		111	60-140	6.33	40
2,4,6-Trichlorophenol	3.51		1.20	ug/L	4.00		87.8	37-144	3.04	58
2,4-Dinitrotoluene (2,4-DNT)	1.77		0.200	ug/L	2.00		88.7	39-139	2.99	42
2,6-Dinitrotoluene (2,6-DNT)	1.85		1.80	ug/L	2.00		92.6	50-158	15.5	48
2-Chloronaphthalene	1.72		0.400	ug/L	2.00		86.2	60-120	6.32	24
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylph	3.95		1.60	ug/L	4.00		98.8	0-181	18.3	203
2-Nitrophenol	3.29		0.700	ug/L	4.00		82.1	29-182	13.6	55
4-Bromophenyl phenyl ether (BDE-3)	1.68		0.300	ug/L	2.00		83.8	53-127	10.2	43
4-Chloro-3-methylphenol	3.99		0.700	ug/L	4.00		99.8	22-147	11.3	73
4-Chlorophenyl phenylether	1.58		0.700	ug/L	2.00		79.1	25-158	11.5	61
4-Nitrophenol	8.54		7.20	ug/L	10.0		85.4	0-132	5.14	131
Acenaphthene	1.36		0.300	ug/L	2.00		68.0	47-145	25.5	48
Acenaphthylene	0.403	J1	0.200	ug/L	2.00		20.2	33-145	123	74
Anthracene	0.659	J1	0.200	ug/L	2.00		32.9	27-133	99.5	66
Benzo(a)anthracene	0.896	J1	0.300	ug/L	2.00		44.8	33-143	72.1	53
Benzo(a)pyrene	<0.500	J1, U	0.500	ug/L	2.00			17-163	200	72
benzo(b&k)fluoranthene	2.35	J1	0.400	ug/L	4.00		58.9	60-140	47.8	40
Benzo(g,h,i)perylene	0.256	J1, U	0.400	ug/L	2.00		12.8	0-219	156	97
Bis(2-ethylhexyl)phthalate	2.17		1.50	ug/L	2.00		108	8-158	4.42	82
Butyl benzyl phthalate	1.94		0.400	ug/L	2.00		96.8	0-152	9.01	60
Chrysene	1.17		0.200	ug/L	2.00		58.5	17-168	28.4	87
Dibenzo(a,h)anthracene	1.31		0.500	ug/L	2.00		65.6	0-227	29.2	126
Diethyl phthalate	2.19		0.500	ug/L	2.00		109	0-120	5.01	100
Dimethyl phthalate	1.90		0.300	ug/L	2.00		95.2	0-120	10.4	183
Di-n-butyl phthalate	2.08		1.60	ug/L	2.00		104	1-120	0.305	47
Di-n-octyl phthalate	2.04		0.500	ug/L	2.00		102	4-146	1.20	69
Fluoranthene	1.87		0.300	ug/L	2.00		93.5	26-137	17.8	66
Fluorene	1.61		0.200	ug/L	2.00		80.5	59-121	14.2	38
Hexachlorobenzene	1.36		0.200	ug/L	2.00		68.1	0-152	13.6	55
Hexachlorobutadiene	0.943		0.300	ug/L	2.00		47.1	24-120	16.1	62
Indeno(1,2,3-cd) pyrene	1.16		0.400	ug/L	2.00		58.1	0-171	52.0	99
Naphthalene	1.45		0.300	ug/L	2.00		72.7	21-133	14.9	65
n-Nitrosodimethylamine	1.90	J1, U	3.80	ug/L	10.0		19.0	4.18-37.2	42.3	40

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Quality Control
(Continued)

Semivolatile Organic Compounds by GCMS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3403 - EPA 625 LLE (Continued)										
LCS Dup (BHB3403-BSD2)					Prepared: 02/20/2024 Analyzed: 03/08/2024					
n-Nitroso-di-n-butylamine	<5.70	U	5.70	ug/L	2.00			60-140	200	40
Pentachlorobenzene	1.30		0.200	ug/L	2.00		65.1	60-140	13.6	40
Pentachlorophenol	4.06		1.40	ug/L	4.00		101	14-176	16.2	86
Phenanthrene	1.77		0.300	ug/L	2.00		88.6	54-120	12.3	39
Pyrene	0.941	J1	0.300	ug/L	2.00		47.0	52-120	69.6	49
Pyridine	<13.3	J1, U	13.3	ug/L	10.0			0-137	200	40
Surrogate: 2,4,6-Tribromophenol-surr			*3.18*	*ug/L*	*4.00*		*79.4*	*33.6-139*		
Surrogate: 2-Fluorobiphenyl-surr			*1.40*	*ug/L*	*2.00*		*70.1*	*32.2-138*		
Surrogate: 2-Fluorophenol-surr			*3.47*	*ug/L*	*4.00*		*86.7*	*32.7-137*		
Surrogate: Nitrobenzene-d5-surr			*1.93*	*ug/L*	*2.00*		*96.3*	*31.2-136*		
Surrogate: Phenol-d5-surr			*3.45*	*ug/L*	*4.00*		*86.1*	*28.9-155*		
Surrogate: p-Terphenyl-d14-surr			*1.65*	*ug/L*	*2.00*		*82.3*	*37.6-117*		
LCS Dup (BHB3403-BSD3)					Prepared: 02/20/2024 Analyzed: 03/10/2024					
1,2,4-Trichlorobenzene	1.53		0.300	ug/L	2.00		76.3	44-142	15.0	50
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methy	1.70		0.400	ug/L	2.00		85.2	60-140	11.7	40
2,4-Dichlorophenol	4.15		0.800	ug/L	4.00		104	39-135	6.47	50
2,4-Dimethylphenol	2.14	J1	0.900	ug/L	4.00		53.6	32-120	83.6	58
2,4-Dinitrophenol	10.3		8.60	ug/L	10.0		103	0-191	25.1	132
2-Chlorophenol	3.50		0.500	ug/L	4.00		87.5	23-134	16.5	61
3,4-Methylphenol	5.53	J1	1.40	ug/L	8.00		69.1	60-140	47.7	40
bis(2-Chloroethoxy)methane	1.79		0.400	ug/L	2.00		89.6	33-184	33.5	54
bis(2-Chloroethyl) ether	1.92		0.600	ug/L	2.00		95.8	12-158	15.2	108
Hexachlorocyclopentadiene	1.30		0.750	ug/L	2.00		65.2	60-140	2.19	40
Hexachloroethane	1.07		0.200	ug/L	2.00		53.3	40-120	23.5	52
Hexachlorophene	3.55		1.10	ug/L	4.00		88.8	60-140	6.32	40
Isophorone	1.62		0.300	ug/L	2.00		81.2	21-196	33.1	93
Nitrobenzene	1.68		0.400	ug/L	2.00		84.2	35-180	34.2	62
n-Nitrosodiethylamine	1.41		0.500	ug/L	2.00		70.6	60-140	5.89	40
n-Nitrosodi-n-propylamine	1.88		1.40	ug/L	2.00		94.2	0-230	27.5	87
n-Nitrosodiphenylamine	<0.200	J1, U	0.200	ug/L	2.00			60-140	200	40
Phenol, Total	4.87	J1	1.50	ug/L	4.00		122	5-120	18.5	64
Surrogate: 2,4,6-Tribromophenol-surr			*3.22*	*ug/L*	*4.00*		*80.4*	*33.6-139*		
Surrogate: 2-Fluorobiphenyl-surr			*1.40*	*ug/L*	*2.00*		*69.8*	*32.2-138*		
Surrogate: 2-Fluorophenol-surr			*4.01*	*ug/L*	*4.00*		*100*	*32.7-137*		
Surrogate: Nitrobenzene-d5-surr			*1.75*	*ug/L*	*2.00*		*87.3*	*31.2-136*		
Surrogate: Phenol-d5-surr			*4.33*	*ug/L*	*4.00*		*108*	*28.9-155*		
Surrogate: p-Terphenyl-d14-surr			*2.00*	*ug/L*	*2.00*		*100*	*37.6-117*		

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Quality Control
(Continued)

Semivolatile Organic Compounds by GCMS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3403 - EPA 625 LLE (Continued)										
Matrix Spike (BHB3403-MS1)	**Source: 24B3473-02RE1**				Prepared: 02/20/2024 Analyzed: 03/08/2024					
1,2,4,5-Tetrachlorobenzene	1.39		0.300	ug/L	2.00	<0.300	69.6	60-140		
1,2-Diphenylhydrazine	1.81		0.750	ug/L	2.00	<0.750	90.5	60-140		
2,4,5-Trichlorophenol	3.91		0.700	ug/L	4.00	<0.700	97.7	60-140		
2,4,6-Trichlorophenol	3.66		1.20	ug/L	4.00	<1.20	91.6	37-144		
2,4-Dinitrotoluene (2,4-DNT)	1.77		0.200	ug/L	2.00	<0.200	88.3	39-139		
2,6-Dinitrotoluene (2,6-DNT)	2.08		1.80	ug/L	2.00	<1.80	104	50-158		
2-Chloronaphthalene	1.87		0.400	ug/L	2.00	<0.400	93.4	60-120		
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylph	4.91		1.60	ug/L	4.00	<1.60	123	0-181		
2-Nitrophenol	3.83		0.700	ug/L	4.00	<0.700	95.8	29-182		
4-Bromophenyl phenyl ether (BDE-3)	1.65		0.300	ug/L	2.00	<0.300	82.5	53-127		
4-Chloro-3-methylphenol	4.37		0.700	ug/L	4.00	<0.700	109	22-147		
4-Chlorophenyl phenylether	1.57		0.700	ug/L	2.00	<0.700	78.3	25-158		
4-Nitrophenol	8.32		7.20	ug/L	10.0	<7.20	83.2	0-132		
Acenaphthene	1.60		0.300	ug/L	2.00	<0.300	80.1	47-145		
Acenaphthylene	0.878		0.200	ug/L	2.00	<0.200	43.9	33-145		
Anthracene	1.37		0.200	ug/L	2.00	<0.200	68.6	27-133		
Benzo(a)anthracene	1.47		0.300	ug/L	2.00	<0.300	73.7	33-143		
Benzo(a)pyrene	1.41		0.500	ug/L	2.00	<0.500	70.6	17-163		
benzo(b&k)fluoranthene	3.35		0.400	ug/L	4.00	<0.400	83.7	60-140		
Benzo(g,h,i)perylene	1.80		0.400	ug/L	2.00	<0.400	89.9	0-219		
Bis(2-ethylhexyl)phthalate	2.31		1.50	ug/L	2.00	0.867	72.2	8-158		
Butyl benzyl phthalate	1.97		0.400	ug/L	2.00	<0.400	98.4	0-152		
Chrysene	1.20		0.200	ug/L	2.00	<0.200	59.8	17-168		
Dibenzo(a,h)anthracene	1.65		0.500	ug/L	2.00	<0.500	82.7	0-227		
Diethyl phthalate	2.43		0.500	ug/L	2.00	0.766	83.4	0-120		
Dimethyl phthalate	2.04		0.300	ug/L	2.00	0.260	89.0	0-120		
Di-n-butyl phthalate	1.52	U	1.60	ug/L	2.00	<1.60	76.2	1-120		
Di-n-octyl phthalate	2.15		0.500	ug/L	2.00	<0.500	107	4-146		
Fluoranthene	1.83		0.300	ug/L	2.00	<0.300	91.4	26-137		
Fluorene	1.60		0.200	ug/L	2.00	<0.200	80.2	59-121		
Hexachlorobenzene	1.30		0.200	ug/L	2.00	<0.200	65.1	0-152		
Hexachlorobutadiene	1.14		0.300	ug/L	2.00	<0.300	57.1	24-120		
Indeno(1,2,3-cd) pyrene	1.80		0.400	ug/L	2.00	<0.400	89.8	0-171		
Naphthalene	1.52		0.300	ug/L	2.00	<0.300	76.0	21-133		
n-Nitrosodimethylamine	3.00	U	3.80	ug/L	10.0	<3.80	30.0	4.18-91		
n-Nitroso-di-n-butylamine	2.00	U	5.70	ug/L	2.00	<5.70	99.9	60-140		
Pentachlorobenzene	1.34		0.200	ug/L	2.00	<0.200	67.2	60-140		
Pentachlorophenol	4.26		1.40	ug/L	4.00	<1.40	106	14-176		
Phenanthrene	1.91		0.300	ug/L	2.00	<0.300	95.5	54-120		
Pyrene	1.60		0.300	ug/L	2.00	<0.300	80.2	52-120		
Pyridine	<13.3	J1, U	13.3	ug/L	10.0	<13.3		60-140		
Surrogate: 2,4,6-Tribromophenol-surr			*3.56*	*ug/L*	*4.00*		*88.9*	*33.6-139*		
Surrogate: 2-Fluorobiphenyl-surr			*1.52*	*ug/L*	*2.00*		*75.8*	*32.2-138*		
Surrogate: 2-Fluorophenol-surr			*4.15*	*ug/L*	*4.00*		*104*	*32.7-137*		
Surrogate: Nitrobenzene-d5-surr		*S*	*3.86*	*ug/L*	*2.00*		*193*	*31.2-136*		

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Quality Control
(Continued)

Semivolatile Organic Compounds by GCMS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3403 - EPA 625 LLE (Continued)										
Matrix Spike (BHB3403-MS1)		**Source: 24B3473-02RE1**			Prepared: 02/20/2024 Analyzed: 03/08/2024					
Surrogate: Phenol-d5-surr		*S*	*10.4*	*ug/L*	*4.00*		*261*	*28.9-155*		
Surrogate: p-Terphenyl-d14-surr			*1.59*	*ug/L*	*2.00*		*79.4*	*37.6-117*		
Matrix Spike (BHB3403-MS2)		**Source: 24B3473-02RE2**			Prepared: 02/20/2024 Analyzed: 03/10/2024					
1,2,4-Trichlorobenzene	1.55		0.300	ug/L	2.00	<0.300	77.5	44-142		
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methy	4.08	L	0.400	ug/L	2.00	2.38	85.0	60-140		
2,4-Dichlorophenol	5.04		0.800	ug/L	4.00	<0.800	126	39-135		
2,4-Dimethylphenol	4.73		0.900	ug/L	4.00	<0.900	118	32-120		
2,4-Dinitrophenol	13.4		8.60	ug/L	10.0	<8.60	134	0-191		
2-Chlorophenol	3.43		0.500	ug/L	4.00	<0.500	85.7	23-134		
3,4-Methylphenol	7.72		1.40	ug/L	8.00	<1.40	96.5	60-140		
bis(2-Chloroethoxy)methane	1.84		0.400	ug/L	2.00	<0.400	92.2	33-184		
bis(2-Chloroethyl) ether	2.16		0.600	ug/L	2.00	<0.600	108	12-158		
Hexachlorocyclopentadiene	1.56		0.750	ug/L	2.00	<0.750	78.2	60-140		
Hexachloroethane	1.27		0.200	ug/L	2.00	<0.200	63.6	40-120		
Hexachlorophene	3.73		1.10	ug/L	4.00	<1.10	93.2	60-140		
Isophorone	1.87		0.300	ug/L	2.00	<0.300	93.3	21-196		
Nitrobenzene	1.84		0.400	ug/L	2.00	<0.400	91.8	35-180		
n-Nitrosodiethylamine	1.36		0.500	ug/L	2.00	<0.500	67.8	60-140		
n-Nitrosodi-n-propylamine	1.99		1.40	ug/L	2.00	<1.40	99.3	0-230		
n-Nitrosodiphenylamine	<0.200	J1, U	0.200	ug/L	2.00	<0.200		60-140		
Phenol, Total	5.13		1.50	ug/L	4.00	0.652	112	5-120		
Surrogate: 2,4,6-Tribromophenol-surr			*3.78*	*ug/L*	*4.00*		*94.5*	*33.6-139*		
Surrogate: 2-Fluorobiphenyl-surr			*1.53*	*ug/L*	*2.00*		*76.4*	*32.2-138*		
Surrogate: 2-Fluorophenol-surr			*4.16*	*ug/L*	*4.00*		*104*	*32.7-137*		
Surrogate: Nitrobenzene-d5-surr			*1.96*	*ug/L*	*2.00*		*97.9*	*31.2-136*		
Surrogate: Phenol-d5-surr			*5.09*	*ug/L*	*4.00*		*127*	*28.9-155*		
Surrogate: p-Terphenyl-d14-surr			*1.96*	*ug/L*	*2.00*		*98.1*	*37.6-117*		

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Quality Control
(Continued)

Semivolatile Organic Compounds by GCMS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3403 - EPA 625 LLE (Continued)										
Matrix Spike Dup (BHB3403-MSD1)	**Source: 24B3473-02RE1**				Prepared: 02/20/2024 Analyzed: 03/08/2024					
1,2,4,5-Tetrachlorobenzene	1.46		0.300	ug/L	2.00	<0.300	73.2	60-140	5.06	40
1,2-Diphenylhydrazine	1.94		0.750	ug/L	2.00	<0.750	97.1	60-140	7.01	40
2,4,5-Trichlorophenol	4.44		0.700	ug/L	4.00	<0.700	111	60-140	12.8	40
2,4,6-Trichlorophenol	3.79		1.20	ug/L	4.00	<1.20	94.6	37-144	3.25	58
2,4-Dinitrotoluene (2,4-DNT)	2.07		0.200	ug/L	2.00	<0.200	104	39-139	15.9	42
2,6-Dinitrotoluene (2,6-DNT)	2.77		1.80	ug/L	2.00	<1.80	138	50-158	28.2	48
2-Chloronaphthalene	1.74		0.400	ug/L	2.00	<0.400	86.8	60-120	7.31	24
2-Methyl-4,6-dinitrophenol	5.12		1.60	ug/L	4.00	<1.60	128	0-181	4.24	203
(4,6-Dinitro-2-methylph										
2-Nitrophenol	3.92		0.700	ug/L	4.00	<0.700	98.1	29-182	2.35	55
4-Bromophenyl phenyl ether (BDE-3)	1.75		0.300	ug/L	2.00	<0.300	87.5	53-127	5.87	43
4-Chloro-3-methylphenol	4.38		0.700	ug/L	4.00	<0.700	109	22-147	0.159	73
4-Chlorophenyl phenylether	1.68		0.700	ug/L	2.00	<0.700	84.1	25-158	7.13	61
4-Nitrophenol	8.90		7.20	ug/L	10.0	<7.20	89.0	0-132	6.77	131
Acenaphthene	1.58		0.300	ug/L	2.00	<0.300	79.2	47-145	1.05	48
Acenaphthylene	1.35		0.200	ug/L	2.00	<0.200	67.6	33-145	42.4	74
Anthracene	1.48		0.200	ug/L	2.00	<0.200	74.1	27-133	7.75	66
Benzo(a)anthracene	1.46		0.300	ug/L	2.00	<0.300	72.8	33-143	1.22	53
Benzo(a)pyrene	1.70		0.500	ug/L	2.00	<0.500	85.0	17-163	18.5	72
benzo(b&k)fluoranthene	2.91		0.400	ug/L	4.00	<0.400	72.7	60-140	14.0	40
Benzo(g,h,i)perylene	1.81		0.400	ug/L	2.00	<0.400	90.3	0-219	0.409	97
Bis(2-ethylhexyl)phthalate	1.99		1.50	ug/L	2.00	0.867	56.0	8-158	15.1	82
Butyl benzyl phthalate	1.93		0.400	ug/L	2.00	<0.400	96.6	0-152	1.87	60
Chrysene	1.23		0.200	ug/L	2.00	<0.200	61.7	17-168	3.10	87
Dibenzo(a,h)anthracene	1.72		0.500	ug/L	2.00	<0.500	86.0	0-227	3.85	126
Diethyl phthalate	2.55		0.500	ug/L	2.00	0.766	89.2	0-120	4.69	100
Dimethyl phthalate	2.16		0.300	ug/L	2.00	0.260	95.2	0-120	5.90	183
Di-n-butyl phthalate	2.62	J1	1.60	ug/L	2.00	<1.60	131	1-120	53.0	47
Di-n-octyl phthalate	1.98		0.500	ug/L	2.00	<0.500	98.9	4-146	8.18	69
Fluoranthene	1.77		0.300	ug/L	2.00	<0.300	88.6	26-137	3.10	66
Fluorene	1.66		0.200	ug/L	2.00	<0.200	82.9	59-121	3.25	38
Hexachlorobenzene	1.42		0.200	ug/L	2.00	<0.200	71.2	0-152	8.94	55
Hexachlorobutadiene	1.11		0.300	ug/L	2.00	<0.300	55.3	24-120	3.21	62
Indeno(1,2,3-cd) pyrene	1.84		0.400	ug/L	2.00	<0.400	92.0	0-171	2.45	99
Naphthalene	1.52		0.300	ug/L	2.00	<0.300	75.8	21-133	0.350	65
n-Nitrosodimethylamine	2.50	U	3.80	ug/L	10.0	<3.80	25.0	4.18-91	18.3	40
n-Nitroso-di-n-butylamine	1.98	U	5.70	ug/L	2.00	<5.70	99.1	60-140	0.818	40
Pentachlorobenzene	1.37		0.200	ug/L	2.00	<0.200	68.7	60-140	2.16	40
Pentachlorophenol	4.45		1.40	ug/L	4.00	<1.40	111	14-176	4.41	86
Phenanthrene	1.83		0.300	ug/L	2.00	<0.300	91.7	54-120	4.04	39
Pyrene	1.54		0.300	ug/L	2.00	<0.300	77.1	52-120	3.92	49
Pyridine	<13.3	J1, U	13.3	ug/L	10.0	<13.3		60-140		40
Surrogate: 2,4,6-Tribromophenol-surr			*3.57*	*ug/L*	*4.00*		*89.3*	*33.6-139*		
Surrogate: 2-Fluorobiphenyl-surr			*1.48*	*ug/L*	*2.00*		*74.1*	*32.2-138*		
Surrogate: 2-Fluorophenol-surr			*4.03*	*ug/L*	*4.00*		*101*	*32.7-137*		
Surrogate: Nitrobenzene-d5-surr	*S*		*2.96*	*ug/L*	*2.00*		*148*	*31.2-136*		

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Quality Control
(Continued)

Semivolatile Organic Compounds by GCMS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3403 - EPA 625 LLE (Continued)										
Matrix Spike Dup (BHB3403-MSD1)		**Source: 24B3473-02RE1**			Prepared: 02/20/2024 Analyzed: 03/08/2024					
Surrogate: Phenol-d5-surr		*S*	*6.96*	*ug/L*	*4.00*		*174*	*28.9-155*		
Surrogate: p-Terphenyl-d14-surr			*1.61*	*ug/L*	*2.00*		*80.4*	*37.6-117*		
Matrix Spike Dup (BHB3403-MSD2)		**Source: 24B3473-02RE2**			Prepared: 02/20/2024 Analyzed: 03/10/2024					
1,2,4-Trichlorobenzene	1.19		0.300	ug/L	2.00	<0.300	59.4	44-142	26.5	50
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methy	4.88	L	0.400	ug/L	2.00	2.38	125	60-140	17.9	40
2,4-Dichlorophenol	4.98		0.800	ug/L	4.00	<0.800	124	39-135	1.16	50
2,4-Dimethylphenol	5.03	J1	0.900	ug/L	4.00	<0.900	126	32-120	6.12	58
2,4-Dinitrophenol	14.3		8.60	ug/L	10.0	<8.60	143	0-191	6.19	132
2-Chlorophenol	3.17		0.500	ug/L	4.00	<0.500	79.2	23-134	7.96	61
3,4-Methylphenol	9.33	L	1.40	ug/L	8.00	<1.40	117	60-140	18.9	40
bis(2-Chloroethoxy)methane	2.11		0.400	ug/L	2.00	<0.400	105	33-184	13.4	54
bis(2-Chloroethyl) ether	1.88		0.600	ug/L	2.00	<0.600	94.1	12-158	13.8	108
Hexachlorocyclopentadiene	1.34		0.750	ug/L	2.00	<0.750	66.8	60-140	15.8	40
Hexachloroethane	1.04		0.200	ug/L	2.00	<0.200	51.8	40-120	20.5	52
Hexachlorophene	3.48		1.10	ug/L	4.00	<1.10	86.9	60-140	7.02	40
Isophorone	1.93		0.300	ug/L	2.00	<0.300	96.7	21-196	3.64	93
Nitrobenzene	1.95		0.400	ug/L	2.00	<0.400	97.7	35-180	6.22	62
n-Nitrosodiethylamine	1.42		0.500	ug/L	2.00	<0.500	71.2	60-140	4.84	40
n-Nitrosodi-n-propylamine	2.27		1.40	ug/L	2.00	<1.40	113	0-230	13.3	87
n-Nitrosodiphenylamine	0.302	J1	0.200	ug/L	2.00	<0.200	15.1	60-140	200	40
Phenol, Total	6.09	J1	1.50	ug/L	4.00	0.652	136	5-120	17.2	64
Surrogate: 2,4,6-Tribromophenol-surr			*3.62*	*ug/L*	*4.00*		*90.5*	*33.6-139*		
Surrogate: 2-Fluorobiphenyl-surr			*1.46*	*ug/L*	*2.00*		*73.2*	*32.2-138*		
Surrogate: 2-Fluorophenol-surr			*3.95*	*ug/L*	*4.00*		*98.7*	*32.7-137*		
Surrogate: Nitrobenzene-d5-surr			*2.07*	*ug/L*	*2.00*		*104*	*31.2-136*		
Surrogate: Phenol-d5-surr			*4.42*	*ug/L*	*4.00*		*111*	*28.9-155*		
Surrogate: p-Terphenyl-d14-surr			*1.99*	*ug/L*	*2.00*		*99.3*	*37.6-117*		

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Quality Control
(Continued)

Organics by GC

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3236 - EPA 1657 SPE										
Blank (BHB3236-BLK1)					Prepared: 02/19/2024 Analyzed: 02/22/2024					
Azinphos-methyl (Guthion)	<0.100	U	0.100	ug/L						
Chlorpyrifos	<0.0500	U	0.0500	ug/L						
Demeton	<0.200	U	0.200	ug/L						
Diazinon	<0.500	U	0.500	ug/L						
Malathion	<0.100	U	0.100	ug/L						
Parathion, ethyl	<0.100	U	0.100	ug/L						
LCS (BHB3236-BS1)					Prepared: 02/19/2024 Analyzed: 02/22/2024					
Azinphos-methyl (Guthion)	0.0481	J1, U	0.100	ug/L	0.251		19.2	37-150		
Chlorpyrifos	0.223		0.0502	ug/L	0.251		89.0	48-150		
Demeton	0.159	U	0.201	ug/L	0.251		63.2	16-150		
Diazinon	0.291	U	0.502	ug/L	0.251		116	50-150		
Malathion	0.222		0.100	ug/L	0.251		88.6	50-150		
Parathion, ethyl	0.223		0.100	ug/L	0.251		88.9	50-150		
Surrogate: Tributyl Phosphate-surr	*S*		*0.243*	*ug/L*	*0.201*		*121*	*40-120*		
Surrogate: Triphenyl Phosphate-surr			*0.124*	*ug/L*	*0.201*		*61.8*	*40-120*		
LCS Dup (BHB3236-BSD1)					Prepared: 02/19/2024 Analyzed: 02/22/2024					
Azinphos-methyl (Guthion)	0.0709	J1, U	0.100	ug/L	0.250		28.4	37-150	38.3	40
Chlorpyrifos	0.230		0.0500	ug/L	0.250		92.0	48-150	2.97	40
Demeton	0.215		0.200	ug/L	0.250		86.0	16-150	30.2	40
Diazinon	0.285	U	0.500	ug/L	0.250		114	50-150	2.24	40
Malathion	0.231		0.100	ug/L	0.250		92.4	50-150	3.82	40
Parathion, ethyl	0.230		0.100	ug/L	0.250		92.2	50-150	3.25	40
Surrogate: Tributyl Phosphate-surr	*S*		*0.272*	*ug/L*	*0.200*		*136*	*40-120*		
Surrogate: Triphenyl Phosphate-surr			*0.151*	*ug/L*	*0.200*		*75.6*	*40-120*		
Matrix Spike (BHB3236-MS1)	**Source: 24B3541-02**				Prepared: 02/19/2024 Analyzed: 02/22/2024					
Azinphos-methyl (Guthion)	<0.102	J1, U	0.102	ug/L	0.256	<0.102		25-150		
Chlorpyrifos	0.249		0.0511	ug/L	0.256	<0.0511	97.2	25-150		
Demeton	<0.204	J1, U	0.204	ug/L	0.256	<0.204		25-150		
Diazinon	0.351	U	0.511	ug/L	0.256	<0.511	137	25-150		
Malathion	0.237		0.102	ug/L	0.256	<0.102	92.5	25-150		
Parathion, ethyl	0.242		0.102	ug/L	0.256	<0.102	94.8	25-150		
Surrogate: Tributyl Phosphate-surr	*S*		*0.297*	*ug/L*	*0.204*		*145*	*40-120*		
Surrogate: Triphenyl Phosphate-surr			*0.147*	*ug/L*	*0.204*		*71.7*	*40-120*		

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Quality Control
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Organics by GC (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3236 - EPA 1657 SPE (Continued)										
Matrix Spike Dup (BHB3236-MSD1)	**Source: 24B3541-02**				Prepared: 02/19/2024 Analyzed: 02/23/2024					
Azinphos-methyl (Guthion)	<0.102	J1, U	0.102	ug/L	0.255	<0.102		25-150		40
Chlorpyrifos	0.174		0.0511	ug/L	0.255	<0.0511	68.0	25-150	35.4	40
Demeton	<0.204	J1, U	0.204	ug/L	0.255	<0.204		25-150		40
Diazinon	0.177	J1, U	0.511	ug/L	0.255	<0.511	69.2	25-150	66.1	40
Malathion	0.0957	J1, U	0.102	ug/L	0.255	<0.102	37.5	25-150	84.8	40
Parathion, ethyl	0.121	J1	0.102	ug/L	0.255	<0.102	47.4	25-150	66.7	40
Surrogate: Tributyl Phosphate-surr		*S*	*0.296*	*ug/L*	*0.204*		*145*	*40-120*		
Surrogate: Triphenyl Phosphate-surr		*S*	*0.0578*	*ug/L*	*0.204*		*28.3*	*40-120*		
Batch: BHB3281 - SW-3511										
MB HERB (BHB3281-BLK1)					Prepared: 02/19/2024 Analyzed: 03/02/2024					
2,4-D	<0.234	U	0.234	ug/L						
Silvex (2,4,5-TP)	<0.236	U	0.236	ug/L						
BS HERB (BHB3281-BS1)					Prepared: 02/19/2024 Analyzed: 03/02/2024					
2,4-D	6.66		0.235	ug/L	5.13		130	70-130		
Silvex (2,4,5-TP)	5.87		0.237	ug/L	4.98		118	70-130		
Surrogate: DCAA-surr		*S*	*36.2*	*ug/L*	*24.9*		*145*	*70-130*		
BSD HERB (BHB3281-BSD1)					Prepared: 02/19/2024 Analyzed: 03/02/2024					
2,4-D	6.70	J1	0.234	ug/L	5.11		131	70-130	0.572	30
Silvex (2,4,5-TP)	6.02		0.236	ug/L	4.96		122	70-130	2.56	30
Surrogate: DCAA-surr		*S*	*39.0*	*ug/L*	*24.8*		*157*	*70-130*		
24B3473-02 MS (BHB3281-MS1)	**Source: 24B3473-02**				Prepared: 02/19/2024 Analyzed: 03/02/2024					
2,4-D	6.31		0.233	ug/L	5.08	<0.233	124	70-130		
Silvex (2,4,5-TP)	5.66		0.235	ug/L	4.93	<0.235	115	70-130		
Surrogate: DCAA-surr		*S*	*32.6*	*ug/L*	*24.7*		*132*	*70-130*		

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Quality Control
(Continued)

Organics by GC (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3281 - SW-3511 (Continued)										
24B3473-02 MSD (BHB3281-MSD1)	**Source: 24B3473-02**				Prepared: 02/19/2024 Analyzed: 03/02/2024					
2,4-D	6.56		0.234	ug/L	5.11	<0.234	128	70-130	3.79	30
Silvex (2,4,5-TP)	5.78		0.236	ug/L	4.96	<0.236	117	70-130	2.15	30
Surrogate: DCAA-surr	*S*		*39.8*	*ug/L*	*24.8*		*160*	*70-130*		
Batch: BHB3651 - EPA 608 SPE										
Blank (BHB3651-BLK1)					Prepared: 02/21/2024 Analyzed: 03/05/2024					
4,4'-DDD	<0.00600	U	0.00600	ug/L						
4,4'-DDE	<0.00300	U	0.00300	ug/L						
4,4'-DDT	<0.0200	U	0.0200	ug/L						
Aldrin	<0.00400	U	0.00400	ug/L						
alpha-BHC (alpha-Hexachlorocyclohexane)	<0.00900	U	0.00900	ug/L						
beta-BHC (beta-Hexachlorocyclohexane)	<0.0200	U	0.0200	ug/L						
Chlordane (Total)	<0.0200	U	0.0200	ug/L						
cis-Chlordane (alpha-Chlordane)	<0.0200	U	0.0200	ug/L						
delta-BHC	<0.00900	U	0.00900	ug/L						
Dieldrin	<0.00300	U	0.00300	ug/L						
Endosulfan I	<0.0100	U	0.0100	ug/L						
Endosulfan II	<0.00300	U	0.00300	ug/L						
Endosulfan sulfate	<0.0400	U	0.0400	ug/L						
Endrin	<0.00600	U	0.00600	ug/L						
Endrin aldehyde	<0.0200	U	0.0200	ug/L						
gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)	<0.00300	U	0.00300	ug/L						
gamma-Chlordane	<0.0200	U	0.0200	ug/L						
Heptachlor	<0.00600	U	0.00600	ug/L						
Heptachlor epoxide	<0.0100	U	0.0100	ug/L						
Methoxychlor	<0.0400	U	0.0400	ug/L						

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SI Environmental - Cypress
9826 Whithorn Drive
Houston, TX 77095

Reported:
04/10/2024 15:13

Quality Control
(Continued)

Organics by GC (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3651 - EPA 608 SPE (Continued)										
Blank (BHB3651-BLK2)					Prepared: 02/21/2024 Analyzed: 03/14/2024					
Dicofol	<0.120	U	0.120	ug/L						
Mirex	<0.0100	U	0.0100	ug/L						
Toxaphene (Chlorinated Camphene)	<0.300	U	0.300	ug/L						
Dicofol only (BHB3651-BLK3)					Prepared: 02/21/2024 Analyzed: 04/02/2024					
Dicofol	<0.120	U	0.120	ug/L						
TOX LCS (BHB3651-BS1)					Prepared: 02/21/2024 Analyzed: 03/14/2024					
Toxaphene (Chlorinated Camphene)	1.44		0.300	ug/L	1.20		120	41-140		
Surrogate: 2,4,5,6 Tetrachloro-m-xylene-surr			*0.130*	*ug/L*	*0.120*		*109*	*25.2-154*		
Surrogate: Decachlorobiphenyl-surr			*0.0793*	*ug/L*	*0.120*		*66.1*	*41.2-118*		
M/D LCS (BHB3651-BS2)					Prepared: 02/21/2024 Analyzed: 03/14/2024					
Dicofol	0.380		0.120	ug/L	0.480		79.1	21.1-147		
Mirex	0.0248		0.0100	ug/L	0.0480		51.7	14-163		
Surrogate: 2,4,5,6 Tetrachloro-m-xylene-surr			*0.102*	*ug/L*	*0.120*		*84.6*	*25.2-154*		
Surrogate: Decachlorobiphenyl-surr			*0.0780*	*ug/L*	*0.120*		*65.0*	*41.2-118*		
LCS (BHB3651-BS3)					Prepared: 02/21/2024 Analyzed: 03/05/2024					
4,4'-DDD	0.102		0.00600	ug/L	0.120		84.7	31-141		
4,4'-DDE	0.0950		0.00300	ug/L	0.120		79.2	30-145		
4,4'-DDT	0.109		0.0200	ug/L	0.120		90.5	25-160		
Aldrin	0.0869		0.00400	ug/L	0.120		72.4	42-140		
alpha-BHC (alpha-Hexachlorocyclohexane)	0.0939		0.00900	ug/L	0.120		78.2	37-140		
beta-BHC (beta-Hexachlorocyclohexane)	0.119		0.0200	ug/L	0.120		98.8	17-147		
Chlordane (Total)	0.392		0.0200	ug/L	0.480		81.8	60-140		
cis-Chlordane (alpha-Chlordane)	0.0961		0.0200	ug/L	0.120		80.0	45-140		
delta-BHC	0.116		0.00900	ug/L	0.120		97.0	19-140		
Dieldrin	0.113		0.00300	ug/L	0.120		94.0	36-146		
Endosulfan I	0.0969		0.0100	ug/L	0.120		80.8	45-153		
Endosulfan II	0.0980		0.00300	ug/L	0.120		81.6	1-202		
Endosulfan sulfate	0.111		0.0400	ug/L	0.120		92.7	26-144		
Endrin	0.110		0.00600	ug/L	0.120		91.9	30-147		
Endrin aldehyde	0.0930		0.0200	ug/L	0.120		77.5	15.1-142		
gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)	0.100		0.00300	ug/L	0.120		83.4	32-140		
gamma-Chlordane	0.0935		0.0200	ug/L	0.120		77.9	45-140		
Heptachlor	0.101		0.00600	ug/L	0.120		84.0	34-140		
Heptachlor epoxide	0.102		0.0100	ug/L	0.120		85.1	37-142		
Methoxychlor	0.107		0.0400	ug/L	0.120		88.9	23.2-144		
Surrogate: 2,4,5,6 Tetrachloro-m-xylene-surr			*0.142*	*ug/L*	*0.120*		*118*	*25.2-154*		

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Quality Control
(Continued)

Organics by GC (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3651 - EPA 608 SPE (Continued)										
LCS (BHB3651-BS3)					Prepared: 02/21/2024 Analyzed: 03/05/2024					
Surrogate: Decachlorobiphenyl-surr			*0.0707*	*ug/L*	*0.120*		*58.9*	*41.2-118*		
Dicofol LCS (BHB3651-BS4)					Prepared: 02/21/2024 Analyzed: 04/02/2024					
Dicofol	0.429		0.120	ug/L	0.480		89.4	21.1-147		
Surrogate: 2,4,5,6 Tetrachloro-m-xylene-surr			*0.0777*	*ug/L*	*0.120*		*64.7*	*25.2-154*		
Surrogate: Decachlorobiphenyl-surr			*0.0748*	*ug/L*	*0.120*		*62.3*	*41.2-118*		
TOX LCSD (BHB3651-BSD1)					Prepared: 02/21/2024 Analyzed: 03/14/2024					
Toxaphene (Chlorinated Camphene)	1.33		0.300	ug/L	1.20		110	41-140	8.44	41
Surrogate: 2,4,5,6 Tetrachloro-m-xylene-surr			*0.0986*	*ug/L*	*0.120*		*82.2*	*25.2-154*		
Surrogate: Decachlorobiphenyl-surr			*0.0699*	*ug/L*	*0.120*		*58.3*	*41.2-118*		
M/D LCSD (BHB3651-BSD2)					Prepared: 02/21/2024 Analyzed: 03/14/2024					
Dicofol	0.505		0.120	ug/L	0.480		105	21.1-147	28.3	40
Mirex	0.0238		0.0100	ug/L	0.0480		49.6	14-163	4.14	40
Surrogate: 2,4,5,6 Tetrachloro-m-xylene-surr			*0.119*	*ug/L*	*0.120*		*99.2*	*25.2-154*		
Surrogate: Decachlorobiphenyl-surr			*0.0803*	*ug/L*	*0.120*		*66.9*	*41.2-118*		
LCS Dup (BHB3651-BSD3)					Prepared: 02/21/2024 Analyzed: 03/05/2024					
4,4'-DDD	0.100		0.00600	ug/L	0.120		83.6	31-141	1.31	39
4,4'-DDE	0.0950		0.00300	ug/L	0.120		79.2	30-145	0.0126	35
4,4'-DDT	0.107		0.0200	ug/L	0.120		89.4	25-160	1.21	42
Aldrin	0.0872		0.00400	ug/L	0.120		72.6	42-140	0.338	35
alpha-BHC (alpha-Hexachlorocyclohexane)	0.0917		0.00900	ug/L	0.120		76.4	37-140	2.35	36
beta-BHC (beta-Hexachlorocyclohexane)	0.118		0.0200	ug/L	0.120		98.3	17-147	0.507	44
Chlordane (Total)	0.391		0.0200	ug/L	0.480		81.4	60-140	0.484	40
cis-Chlordane (alpha-Chlordane)	0.0956		0.0200	ug/L	0.120		79.6	45-140	0.526	35
delta-BHC	0.114		0.00900	ug/L	0.120		95.3	19-140	1.73	52
Dieldrin	0.129		0.00300	ug/L	0.120		108	36-146	13.5	49
Endosulfan I	0.0971		0.0100	ug/L	0.120		80.9	45-153	0.130	28
Endosulfan II	0.0982		0.00300	ug/L	0.120		81.8	1-202	0.196	53
Endosulfan sulfate	0.109		0.0400	ug/L	0.120		91.1	26-144	1.76	38
Endrin	0.110		0.00600	ug/L	0.120		91.3	30-147	0.661	48
Endrin aldehyde	0.0960		0.0200	ug/L	0.120		80.0	15.1-142	3.22	50.1
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	0.0986		0.00300	ug/L	0.120		82.2	32-140	1.44	39
gamma-Chlordane	0.0996		0.0200	ug/L	0.120		83.0	45-140	6.32	35
Heptachlor	0.0942		0.00600	ug/L	0.120		78.5	34-140	6.79	43
Heptachlor epoxide	0.101		0.0100	ug/L	0.120		84.4	37-142	0.850	26
Methoxychlor	0.104		0.0400	ug/L	0.120		86.8	23.2-144	2.42	40

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Quality Control
(Continued)

Organics by GC (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3651 - EPA 608 SPE (Continued)										
LCS Dup (BHB3651-BSD3)					Prepared: 02/21/2024 Analyzed: 03/05/2024					
Surrogate: 2,4,5,6 Tetrachloro-m-xylene-surr			*0.136*	*ug/L*	*0.120*		*113*	*25.2-154*		
Surrogate: Decachlorobiphenyl-surr			*0.0787*	*ug/L*	*0.120*		*65.5*	*41.2-118*		
Dicofol LCS (BHB3651-BSD4)					Prepared: 02/21/2024 Analyzed: 04/03/2024					
Dicofol	0.484		0.120	ug/L	0.480		101	21.1-147	11.9	40
Surrogate: 2,4,5,6 Tetrachloro-m-xylene-surr			*0.108*	*ug/L*	*0.120*		*90.0*	*25.2-154*		
Surrogate: Decachlorobiphenyl-surr			*0.0682*	*ug/L*	*0.120*		*56.9*	*41.2-118*		
Matrix Spike (BHB3651-MS1)		**Source: 24B3473-02**			Prepared: 02/21/2024 Analyzed: 03/05/2024					
4,4'-DDD	0.0928		0.00600	ug/L	0.120	<0.00600	77.3	31-141		
4,4'-DDE	0.0915		0.00300	ug/L	0.120	<0.00300	76.3	30-145		
4,4'-DDT	0.0918		0.0200	ug/L	0.120	<0.0200	76.5	25-160		
Aldrin	0.0810		0.00400	ug/L	0.120	<0.00400	67.5	42-140		
alpha-BHC (alpha-Hexachlorocyclohexane)	0.103		0.00900	ug/L	0.120	0.00590	81.2	37-140		
beta-BHC (beta-Hexachlorocyclohexane)	0.128		0.0200	ug/L	0.120	0.0165	93.1	17-147		
Chlordane (Total)	0.400		0.0200	ug/L	0.480	<0.0200	83.3	60-140		
cis-Chlordane (alpha-Chlordane)	0.0905		0.0200	ug/L	0.120	<0.0200	75.4	45-140		
delta-BHC	0.125		0.00900	ug/L	0.120	<0.00900	104	19-140		
Dieldrin	0.102		0.00300	ug/L	0.120	0.00183	83.8	36-146		
Endosulfan I	0.101		0.0100	ug/L	0.120	<0.0100	84.3	45-153		
Endosulfan II	0.0966		0.00300	ug/L	0.120	<0.00300	80.5	1-202		
Endosulfan sulfate	0.121		0.0400	ug/L	0.120	<0.0400	100	26-144		
Endrin	0.107		0.00600	ug/L	0.120	<0.00600	88.8	30-147		
Endrin aldehyde	0.0868		0.0200	ug/L	0.120	<0.0200	72.3	60-140		
gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)	0.104		0.00300	ug/L	0.120	<0.00300	86.3	32-140		
gamma-Chlordane	0.0945		0.0200	ug/L	0.120	<0.0200	78.7	45-140		
Heptachlor	0.124		0.00600	ug/L	0.120	<0.00600	103	34-140		
Heptachlor epoxide	0.0910		0.0100	ug/L	0.120	<0.0100	75.8	37-142		
Methoxychlor	0.105		0.0400	ug/L	0.120	0.0104	78.5	60-140		
Surrogate: 2,4,5,6 Tetrachloro-m-xylene-surr			*0.151*	*ug/L*	*0.120*		*126*	*25.2-154*		
Surrogate: Decachlorobiphenyl-surr			*0.0693*	*ug/L*	*0.120*		*57.8*	*41.2-118*		

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Quality Control
(Continued)

Organics by GC (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB4001 - EPA 608 SPE										
Blank (BHB4001-BLK1)					Prepared: 02/22/2024 Analyzed: 03/13/2024					
Aroclor-1016 (PCB-1016)	<0.200	U	0.200	ug/L						
Aroclor-1221 (PCB-1221)	<0.200	U	0.200	ug/L						
Aroclor-1232 (PCB-1232)	<0.200	U	0.200	ug/L						
Aroclor-1242 (PCB-1242)	<0.200	U	0.200	ug/L						
Aroclor-1248 (PCB-1248)	<0.200	U	0.200	ug/L						
Aroclor-1254 (PCB-1254)	<0.200	U	0.200	ug/L						
Aroclor-1260 (PCB-1260)	<0.200	U	0.200	ug/L						
PCBs, Total	<0.200	U	0.200	ug/L						
LCS (BHB4001-BS1)					Prepared: 02/22/2024 Analyzed: 03/13/2024					
Aroclor-1016 (PCB-1016)	0.825		0.200	ug/L	0.800		103	50-140		
Aroclor-1260 (PCB-1260)	0.675		0.200	ug/L	0.800		84.4	8-140		
PCBs, Total	0.702		0.200	ug/L	0.800		87.7	24.9-152		
Surrogate: 2,4,5,6 Tetrachloro-m-xylene-surr			*0.0752*	*ug/L*	*0.0800*		*93.9*	*34.8-160*		
Surrogate: Decachlorobiphenyl-surr			*0.0453*	*ug/L*	*0.0800*		*56.6*	*36.2-129*		
LCS Dup (BHB4001-BSD1)					Prepared: 02/22/2024 Analyzed: 03/13/2024					
Aroclor-1016 (PCB-1016)	1.36	J1	0.200	ug/L	0.800		170	50-140	48.9	36
Aroclor-1260 (PCB-1260)	0.787		0.200	ug/L	0.800		98.3	8-140	15.2	38
PCBs, Total	0.893		0.200	ug/L	0.800		112	24.9-152	23.9	40
Surrogate: 2,4,5,6 Tetrachloro-m-xylene-surr			*0.0894*	*ug/L*	*0.0800*		*112*	*34.8-160*		
Surrogate: Decachlorobiphenyl-surr			*0.0613*	*ug/L*	*0.0800*		*76.6*	*36.2-129*		
Matrix Spike (BHB4001-MS1)	**Source: 24A2000-01**				Prepared: 02/22/2024 Analyzed: 03/13/2024					
Aroclor-1016 (PCB-1016)	1.07		0.200	ug/L	0.800	<0.200	133	50-140		
Aroclor-1260 (PCB-1260)	0.725		0.200	ug/L	0.800	<0.200	90.7	8-140		
PCBs, Total	0.787		0.200	ug/L	0.800	<0.200	98.4	25.5-136		
Surrogate: 2,4,5,6 Tetrachloro-m-xylene-surr			*0.0891*	*ug/L*	*0.0800*		*111*	*34.8-160*		
Surrogate: Decachlorobiphenyl-surr			*0.0576*	*ug/L*	*0.0800*		*72.0*	*36.2-129*		

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Quality Control
(Continued)

Organics by GC (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB4001 - EPA 608 SPE (Continued)										
Matrix Spike Dup (BHB4001-MSD1)		**Source: 24A2000-01**			Prepared: 02/22/2024 Analyzed: 03/13/2024					
Aroclor-1016 (PCB-1016)	0.959		0.200	ug/L	0.800	<0.200	120	50-140	10.6	36
Aroclor-1260 (PCB-1260)	0.601		0.200	ug/L	0.800	<0.200	75.1	8-140	18.8	38
PCBs, Total	0.664		0.200	ug/L	0.800	<0.200	83.0	25.5-136	17.0	40
Surrogate: 2,4,5,6 Tetrachloro-m-xylene-surr			*0.0904*	*ug/L*	*0.0800*		*113*	*34.8-160*		
Surrogate: Decachlorobiphenyl-surr			*0.0500*	*ug/L*	*0.0800*		*62.5*	*36.2-129*		

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Quality Control
(Continued)

Metals, Total

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB2557 - EPA 200.8										
Blank (BHB2557-BLK1)					Prepared: 02/15/2024 Analyzed: 02/16/2024					
Arsenic	<0.500	U	0.500	ug/L						
Blank (BHB2557-BLK2)					Prepared: 02/15/2024 Analyzed: 02/16/2024					
Antimony	<5.00	U	5.00	ug/L						
Barium	<3.00	U	3.00	ug/L						
Beryllium	<0.500	U	0.500	ug/L						
Cadmium	<1.00	U	1.00	ug/L						
Chromium	<3.00	U	3.00	ug/L						
Lead	<0.500	U	0.500	ug/L						
Silver	<0.500	U	0.500	ug/L						
Thallium	<0.500	U	0.500	ug/L						
Zinc	<5.00	U	5.00	ug/L						
Blank (BHB2557-BLK3)					Prepared: 02/15/2024 Analyzed: 02/20/2024					
Aluminum	<5.00	U	5.00	ug/L						
Copper	<0.00200	U	0.00200	mg/L						
Nickel	<2.00	U	2.00	ug/L						
Blank (BHB2557-BLK4)					Prepared: 02/15/2024 Analyzed: 02/27/2024					
Selenium	<5.00	U	5.00	ug/L						
LCS (BHB2557-BS1)					Prepared: 02/15/2024 Analyzed: 02/16/2024					
Arsenic	49.0		0.500	ug/L	50.0		98.0	85-115		
LCS (BHB2557-BS2)					Prepared: 02/15/2024 Analyzed: 02/16/2024					
Antimony	109		1.00	ug/L	100		109	85-115		
Barium	298		3.00	ug/L	300		99.2	85-115		
Beryllium	18.3		0.200	ug/L	20.0		91.3	85-115		
Cadmium	102		1.00	ug/L	100		102	85-115		
Chromium	304		3.00	ug/L	300		101	85-115		
Lead	46.8		0.500	ug/L	50.0		93.6	85-115		
Silver	49.7		0.500	ug/L	50.0		99.4	85-115		
Thallium	49.4		0.500	ug/L	50.0		98.8	85-115		
Zinc	199		2.00	ug/L	200		99.6	85-115		

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Quality Control
(Continued)

Metals, Total (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB2557 - EPA 200.8 (Continued)										
LCS (BHB2557-BS3)					Prepared: 02/15/2024 Analyzed: 02/20/2024					
Aluminum	275		5.00	ug/L	250		110	85-115		
Copper	0.111		0.00200	mg/L	0.100		111	85-115		
Nickel	111		2.00	ug/L	100		111	85-115		
LCS (BHB2557-BS4)					Prepared: 02/15/2024 Analyzed: 02/27/2024					
Selenium	226		5.00	ug/L	200		113	85-115		
Duplicate (BHB2557-DUP1)		**Source: 24B3078-02**			Prepared: 02/15/2024 Analyzed: 02/16/2024					
Arsenic	0.580		0.500	ug/L		0.600			3.39	20
Duplicate (BHB2557-DUP2)		**Source: 24B3078-02**			Prepared: 02/15/2024 Analyzed: 02/16/2024					
Antimony	0.533	U	1.00	ug/L		0.579			8.27	20
Barium	128		3.00	ug/L		129			0.426	20
Beryllium	0.0200	U	0.200	ug/L		<0.200			200	20
Cadmium	<1.00	U	1.00	ug/L		0.00900			200	20
Chromium	0.352	U	3.00	ug/L		0.406			14.2	20
Lead	0.0560	U	0.500	ug/L		0.0570			1.77	20
Silver	<0.500	U	0.500	ug/L		0.00600			200	20
Thallium	<0.500	U	0.500	ug/L		<0.500				20
Zinc	21.7		2.00	ug/L		22.5			3.63	20
Duplicate (BHB2557-DUP3)		**Source: 24B3078-02**			Prepared: 02/15/2024 Analyzed: 02/20/2024					
Aluminum	11.3		5.00	ug/L		11.1			1.68	20
Copper	0.00700		0.00200	mg/L		0.00676			3.50	20
Nickel	1.71	U	2.00	ug/L		1.76			3.06	20
Duplicate (BHB2557-DUP4)		**Source: 24B3078-02**			Prepared: 02/15/2024 Analyzed: 02/27/2024					
Selenium	0.773	U	5.00	ug/L		0.458			51.2	20

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Quality Control
(Continued)

Metals, Total (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB2557 - EPA 200.8 (Continued)										
Matrix Spike (BHB2557-MS1)		**Source: 24B3078-02**			Prepared: 02/15/2024 Analyzed: 02/16/2024					
Arsenic	50.1		0.500	ug/L	50.0	0.600	99.1	75-125		
Matrix Spike (BHB2557-MS2)		**Source: 24B3078-02**			Prepared: 02/15/2024 Analyzed: 02/16/2024					
Antimony	111		1.00	ug/L	100	0.579	110	75-125		
Barium	440		3.00	ug/L	300	129	104	75-125		
Beryllium	19.0		0.200	ug/L	20.0	<0.200	95.2	75-125		
Cadmium	97.1		1.00	ug/L	100	0.00900	97.1	75-125		
Chromium	306		3.00	ug/L	300	0.406	102	75-125		
Lead	48.0		0.500	ug/L	50.0	0.0570	95.9	75-125		
Silver	49.3		0.500	ug/L	50.0	0.00600	98.5	75-125		
Thallium	48.6		0.500	ug/L	50.0	<0.500	97.1	75-125		
Zinc	218		2.00	ug/L	200	22.5	97.8	75-125		
Matrix Spike (BHB2557-MS3)		**Source: 24B3078-02**			Prepared: 02/15/2024 Analyzed: 02/20/2024					
Aluminum	289		5.00	ug/L	250	11.1	111	75-125		
Copper	0.115		0.00200	mg/L	0.100	0.00676	109	75-125		
Nickel	107		2.00	ug/L	100	1.76	105	75-125		
Matrix Spike (BHB2557-MS4)		**Source: 24B3078-02**			Prepared: 02/15/2024 Analyzed: 02/27/2024					
Selenium	215		5.00	ug/L	200	0.458	107	75-125		
Batch: BHB3318 - EPA 1631										
Blank (BHB3318-BLK1)					Prepared: 02/19/2024 Analyzed: 02/21/2024					
Mercury	<0.00500	U	0.00500	ug/L						
Blank (BHB3318-BLK2)					Prepared: 02/19/2024 Analyzed: 02/21/2024					
Mercury	<0.00500	U	0.00500	ug/L						

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Quality Control
(Continued)

Metals, Total (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3318 - EPA 1631 (Continued)										
Blank (BHB3318-BLK3)					Prepared: 02/19/2024 Analyzed: 02/21/2024					
Mercury	<0.00500	U	0.00500	ug/L						
Matrix Spike (BHB3318-MS1)		**Source: 24B3034-02**			Prepared: 02/19/2024 Analyzed: 02/21/2024					
Mercury	0.0486		0.00526	ug/L	0.0526	<0.00526	92.3	71-125		
Matrix Spike Dup (BHB3318-MSD1)		**Source: 24B3034-02**			Prepared: 02/19/2024 Analyzed: 02/21/2024					
Mercury	0.0477		0.00526	ug/L	0.0526	<0.00526	90.7	71-125	1.69	24

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Quality Control
(Continued)

Metals, Dissolved

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHC0379 - Cr VI										
BHB1557-BLK1 (BHC0379-LBK1)					Prepared & Analyzed: 03/04/2024					
Chromium (VI)	<3.00	U	3.00	ug/L						
Matrix Spike (BHC0379-MS1)		**Source: 24B0941-22**			Prepared & Analyzed: 03/04/2024					
Chromium (VI)	227		3.02	ug/L	251	6.17	88.0	70-130		
Matrix Spike Dup (BHC0379-MSD1)		**Source: 24B0941-22**			Prepared & Analyzed: 03/04/2024					
Chromium (VI)	223		3.02	ug/L	251	6.17	86.2	70-130	2.09	20

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Quality Control
(Continued)

General Chemistry

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB2394 - EPA 300.0										
Duplicate (BHB2394-DUP1)		**Source: 24B3044-02**			Prepared & Analyzed: 02/14/2024					
Nitrate as N	673		100	ug/L		674			0.148	15
Chloride	54.9		20.0	mg/L		54.8			0.146	15
Fluoride	0.316		0.250	mg/L		0.320			1.26	15
Nitrite as N	<50.0	U	50.0	ug/L		<50.0				15
Sulfate	69.6		20.0	mg/L		69.5			0.0288	15
Duplicate (BHB2394-DUP2)		**Source: 24A4917-04**			Prepared & Analyzed: 02/14/2024					
Fluoride	0.188	U	0.250	mg/L		0.200			6.19	15
Nitrate as N	141		100	ug/L		151			6.85	15
Sulfate	7.82		1.00	mg/L		7.79			0.333	15
Chloride	47.7		1.00	mg/L		47.8			0.0880	15
Nitrite as N	<50.0	U	50.0	ug/L		<50.0				15
MRL Check (BHB2394-MRL1)					Prepared & Analyzed: 02/14/2024					
Sulfate	1.18		1.00	mg/L	1.00		118	50-150		
Fluoride	0.288		0.250	mg/L	0.250		115	50-150		
Nitrate as N	109		100	ug/L	100		109	50-150		
Chloride	1.13		1.00	mg/L	1.00		113	50-150		
Nitrite as N	46.0	U	50.0	ug/L	50.0		92.0	50-150		
Matrix Spike (BHB2394-MS1)		**Source: 24B3044-02**			Prepared & Analyzed: 02/14/2024					
Nitrite as N	1610	J1	55.6	ug/L	1110	<55.6	145	80-120		
Nitrate as N	2820		111	ug/L	2220	674	96.5	80-120		
Chloride	69.4	J1	22.2	mg/L	11.1	54.8	131	80-120		
Fluoride	5.89		0.278	mg/L	5.56	0.320	100	80-120		
Sulfate	89.1		22.2	mg/L	22.2	69.5	88.2	80-120		
Matrix Spike (BHB2394-MS2)		**Source: 24A4917-04**			Prepared & Analyzed: 02/14/2024					
Nitrite as N	1470	J1	55.6	ug/L	1110	<55.6	132	80-120		
Chloride	61.9	J1	1.11	mg/L	11.1	47.8	127	80-120		
Nitrate as N	2240		111	ug/L	2220	151	94.2	80-120		
Sulfate	28.9		1.11	mg/L	22.2	7.79	95.1	80-120		
Fluoride	5.56		0.278	mg/L	5.56	0.200	96.5	80-120		

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Quality Control
(Continued)

General Chemistry (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB2570 - Alkalinity										
Blank (BHB2570-BLK1)					Prepared & Analyzed: 02/15/2024					
Conductivity	<2.00	U	2.00	umhos/cm @ 25 °C						
LCS (BHB2570-BS1)					Prepared & Analyzed: 02/15/2024					
Conductivity	1390			umhos/cm @ 25 °C	1410		98.8	90-110		
QSC (BHB2570-BS2)					Prepared & Analyzed: 02/15/2024					
Conductivity	508			umhos/cm @ 25 °C	500		102	90-110		
LCS (BHB2570-BS4)					Prepared & Analyzed: 02/15/2024					
Alkalinity as CaCO3	103			mg/L	100		103	90-110		
Duplicate (BHB2570-DUP1)		**Source: 24A4917-05**			Prepared & Analyzed: 02/15/2024					
Conductivity	739		2.00	umhos/cm @ 25 °C		733			0.815	15
Alkalinity as CaCO3	305		10.0	mg/L		296			2.91	15
Duplicate (BHB2570-DUP2)		**Source: 24B3473-02**			Prepared & Analyzed: 02/15/2024					
Conductivity	1100		2.00	umhos/cm @ 25 °C		1090			0.640	15
Alkalinity as CaCO3	192		10.0	mg/L		191			0.401	15
Batch: BHB2576 - CBOD-5210										
LCS (BHB2576-BS1)					Prepared: 02/15/2024 Analyzed: 02/20/2024					
Carbonaceous BOD (CBOD)	145	J1		mg/L	198		73.3	85-115		
Duplicate (BHB2576-DUP1)		**Source: 24B3456-02**			Prepared: 02/15/2024 Analyzed: 02/20/2024					
Carbonaceous BOD (CBOD)	<2.40	J4, U	2.40	mg/L		<2.40				40

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Quality Control
(Continued)

General Chemistry (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB2576 - CBOD-5210 (Continued)										
Duplicate (BHB2576-DUP2)		**Source: 24B0123-01**			Prepared: 02/15/2024 Analyzed: 02/20/2024					
Carbonaceous BOD (CBOD)	<2.40	J4, U	2.40	mg/L		<2.40				40
Duplicate (BHB2576-DUP3)		**Source: 24B3299-02**			Prepared: 02/15/2024 Analyzed: 02/20/2024					
Carbonaceous BOD (CBOD)	<2.40	J4, U	2.40	mg/L		<2.40				40
Duplicate (BHB2576-DUP4)		**Source: 24B3289-02**			Prepared: 02/15/2024 Analyzed: 02/20/2024					
Carbonaceous BOD (CBOD)	<2.40	U	2.40	mg/L		<2.40				40
Duplicate (BHB2576-DUP5)		**Source: 24B3512-01**			Prepared: 02/15/2024 Analyzed: 02/20/2024					
Carbonaceous BOD (CBOD)	<2.40	J4, U	2.40	mg/L		<2.40				40
Duplicate (BHB2576-DUP6)		**Source: 24B3423-02**			Prepared: 02/15/2024 Analyzed: 02/20/2024					
Carbonaceous BOD (CBOD)	<2.40	J4, U	2.40	mg/L		<2.40				40
Duplicate (BHB2576-DUP7)		**Source: 24B0683-04**			Prepared: 02/15/2024 Analyzed: 02/20/2024					
Carbonaceous BOD (CBOD)	85.5		50.0	mg/L		83.2			2.67	20
Batch: BHB2660 - TSS										
Blank (BHB2660-BLK1)					Prepared: 02/15/2024 Analyzed: 02/16/2024					
Residue-nonfilterable (TSS)	<1.00	U	1.00	mg/L						
LCS (BHB2660-BS1)					Prepared: 02/15/2024 Analyzed: 02/16/2024					
Residue-nonfilterable (TSS)	99.2		1.00	mg/L	100		99.2	85-115		
Duplicate (BHB2660-DUP1)		**Source: 24B3309-01**			Prepared: 02/15/2024 Analyzed: 02/16/2024					
Residue-nonfilterable (TSS)	5.26	J1	1.00	mg/L		4.63			12.8	10

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Quality Control
(Continued)

General Chemistry (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB2660 - TSS (Continued)										
Duplicate (BHB2660-DUP2)		**Source: 24B3473-02**			Prepared: 02/15/2024 Analyzed: 02/16/2024					
Residue-nonfilterable (TSS)	3.16		1.00	mg/L		2.95			6.90	10
Batch: BHB2679 - EPA 300.0										
Duplicate (BHB2679-DUP1)		**Source: 24B3514-03**			Prepared & Analyzed: 02/15/2024					
Chloride	392		20.0	mg/L		429			8.98	15
Nitrate as N	5350		100	ug/L		5350			0.0748	15
Duplicate (BHB2679-DUP2)		**Source: 24B3084-02**			Prepared & Analyzed: 02/15/2024					
Nitrate as N	21900		1000	ug/L		21900			0.137	15
Chloride	251		10.0	mg/L		252			0.557	15
MRL Check (BHB2679-MRL1)					Prepared & Analyzed: 02/15/2024					
Chloride	1.13		1.00	mg/L	1.00		113	50-150		
Nitrate as N	110		100	ug/L	100		110	50-150		
Matrix Spike (BHB2679-MS1)		**Source: 24B3514-03**			Prepared & Analyzed: 02/15/2024					
Chloride	437	J1	22.2	mg/L	11.1	429	74.3	80-120		
Nitrate as N	7630		111	ug/L	2220	5350	103	80-120		
Matrix Spike (BHB2679-MS2)		**Source: 24B3084-02**			Prepared & Analyzed: 02/15/2024					
Nitrate as N	23900		1110	ug/L	2220	21900	90.1	80-120		
Chloride	278	J1	11.1	mg/L	11.1	252	232	80-120		
Batch: BHB2760 - NH3-N SEAL-350.1										
Matrix Spike (BHB2760-MS1)		**Source: 24B0752-01**			Prepared & Analyzed: 02/16/2024					
Ammonia as N	0.410		0.0500	mg/L	0.400	<0.0500	102	90-110		

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Quality Control
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General Chemistry (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB2760 - NH3-N SEAL-350.1 (Continued)										
Matrix Spike (BHB2760-MS2)		**Source: 24B3469-01**			Prepared & Analyzed: 02/16/2024					
Ammonia as N	0.435		0.0500	mg/L	0.400	0.0483	96.8	90-110		
Matrix Spike Dup (BHB2760-MSD1)		**Source: 24B0752-01**			Prepared & Analyzed: 02/16/2024					
Ammonia as N	0.395		0.0500	mg/L	0.400	<0.0500	98.8	90-110	3.60	20
Matrix Spike Dup (BHB2760-MSD2)		**Source: 24B3469-01**			Prepared & Analyzed: 02/16/2024					
Ammonia as N	0.422		0.0500	mg/L	0.400	0.0483	93.4	90-110	3.20	20
Batch: BHB2893 - TDS										
Blank (BHB2893-BLK1)					Prepared: 02/16/2024 Analyzed: 02/20/2024					
Residue-filterable (TDS)	<10.0	U	10.0	mg/L						
LCS (BHB2893-BS1)					Prepared: 02/16/2024 Analyzed: 02/20/2024					
Residue-filterable (TDS)	144		10.0	mg/L	150		96.0	90-110		
Duplicate (BHB2893-DUP1)		**Source: 24B0263-02**			Prepared: 02/16/2024 Analyzed: 02/20/2024					
Residue-filterable (TDS)	1700		10.0	mg/L		1640			3.47	10
Duplicate (BHB2893-DUP2)		**Source: 24B3748-02**			Prepared: 02/16/2024 Analyzed: 02/20/2024					
Residue-filterable (TDS)	444		10.0	mg/L		446			0.449	10
Batch: BHB3025 - TKN T										
Blank (BHB3025-BLK1)					Prepared: 02/16/2024 Analyzed: 02/19/2024					
Total Kjeldahl Nitrogen - (TKN)	<1.00	U	1.00	mg/L						

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Quality Control
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General Chemistry (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3025 - TKN T (Continued)										
LCS (BHB3025-BS1)					Prepared: 02/16/2024 Analyzed: 02/19/2024					
Total Kjeldahl Nitrogen - (TKN)	1.90		1.00	mg/L	1.97		96.5	85-115		
Duplicate (BHB3025-DUP1)		**Source: 24B0617-02**			Prepared: 02/16/2024 Analyzed: 02/19/2024					
Total Kjeldahl Nitrogen - (TKN)	0.560	J1, U	1.00	mg/L		0.896			46.2	20
Matrix Spike (BHB3025-MS1)		**Source: 24B0617-02**			Prepared: 02/16/2024 Analyzed: 02/19/2024					
Total Kjeldahl Nitrogen - (TKN)	4.37		1.00	mg/L	4.00	0.896	86.8	85-115		
Batch: BHB3036 - Phosphorus EPA 365.1										
LCS (BHB3036-BS1)					Prepared: 02/16/2024 Analyzed: 02/21/2024					
Total Phosphorus	0.234		0.0100	mg/L	0.250		93.8	90-110		
Matrix Spike (BHB3036-MS1)		**Source: 24B3309-01**			Prepared: 02/16/2024 Analyzed: 02/21/2024					
Total Phosphorus	9.49		0.200	mg/L	5.00	4.72	95.3	80-120		
Matrix Spike (BHB3036-MS2)		**Source: 24B3572-06**			Prepared: 02/16/2024 Analyzed: 02/21/2024					
Total Phosphorus	21.1		0.500	mg/L	12.5	8.69	99.3	80-120		
Matrix Spike Dup (BHB3036-MSD1)		**Source: 24B3309-01**			Prepared: 02/16/2024 Analyzed: 02/21/2024					
Total Phosphorus	9.57		0.200	mg/L	5.00	4.72	96.9	80-120	0.861	20
Matrix Spike Dup (BHB3036-MSD2)		**Source: 24B3572-06**			Prepared: 02/16/2024 Analyzed: 02/21/2024					
Total Phosphorus	21.1		0.500	mg/L	12.5	8.69	99.5	80-120	0.142	20
Batch: BHB3603 - CN-4500										
Blank (BHB3603-BLK1)					Prepared & Analyzed: 02/21/2024					
Total Cyanide	<10.0	U	10.0	ug/L						

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Quality Control
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General Chemistry (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB3603 - CN-4500 (Continued)										
LCS (BHB3603-BS1)					Prepared & Analyzed: 02/21/2024					
Total Cyanide	212		10.0	ug/L	200		106	90-110		
QCS (BHB3603-BS2)					Prepared & Analyzed: 02/21/2024					
Total Cyanide	212		10.0	ug/L	200		106	90-110		
MRL Check (BHB3603-MRL1)					Prepared & Analyzed: 02/21/2024					
Total Cyanide	10.9		10.0	ug/L	10.0		109	50-150		
Matrix Spike (BHB3603-MS1)		**Source: 24B2154-04**			Prepared & Analyzed: 02/21/2024					
Total Cyanide	234		10.0	ug/L	200	5.52	114	80-120		
Matrix Spike Dup (BHB3603-MSD1)		**Source: 24B2154-04**			Prepared & Analyzed: 02/21/2024					
Total Cyanide	222		10.0	ug/L	200	5.52	108	80-120	5.36	20
Batch: BHB3604 - EPA 1664										
Blank (BHB3604-BLK1)					Prepared & Analyzed: 02/21/2024					
n-Hexane Extractable Material (O&G)	<5.00	U	5.00	mg/L						
LCS (BHB3604-BS1)					Prepared & Analyzed: 02/21/2024					
n-Hexane Extractable Material (O&G)	39.8		5.00	mg/L	40.0		99.6	77.5-114.5		
LCS Dup (BHB3604-BSD1)					Prepared & Analyzed: 02/21/2024					
n-Hexane Extractable Material (O&G)	42.0		5.00	mg/L	40.0		105	77.5-114.5	5.32	20
Matrix Spike (BHB3604-MS1)		**Source: 24B3609-01**			Prepared & Analyzed: 02/21/2024					
n-Hexane Extractable Material (O&G)	105	J1	5.00	mg/L	160	31.2	46.4	77.5-114.5		

* A = Accredited, N = Not Accredited or Accreditation not available

130 S. Trade Center Parkway, Conroe TX 77385
Tel: (936) 321-6060
Email: lab@nwdls.com
www. NWDLS.com
TCEQ TX-C24-00086

SI Environmental - Cypress
9826 Whithorn Drive
Houston, TX 77095

Reported:
04/10/2024 15:13

Quality Control
(Continued)

Microbiology

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BHB2477 - TC EC Quantitray										
Blank (BHB2477-BLK1)					Prepared: 02/14/2024 Analyzed: 02/15/2024					
Escherichia coli (E. coli)	<1.00	U	1.00	MPN/100 mL						
Duplicate (BHB2477-DUP1)			**Source: 24B3477-01**		Prepared: 02/14/2024 Analyzed: 02/15/2024					
Escherichia coli (E. coli)	7.50		1.00	MPN/100 mL		3.10			83.0	200

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SI Environmental - Cypress
9826 Whithorn Drive
Houston, TX 77095

Reported:
04/10/2024 15:13

Sample Condition Checklist

Work Order: 24B3033

Check Points	
No	Custody Seals
Yes	Containers Intact
Yes	COC/Labels Agree
Yes	Received On Ice
Yes	Appropriate Containers
Yes	Appropriate Sample Volume
Yes	Coolers Intact
Yes	Samples Accepted

Work Order: 24B3034

Check Points	
No	Custody Seals
Yes	Containers Intact
Yes	COC/Labels Agree
Yes	Received On Ice
Yes	Appropriate Containers
Yes	Appropriate Sample Volume
Yes	Coolers Intact
Yes	Samples Accepted

Work Order: 24B3473

Check Points	
No	Custody Seals
Yes	Containers Intact
Yes	COC/Labels Agree
Yes	Received On Ice
Yes	Appropriate Containers
Yes	Appropriate Sample Volume
Yes	Coolers Intact
Yes	Samples Accepted

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TCEQ TX-C24-00086

SI Environmental - Cypress
9826 Whithorn Drive
Houston, TX 77095

Reported:
04/10/2024 15:13

Work Order: 24B4264

Check Points

No	Custody Seals
Yes	Containers Intact
Yes	COC/Labels Agree
Yes	Received On Ice
Yes	Appropriate Containers
Yes	Appropriate Sample Volume
Yes	Coolers Intact
Yes	Samples Accepted

Work Order: 24B4265

Check Points

No	Custody Seals
Yes	Containers Intact
Yes	COC/Labels Agree
Yes	Received On Ice
Yes	Appropriate Containers
Yes	Appropriate Sample Volume
Yes	Coolers Intact
Yes	Samples Accepted

Work Order: 24B4607

Check Points

No	Custody Seals
Yes	Containers Intact
Yes	COC/Labels Agree
Yes	Received On Ice
Yes	Appropriate Containers
Yes	Appropriate Sample Volume
Yes	Coolers Intact
Yes	Samples Accepted

* A = Accredited, N = Not Accredited or Accreditation not available

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Tel: (936) 321-6060
Email: lab@nwdls.com
www. NWDLS.com
TCEQ TX-C24-00086

SI Environmental - Cypress
9826 Whithorn Drive
Houston, TX 77095

Reported:
04/10/2024 15:13

Term and Qualifier Definitions

Item	Definition
C	Associated calibration QC is outside the established quality control criteria for accuracy.
C+	The associated calibration QC is higher than the established quality control criteria for accuracy - no hit in sample; data not affected and acceptable to report.
HR	The rerun parameter was analyzed outside the method specified holding time.
J1	Estimated value - The reported value is outside the established quality control criteria for accuracy and/or precision.
J4	Estimated value and sample is less than value - No dilution produced a depletion of 2 mg/L of DO or greater, oxygen demand of sample was less than anticipated.
L	Off scale high - The concentration of the analyte exceeds the linear range.
S	The surrogate recovery was outside the established laboratory recovery limit.
U	Non-detected compound.
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated
*	A = Accredited, N = Not Accredited or Accreditation not available
DF	Dilution Factor - the factor applied to the reported data due to sample preparation, dilution, or moisture content
MDL	Method Detection Limit - The minimum concentration of a substance (or analyte) that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. Based on standard deviation of replicate spiked samples take through all steps of the analytical procedure following 40 CFR Part 136 Appendix B.
SDL	Sample Detection Limit - The minimum concentration of a substance (analyte) that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The SDL is an adjusted limit thus sample specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments. If there are no sample specific parameters, the MDL = SDL.
MRL	Method Reporting Limit - Analyte concentration that corresponds to the lowest level lab reports with confidence in accuracy of quantitation and without qualification (i.e. J-flagged). The MRL is at or above the lowest calibration standard.
LRL	Laboratory Reporting Limit - Analyte concentration that corresponds to the lowest level lab reports with confidence in accuracy of quantitation and without qualification (i.e. J-flagged). The LRL is an adjusted limit thus sample specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments. If there are no sample specific parameters, the MRL = LRL.

* A = Accredited, N = Not Accredited or Accreditation not available

CHAIN OF CUSTODY RECORD

North Water District Laboratory Services
130 S. Trade Center Pkwy, Conroe Tx 77385
(936) 321-6060 - lab@nwdls.com
TCEQ TX-C24-00086

24B3033

Lab PM : Aundra Noe	**Project Name** : WHC MUD 11 - Outfall 001 3 Part Grab Composite 1	**Schedule Comments**:
SI Environmental - Cypress Wendy Rambin 9826 Whithorn Drive Houston, TX 77095 Phone: (281) 807-9500	**Project Comments**: DAY OF GRAB 1 - TAKE GLASS RECEPTACLE & PLACE IN SAMPLER COORDINATE GRAB 1 & GRAB 2 COLLECTION TIMES WITH OTHER FIELD TECH IF NEEDED	

Sample ID	Collection Point	Date/Time Begin	Date/Time Sampled	Sample Type	Container	Analysis/Preservation		Field Results
24B3033-01	18 Mohm DI		02/13/2024 0810	AQ Grab	A Glass 4oz Boston Round	LL Hg-1631	BrCl	
24B3033-02	Outfall 001 3 Part Grab		02/13/2024 0805	AQ Grab	A Glass VOA 40mL HCl pH<2 B Glass VOA 40mL HCl pH<2 C Glass VOA 40mL HCl pH<2 D Glass VOA 40mL E Glass VOA 40mL F Glass VOA 40mL G Glass 4oz Boston Round	LL Hg-1631 Composite VOA	BrCl 4°C	

Field Remarks:		**Lab Preservation:** (Circle and Write ID Below) H2SO4 HNO3 NaOH Other:		
Sampler (Signature) Terry May	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
Print Name Terry May	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
Affiliation NWDLS	Relinquished To Lab By: (Signature) Terry May	Date/Time 2/13/24 1300	Received for Laboratory By: (Signature) KAC	Date/Time 2/13/24 1302

Custody Seal : Yes / No COC Labels Agree: Yes / No Appropriate Volume: Yes / No Received on Ice: Yes / No Temperature: °C

Container Intact : Yes / No Appropriate Containers: Yes / No Coolers Intact: Yes / No Samples Accepted: Yes / No Thermometer ID:

West Road

CHAIN OF CUSTODY RECORD

North Water District Laboratory Services
130 S. Trade Center Pkwy, Conroe Tx 77385
(936) 321-6060 - lab@nwdls.com
TCEQ TX-C24-00086

24B3034

Lab PM : Aundra Noe	**Project Name** : WHC MUD 11 - Outfall 001 3 Part Grab Composite 2	**Schedule Comments:**
SI Environmental - Cypress Wendy Rambin 9826 Whithorn Drive Houston, TX 77095 Phone: (281) 807-9500	**Project Comments**: COORDINATE GRAB 1 & GRAB 2 COLLECTION TIMES WITH OTHER FIELD TECH IF NEEDED	

Sample ID	Collection Point	Date/Time Begin	Date/Time Sampled	Sample Type	Container	Analysis/Preservation		Field Results
24B3034-01	18 Mohm DI		02/13/2024 1205	AQ Grab	A Glass 4oz Boston Round	LL Hg-1631	BrCl	
24B3034-02	Outfall 001 3 Part Grab		02/13/2024 1205	AQ Grab	A Glass VOA 40mL HCl pH<2 B Glass VOA 40mL HCl pH<2 C Glass VOA 40mL HCl pH<2 D Glass VOA 40mL E Glass VOA 40mL F Glass VOA 40mL G Glass 4oz Boston Round	LL Hg-1631 Composite VOA	BrCl 4°C	

Field Remarks:		**Lab Preservation:** (Circle and Write ID Below) H2SO4 HNO3 NaOH Other:		
Sampler (Signature) Tyler Henderson	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
Print Name Tyler Henderson	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
Affiliation NWDLS	Relinquished To Lab By: (Signature) Tyler Henderson	Date/Time 2.13.24/1205	Received for Laboratory By: (Signature) KAC	Date/Time 2.13.24/1205

Custody Seal : Yes / No COC Labels Agree: Yes / No Appropriate Volume: Yes / No Received on Ice: Yes / No Temperature: ____ °C

Container Intact : Yes / No Appropriate Containers: Yes / No Coolers Intact: Yes / No Samples Accepted: Yes / No Thermometer ID: ____

West Road

CHAIN OF CUSTODY RECORD

North Water District Laboratory Services
130 S. Trade Center Pkwy, Conroe Tx 77385
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TCEQ T104704238-23-39

24B3473

(Continued)

Lab PM : Aundra Noe

Project Name : WHC MUD 11 - Large Permit Renewal

Schedule Comments:

SI Environmental - Cypress
Wendy Rambin
9826 Whithorn Drive
Houston, TX 77095
Phone: (281) 807-9500

Project Comments: 8665 W Sam Houston Parkway N gate combination 2043
key 2004 - Ivan Zapata 713-281-3715
DO reading must be recorded before 9am If CL2 not between 1.0 - 4.0 Call Office

24B3473-02	Outfall 001 Sampler	2-13-24/5:00	2/14/2024/5:00	AQ 24HR Comp	A HDPE 250mL AA HDPE 1L B HDPE 1L C HDPE 250mL D PreCleaned HDPE 250mL HNO3 E HDPE 250 Cr6+Buf after filtration F Glass VOA 60mL G Glass VOA 60mL H Glass VOA 60mL I HDPE 250mL J HDPE 250mL H2SO4 K HDPE 250mL H2SO4 L Amber Glass 250mL w/ Teflon-lined Lid M Amber Glass 250mL w/ Teflon-lined Lid N Amber Glass 250mL w/ Teflon-lined Lid O Amber Glass 250mL w/ Teflon-lined Lid P Amber Glass 1L w/ Teflon-lined Lid Q Amber Glass 1L w/ Teflon-lined Lid R Amber Glass 1L w/ Teflon-lined Lid S Amber Glass 1L w/ Teflon-lined Lid T Amber Glass 1L w/ Teflon-lined Lid U Amber Glass 1L w/ Teflon-lined Lid V Amber Glass 1L w/ Teflon-lined Lid W Amber Glass 1L w/ Teflon-lined Lid X Amber Glass 250mL w/ Teflon-lined Lid Y Amber Glass 250mL w/ Teflon-lined Lid Z HDPE 250mL	Aluminum ICPMS 200.8 HNO3 Antimony ICPMS 200.8 HNO3 Arsenic ICPMS 200.8 HNO3 Barium ICPMS 200.8 HNO3 Beryllium ICPMS 200.8 HNO3 Cadmium ICPMS 200.8 HNO3 Chromium ICPMS 200.8 HNO3 Copper ICPMS 200.8 HNO3 Lead ICPMS 200.8 HNO3 LPR Metals [Group Analysis] Nickel ICPMS 200.8 HNO3 Selenium ICPMS 200.8 HNO3 Silver ICPMS 200.8 HNO3 Thallium ICPMS 200.8 HNO3 Zinc ICPMS 200.8 HNO3 HERB-6640 4°C Nonylphenol-D7065 4°C OCP-608 4°C OPP-1657 4°C PCB-608 4°C SVOA-625 4°C Sub_CBURP-632 4°C Alkalinity-2320 4°C CBOD-5210 4°C Chloride IC 300.0 4°C Conductivity-2510 4°C Cr III ICPMS [Group Analysis] Cr VI-D 3500 Cr6+Buf 4°C Fluoride IC 300.0 4°C LPR Anions [Group Analysis] NH3-N SEAL-350.1 H2SO4 4°C Nitrate as N IC 300.0 4°C Nitrite as N IC 300.0 4°C Sulfate IC 300.0 4°C TDS-2540 4°C TKN T-4500 C H2SO4 4°C Total Phosphorus-365.1- H2SO4 4°C TSS-2540 4°C	

CHAIN OF CUSTODY RECORD

North Water District Laboratory Services
130 S. Trade Center Pkwy, Conroe Tx 77385
(936) 321-6060 - lab@nwdls.com
TCEQ T104704238-23-39

24B3473

(Continued)

Lab PM : Aundra Noe	**Project Name** : WHC MUD 11 - Large Permit Renewal	**Schedule Comments:**
SI Environmental - Cypress Wendy Rambin 9826 Whithorn Drive Houston, TX 77095 Phone: (281) 807-9500	**Project Comments**: 8665 W Sam Houston Parkway N gate combination 2043 key 2004 - Ivan Zapata 713-281-3715 DO reading must be recorded before 9am If CL2 not between 1.0 - 4.0 Call Office	

24B3473-03	Outfall 001 3 Part Grab		2/14/2024 8:30	AQ Grab	A Glass VOA 40mL HCl pH<2 B Glass VOA 40mL HCl pH<2 C Glass VOA 40mL HCl pH<2 D Glass VOA 40mL E Glass VOA 40mL F Glass VOA 40mL G Glass 4oz Boston Round	LL Hg-1631 BrCl Composite VOA 4°C	
24B3473-04	Outfall 001 3 Part Grab C		2/14/2024	AQ Grab 3-Part Cor		VOA-624 4°C	
24B3473-05	18 Mohm DI		2/14/2024	AQ Grab	A Glass 4oz Boston Round	LL Hg-1631 BrCl	

Field Remarks:		**Lab Preservation:** (Circle and Write ID Below) H2SO4 HNO3 NaOH Other:		
Sampler (Signature)	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
Print Name Jose Gutierrez	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
Affiliation NWDLS	Relinquished To Lab By: (Signature)	Date/Time 2.14.24/15:10	Received for Laboratory By: (Signature) KMC	Date/Time 1510 2.14.24

Custody Seal : Yes / No COC Labels Agree: Yes / No Appropriate Volume: Yes / No Received on Ice: Yes / No Temperature: °C

Container Intact : Yes / No Appropriate Containers: Yes / No Coolers Intact: Yes / No Samples Accepted: Yes / No Thermometer ID:

West Road

CHAIN OF CUSTODY RECORD

North Water District Laboratory Services
130 S. Trade Center Pkwy, Conroe Tx 77385
(936) 321-6060 - lab@nwdls.com
TCEQ T104704238-23-39

24B3473

Lab PM : Aundra Noe	**Project Name** : WHC MUD 11 - Large Permit Renewal	**Schedule Comments:**
SI Environmental - Cypress Wendy Rambin 9826 Whithorn Drive Houston, TX 77095 Phone: (281) 807-9500	**Project Comments**: 8665 W Sam Houston Parkway N gate combination 2043 key 2004 - Ivan Zapata 713-281-3715 DO reading must be recorded before 9am If CL2 not between 1.0 - 4.0 Call Office	

Sample ID	Collection Point	Date/Time Begin	Date/Time Sampled	Sample Type	Container	Analysis/Preservation		Field Results	
24B3473-01	Outfall 001		2/14/2024 / 8:50	AQ Grab	A HDPE 250mL NaOH B Glass Wide 1L w/ Teflon-lined Lid C HDPE S250mL Na2S2O3	TC EC-9223 O&G-1664 CN AMEN-4500 CN T-4500	Na2S2O3 <10°C HCl 4°C NaOH 4°C NaOH 4°C	Flow MGD Field Total Chlorine Residual WW Field	0.772 0.0

CHAIN OF CUSTODY RECORD

North Water District Laboratory Services
130 S. Trade Center Pkwy, Conroe Tx 77385
(936) 321-6060 - lab@nwdls.com
TCEQ T104704238-23-39

24B3476

Lab PM : Deena Higginbotham	**Project Name** : WHC MUD 11 - Non Potable - Weekly Wed	**Schedule Comments:**
SI Environmental - Cypress Wendy Rambin 9826 Whithorn Drive Houston, TX 77095 Phone: (281) 807-9500	**Project Comments**: 8665 W Sam Houston Parkway N gate combination 2043-key 2004 Ivan Zapata 713-281-3715 CALL WENDY RAMBIN IF CHLORINE RESIDUAL IS BELOW 1.5 mg/L 713-859-3785	

Sample ID	Collection Point	Date/Time Begin	Date/Time Sampled	Sample Type	Container	Analysis/Preservation	Field Results
~~24B3476-01~~	~~Outfall 001~~		2/14/2024 8:20	~~AQ Grab~~	~~A HDPE S250mL Na2S2O3~~	~~TC EC 9223 Na2S2O3 <10°C~~	DO Field 7.14 pH Field 7.33 Total Cl Field 1.6
~~24B3476-02~~	~~Outfall 001 Sampler~~		~~2/14/2024~~	~~AQ 24HR Comp~~	~~A HDPE 1L~~ ~~B PreCleaned HDPE 250mL HNO3~~ ~~C HDPE 250mL H2SO4~~ ~~D HDPE 250mL H2SO4~~ ~~E HDPE 1L~~	~~Copper ICPMS 200.8 HNO3~~ ~~CBOD-5210 4°C~~ ~~NH3-N SEAL-350.1 H2SO4 4°C~~ ~~TKN T-4500 C H2SO4 4°C~~ ~~TSS-2540 4°C~~	

Field Remarks:

Lab Preservation: (Circle and Write ID Below) H2SO4 HNO3 NaOH Other: _____

Sampler (Signature) Jose Gutierrez	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
Print Name	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
Affiliation NWDLS	Relinquished To Lab By: (Signature)	Date/Time 2.14.24/15:10	Received for Laboratory By: (Signature) VMC	Date/Time 1510 2.14.24

Custody Seal : Yes / No COC Labels Agree: Yes / No Appropriate Volume: Yes / No Received on Ice: Yes / No Temperature: _____ °C

Container Intact : Yes / No Appropriate Containers: Yes / No Coolers Intact: Yes / No Samples Accepted: Yes / No Thermometer ID: _____

West Road

CHAIN OF CUSTODY RECORD

North Water District Laboratory Services
130 S. Trade Center Pkwy, Conroe Tx 77385
(936) 321-6060 - lab@nwdls.com
TCEQ T104704238-23-39

24B4264

Lab PM : Aundra Noe	**Project Name** : WHC MUD 11 - Outfall 001 3 Part Grab Comp 1 RC	**Schedule Comments:**
SI Environmental - Cypress Wendy Rambin 9826 Whithorn Drive Houston, TX 77095 Phone: (281) 807-9500	**Project Comments**: COORDINATE GRAB 1 & GRAB 2 COLLECTION TIMES WITH OTHER FIELD TECH IF NEEDED	2043

Sample ID	Collection Point	Date/Time Begin	Date/Time Sampled	Sample Type	Container	Analysis/Preservation	Field Results
24B4264-01	Outfall 001 3 Part Grab		2/20/2024/07:05	AQ Grab	A Glass VOA 40mL B Glass VOA 40mL C Glass VOA 40mL D Glass VOA 40mL HCl pH<2 E Glass VOA 40mL HCl pH<2 F Glass VOA 40mL HCl pH<2	Composite VOA 4°C	

Field Remarks:			**Lab Preservation:** (Circle and Write ID Below) H2SO4 HNO3 NaOH Other:		
Sampler (Signature) TyH	Relinquished By: (Signature)	Date/Time	Received By: (Signature)		Date/Time
Print Name Tyler Henderson	Relinquished By: (Signature)	Date/Time	Received By: (Signature)		Date/Time
Affiliation NWDLS	Relinquished To Lab By: (Signature) TyH	Date/Time 2-20-24/13:35	Received for Laboratory By: (Signature) ROR		Date/Time 1335 2.20.24

Custody Seal: Yes / No | COC Labels Agree: Yes / No | Appropriate Volume: Yes / No | Received on Ice: Yes / No | Temperature: °C

Container Intact: Yes / No | Appropriate Containers: Yes / No | Coolers Intact: Yes / No | Samples Accepted: Yes / No | Thermometer ID:

West Road

CHAIN OF CUSTODY RECORD

North Water District Laboratory Services
130 S. Trade Center Pkwy, Conroe Tx 77385
(936) 321-6060 - lab@nwdls.com

TCEQ T104704238-23-39

24B4265

Lab PM : Aundra Noe	**Project Name** : WHC MUD 11 - Outfall 001 3 Part Grab Comp 2 RC	Schedule Comments:
SI Environmental - Cypress Wendy Rambin 9826 Whithorn Drive Houston, TX 77095 Phone: (281) 807-9500	**Project Comments**: COORDINATE GRAB 1 & GRAB 2 COLLECTION TIMES WITH OTHER FIELD TECH IF NEEDED	

Sample ID	Collection Point	Date/Time Begin	Date/Time Sampled	Sample Type	Container	Analysis/Preservation	Field Results
24B4265-01	Outfall 001 3 Part Grab		2/20/2024/ 11:35	AQ Grab	A Glass VOA 40mL B Glass VOA 40mL C Glass VOA 40mL D Glass VOA 40mL HCl pH<2 E Glass VOA 40mL HCl pH<2 F Glass VOA 40mL HCl pH<2	Composite VOA 4°C	

Field Remarks:		Lab Preservation: (Circle and Write ID Below) H2SO4 HNO3 NaOH Other:		
Sampler (Signature)	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
Print Name: Tyler Henderson	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
Affiliation: NWDLS	Relinquished To Lab By: (Signature)	Date/Time 2-20-24/13:35	Received for Laboratory By: (Signature) ROR	Date/Time 1335 2.20.24

Custody Seal: Yes / No | COC Labels Agree: Yes / No | Appropriate Volume: Yes / No | Received on Ice: Yes / No | Temperature: °C

Container Intact: Yes / No | Appropriate Containers: Yes / No | Coolers Intact: Yes / No | Samples Accepted: Yes / No | Thermometer ID:

West Road

CHAIN OF CUSTODY RECORD

North Water District Laboratory Services
130 S. Trade Center Pkwy, Conroe Tx 77385
(936) 321-6060 - lab@nwdls.com
TCEQ T104704238-23-39

24B4607

Lab PM : Aundra Noe	**Project Name** : WHC MUD 11 - Large Permit Renewal - Recollect	Schedule Comments:
SI Environmental - Cypress Wendy Rambin 9826 Whithorn Drive Houston, TX 77095 Phone: (281) 807-9500	**Project Comments**:	

Sample ID	Collection Point	Date/Time Begin	Date/Time Sampled	Sample Type	Container	Analysis/Preservation	Field Results
24B4607-01	Outfall 001 3 Part Grab		2/21/2024 / 8:15	AQ Grab	A Glass VOA 40mL B Glass VOA 40mL C Glass VOA 40mL D Glass VOA 40mL HCl pH<2 E Glass VOA 40mL HCl pH<2 F Glass VOA 40mL HCl pH<2	Composite VOA 4°C	
24B4607-02	Outfall 001 3 Part Grab C		2/21/2024	AQ Grab 3-Part Cor		VOA-624 4°C	

Field Remarks:		Lab Preservation: (Circle and Write ID Below) H2SO4 HNO3 NaOH Other:		
Sampler (Signature) [signature]	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
Print Name Jose Gutierrez	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
Affiliation NWDLS	Relinquished To Lab By: (Signature) [signature]	Date/Time 2.21.24/15:00	Received for Laboratory By: (Signature) [signature]	Date/Time 2.21.2024 15:00

Custody Seal: Yes / No | COC Labels Agree: Yes / No | Appropriate Volume: Yes / No | Received on Ice: Yes / No | Temperature: °C

Container Intact: Yes / No | Appropriate Containers: Yes / No | Coolers Intact: Yes / No | Samples Accepted: Yes / No | Thermometer ID:

West Road

2600 Dudley Rd. Kilgore, Texas 75662
24 Waterway Avenue, Suite 375 The Woodlands, TX 77380
Office: 903-984-0551 * Fax: 903-984-5914

Project
1092220

NWDS-G

North Water District Laboratory
Deena McDaniel
130 S Trade Center Parkway
Conroe, TX 77385

Printed 02/27/2024
8:14

TABLE OF CONTENTS

24B3473

This report consists of this Table of Contents and the following pages:

Email: Kilgore.projectmanager@spl-inc.com

2600 Dudley Rd. Kilgore, Texas 75662
24 Waterway Avenue, Suite 375 The Woodlands, TX 77380
*Office: 903-984-0551 * Fax: 903-984-5914*

SAMPLE CROSS REFERENCE

Project
1092220

North Water District Laboratory
Deena McDaniel
130 S Trade Center Parkway
Conroe, TX 77385

Sample	Sample ID	Taken	Time	Received
2273902	*24B3473-02*	02/14/2024	05:00:00	02/16/2024

Bottle 01 Client Supplied Amber Glass
Bottle 02 Client Supplied Amber Glass
Bottle 03 Prepared Bottle: 632L\632S 2 mL Autosampler Vial (Batch 1104937) Volume: 1.00000 mL <== Derived from 02 (984 ml)

Method	Bottle	PrepSet	Preparation	QcGroup	Analytical
EPA 632	03	1104937	02/19/2024	1106063	02/23/2024

Email: Kilgore.projectmanager@spl-inc.com

2600 Dudley Rd. Kilgore, Texas 75662
24 Waterway Avenue, Suite 375 The Woodlands, TX 77380
Office: 903-984-0551 * Fax: 903-984-5914

SPL The Science of Sure

NWDS-G

Project
1092220

North Water District Laboratory
Deena McDaniel
130 S Trade Center Parkway
Conroe, TX 77385

Printed: 02/27/2024

24B3473

RESULTS

Sample Results

2273902 **24B3473-02** Received: 02/16/2024

Non-Potable Water | Collected by: Client | North Water District | PO: #26201
Taken: 02/14/2024 05:00:00

EPA 632 Prepared: 1104937 02/20/2024 09:30:00 Analyzed 1106063 02/23/2024 05:33:00 BRU

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Carbaryl (Sevin)**	**<1.22**	**ug/L**	1.22		**63-25-2**	03
z	**Danitol**	**<0.102**	**ug/L**	0.102		**64357-84-7**	03
z	**Diuron**	**<0.0457**	**ug/L**	0.0457	D	**330-54-1**	03

Sample Preparation

2273902 **24B3473-02** Received: 02/16/2024

#26201

02/14/2024

Prepared: 02/19/2024 15:04:39 *Calculated* 02/19/2024 15:04:39 CAL

z **Environmental Fee (per Project)** **Verified**

Cooler Return *Prepared:* 02/20/2024 17:00:00 *Analyzed* 02/20/2024 17:00:00 DRS

z **Return Cooler/No bottles Require** **returned**

EPA 632 *Prepared:* 1104937 02/20/2024 09:30:00 *Analyzed* 1104937 02/20/2024 09:30:00 MCC

Liquid-Liquid Extr. W/Hex Ex **1/984** **ml** 02

EPA 632 *Prepared:* 1104937 02/20/2024 09:30:00 *Analyzed* 1106063 02/23/2024 05:33:00 BRU

2600 Dudley Rd. Kilgore, Texas 75662
24 Waterway Avenue, Suite 375 The Woodlands, TX 77380
Office: 903-984-0551 * Fax: 903-984-5914

SPL The Science of Sure

NWDS-G

Project
1092220

North Water District Laboratory
Deena McDaniel
130 S Trade Center Parkway
Conroe, TX 77385

Printed: 02/27/2024

2273902 24B3473-02

Received: 02/16/2024

#26201

02/14/2024

EPA 632 Prepared: 1104937 02/20/2024 09:30:00 Analyzed 1106063 02/23/2024 05:33:00 BRU

z	Carbaryl/Diuron/Danitol	Entered	03

Qualifiers:

D - Duplicate RPD was higher than expected

We report results on an As Received (or Wet) basis unless marked Dry Weight.

Unless otherwise noted, testing was performed at SPL, Inc.- Kilgore laboratory which holds International, Federal, and state accreditations. Please see our Websites for details.

(N)ELAC - Covered in our NELAC scope of accreditation
z -- Not covered by our NELAC scope of accreditation

These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of SPL Kilgore. Unless otherwise specified, these test results meet the requirements of NELAC.
RL is the Reporting Limit (sample specific quantitation limit) and is at or above the Method Detection Limit (MDL). CAS is Chemical Abstract Service number. RL is our Reporting Limit, or Minimum Quantitation Level. The RL takes into account the Instrument Detection Limit (IDL), Method Detection Limit (MDL), and Practical Quantitation Limit (PQL), and any dilutions and/or concentrations performed during sample preparation (EQL). Our analytical result must be above this RL before we report a value in the 'Results' column of our report (without a 'J' flag). Otherwise, we report ND (Not Detected above RL), because the result is "<" (less than) the number in the RL column. MAL is Minimum Analytical Level and is typically from regulatory agencies. Unless we report a result in the result column, or interferences prevent it, we work to have our RL at or below the MAL.

Bill Peery

Bill Peery, MS, VP Technical Services

QUALITY CONTROL

NWDS-G

North Water District Laboratory
Deena McDaniel
130 S Trade Center Parkway
Conroe, TX 77385

Project
1092220

Printed 02/27/2024

Analytical Set 1106063 EPA 632

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Carbaryl (Sevin)	1104937	ND	66.1	2500	ug/L	126026911
Danitol	1104937	ND	66.1	2500	ug/L	126026911
Diuron	1104937	272	44.4	45.0	ug/L	126026911

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Carbaryl (Sevin)	1080	1000	ug/L	108	70.0 - 130	126026910
Carbaryl (Sevin)	1100	1000	ug/L	110	70.0 - 130	126026914
Carbaryl (Sevin)	1210	1000	ug/L	121	70.0 - 130	126026916
Carbaryl (Sevin)	1080	1000	ug/L	108	70.0 - 130	126026924
Carbaryl (Sevin)	1070	1000	ug/L	107	70.0 - 130	126026929
Danitol	919	1000	ug/L	91.9	70.0 - 130	126026910
Danitol	920	1000	ug/L	92.0	70.0 - 130	126026914
Danitol	948	1000	ug/L	94.8	70.0 - 130	126026916
Danitol	857	1000	ug/L	85.7	70.0 - 130	126026924
Danitol	871	1000	ug/L	87.1	70.0 - 130	126026929
Diuron	1140	1000	ug/L	114	70.0 - 130	126026910
Diuron	1070	1000	ug/L	107	70.0 - 130	126026914
Diuron	1250	1000	ug/L	125	70.0 - 130	126026916
Diuron	1070	1000	ug/L	107	70.0 - 130	126026924
Diuron	1070	1000	ug/L	107	70.0 - 130	126026929

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Carbaryl (Sevin)	1104937	1020	794	1000	17.1 - 131	102	79.4	ug/L	24.9	30.0
Danitol	1104937	2280	2040	1000	0.100 - 334	228	204	ug/L	11.1	30.0
Diuron	1104937	96.0	183	1000	0.100 - 138	9.60	18.3	ug/L	62.4 *	30.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Carbaryl (Sevin)	2273946	1.07	0.734	ND	1000	0.100 - 215	0.107	0.0734 *	ug/L	37.3 *	30.0
Diuron	2273946	0.925	0.133	ND	1000	0.100 - 148	0.0925 *	0.0133 *	ug/L	150 *	50.0

* Out RPD is Relative Percent Difference: abs(r1-r2) / mean(r1,r2) * 100% Recover% is Recovery Percent: result / known * 100%

Blank - Method Blank (reagent water or other blank matrices that contains all reagents except standard(s) and is processed simultaneously with and under the same conditions as samples; carried through preparation and analytical procedures exactly like a sample; monitors); CCV - Continuing Calibration Verification (same standard used to prepare the curve; typically a mid-range concentration; verifies the continued validity of the calibration curve); MSD - Matrix Spike Duplicate (replicate of the matrix spike; same solution and amount of target analyte added to the MS is added to a third aliquot of sample; quantifies matrix bias and precision.); LCS Dup - Laboratory Control Sample Duplicate (replicate LCS; analyzed when there is insufficient sample for duplicate or MSD; quantifies accuracy and precision.)

NWDLS

SUBCONTRACT ORDER

Sending Laboratory:

North Water District Laboratory Services, Inc.
130 South Trade Center Parkway
Conroe, TX 77385
Phone: 936-321-6060
Fax: 936-321-6061

Project Manager: Aundra Noe

Subcontracted Laboratory:

SPL
2600 Dudley Rd
Kilgore, TX 75662
Phone: (903) 984-0551
Fax:

Work Order: 24B3473

Analysis	Due	Expires	Comments
Sample ID: 24B3473-02 ***Waste Water*** ***Sampled: 02/14/2024 05:00***			
Sub_CBURP-632	02/28/2024	02/21/2024 05:00	2273902
Analyte(s): Carbaryl	Danitol		Diuron
Containers Supplied:			

Released By: [signature] Date: 02.15.24

Received By: UPS Date: 02.15.24

VP3 2-16-24 [signature] 2-16-24

KRYSTAL MOORE
9363216060
NWDLS
130 S TRADE CENTER PKWY
CONROE TX 77385

30 LBS

1 OF 1

SHIP TO:
ANA-LAB
903-984-0551
ANA-LAB
2600 DUDLEY ROAD
KILGORE TX 75662

TX 756 0-32

UPS NEXT DAY AIR

1

TRACKING #: 1Z 12W 40V 01 9007 2779

BILLING: P/P

XOL 24.01.23 NV45 7.0A 02/2024*

2/15/24, 9:10 AM about:blank

2/16 1545 CP
Date Time Tech
Temp: 3.2 3.3 C
Therm#: 6443 Corr Fact: 0.1 C

April 24, 2024

Wendy Rambin

Compliance Manager

9835 Whithorn Drive Houston, TX 77095

Dear Wendy: Sludge from the West Harris County MUD 11 WWTP will be dewatered by Trinity Wastewater Solutions and transported to one of the following disposal sites:

1) New Earth-Katy, 6205 FM' 2855, Katy, TX 77493, TCEQ #42041

2) New Earth-Conroe, 12286 Hwy 105 E, Conroe, TX 77306, TCEQ #42037

Trinity Wastewater Solutions' and Wastewater Transport Services transporter number is 24343.

The material will be transported in end dump trailers and it will be approximately 15-18% solid.

As an alternative, liquid sludge could be transported to Wastewater Residuals Management for disposal. If you have any questions or need any additional information, please feel free to contact me at (713)-828-5487.

Sincerely,

Miller Boyle

Operations Manager

818 Town & Country Boulevard
Suite 500
Houston, Texas 77024
United States
T +1.281.721.8400
F +1.281.721.8700
www.jacobs.com

April 22, 2024

Executive Director
Applications Review and Processing Team (MC148)
Texas Commission on Environmental Quality
12100 Park 35 Circle
Austin, Texas 78753

RE: Written Explanation of Why Worksheet 3.0, Section 6 is Not Applicable
West Harris County Municipal Utility District No. 11
Existing TPDES Permit No. WQ0013689001
RN102998374; CN600740013

Dear Sir or Madame:

As part of the Domestic Wastewater Treatment Plant Discharge Permit Renewal Application (the "Application"), Worksheet 3.0, Section 6 – Well and Map Information – was marked as "Not Applicable". Pursuant to the language in the Application itself, this document is meant to serve as a detailed explanation as to why Worksheet 3.0, Section 6 is not applicable.

As indicated within the Application itself, West Harris County Municipal Utility District No. 11 (the "Owner") does not dispose of wastewater effluent by any form of land disposal. Treated wastewater effluent is discharged directly to Harris County Flood Control District ("HCFCD") Unit No. E200-00-00, which flows in to HCFCD Unit No. E141-00-00, and thence to HCFCD Unit No. E100-00-00. The Owner does not own, operate, or otherwise make use of any sort of land application site or storage and evaporation lagoons/ponds for the purpose of discharging wastewater effluent. Accordingly, the requirements of Worksheet 3.0, Section 6 are indeed not applicable, as the items required to be illustrated by said Section do not exist in this case.

I hope that the above sufficiently explains why Worksheet 3.0, Section 6 is not applicable to the Owner. Please do not hesitate to contact me at any time if you have any questions or need any additional information concerning this matter. All of my contact information is below for you.

Respectfully,

Shawn P. Sharkey, P.E.
District Engineer for West Harris County MUD No. 11
Jacobs Engineering Group Inc.
818 Town & Country Blvd, Suite 500
Houston, Texas 77024
MOB: 713-582-0132
shawn.sharkey@jacobs.com

*Table EX9(1) - Monthly Water Balance**

(Units in inches unless otherwise specified)

1	2	3	4	5	6	7	8	9	10	11
	Avg Rain	**Avg Run-off**	**Avg R_i****	**ET****	**L****	**TWN****	**Effluent Required in Root Zone**	**EFRS****	**Effluent Applied to Land**	**CFR****
JAN	2.39	0.72	1.67	0.9	0.0	0.9	0.0	0.06	0.0	0.06
FEB	2.80	0.99	1.81	1.3	0.0	1.3	0.0	0.03	0.0	0.03
MAR	2.95	1.09	1.86	3.0	0.9	3.9	2.1	0.15	2.5	2.6
APR	4.04	1.92	2.12	3.5	1.1	4.6	2.5	0.11	3.0	3.1
MAY	5.10	2.80	2.30	6.5	3.4	9.9	7.6	0.16	9.0	9.1
JUN	3.04	1.16	1.88	6.7	3.9	10.6	8.8	0.39	10.3	10.7
JUL	2.24	0.62	1.62	7.4	4.7	12.1	10.5	0.64	12.4	13.0
AUG	2.21	0.61	1.60	5.1	2.9	8.0	6.4	0.66	7.5	8.1
SEP	2.97	1.11	1.86	5.3	2.8	8.1	6.3	0.42	7.4	7.8
OCT	3.43	1.44	1.99	4.2	1.8	6.0	4.0	0.31	4.7	5.0
NOV	2.97	1.11	1.86	1.7	0.0	1.70	0.0	0.16	0.0	0.16
DEC	3.31	1.35	1.96	0.72	0.0	0.72	0.0	0.08	0.0	0.08
TOTAL	37.45	14.92	22.53	46.3	21.5	67.8	48.2	3.16	56.8	59.7

***Table EX9(1) was completed in accordance with Table 1 of 30 TAC 309.20. Refer to Appendix C for detailed explanation of calculations**.

****R_i = Infiltrated Rainfall, ET = Evapotranspiration, L = Required Leaching, TWN = Total Water Needs, EFRS = Evaporation From Reservoir Surface, RC = Consumption From Reservoir**.

*EX9(2) - Storage Volume Calculation**

(Units in inches unless otherwise specified)

12	13	14A	14B	15	16	17	18A	18B	19	20
	Effluent Applied To Land	**MRD**(%)**	**Rainfall (MAX)**	**Runoff (MAX)**	**R_i ****	**Total Avail. H_2O**	**DoM** (%)**	**Net E (MIN)**	**Storage (in-ac/ac)**	**AS (in-ac/ac)**
JAN	0.73	6.4	3.32	1.36	1.96	2.69	1.8 %	0.04	0.69	1.98
FEB	0.73	7.5	3.89	1.80	2.09	2.82	1.1%	0.02	0.71	2.69
MAR	0.73	7.9	4.10	1.97	2.16	2.86	4.7 %	0.10	-1.4	1.27
APR	0.73	10.8	5.61	3.23	2.37	3.10	3.6 %	0.08	-2.0	-0.73
MAY	0.73	13.6	7.06	4.53	2.53	3.26	4.9 %	0.11	-8.1	-8.83
JUN	0.73	8.1	4.20	2.05	2.15	2.88	12.4 %	0.27	-9.5	-18.33
JUL	0.73	6.0	3.11	1.21	1.90	2.63	20.0 %	0.44	-11.7	-30.13
AUG	0.73	5.9	3.06	1.17	1.89	2.62	20.8 %	0.45	-6.9	-37.03
SEP	0.73	7.9	4.10	1.97	2.13	2.86	13.2 %	0.29	-6.6	-43.63
OCT	0.73	9.2	4.77	2.52	2.25	2.98	9.6 %	0.21	-3.9	-47.53
NOV	0.73	7.9	4.10	1.97	2.13	2.86	5.1 %	0.11	0.62	0.62
DEC	0.73	8.8	4.57	2.35	2.22	2.95	2.6 %	0.06	0.67	1.29
TOTAL	8.76	100.0	51.9	26.1	25.8	34.5	100	2.18	------	2.69***

***Table EX9(2) was completed in accordance with Table 2 of 30 TAC 309.20. Refer to Appendix C for detailed explanation of calculations**.

****MRD = Mean Rainfall Distribution, R_i = Infiltrated Rainfall, DoM = Distribution of Mean, Net E = Net Evaporation, AS = Accumulated Storage**.

*****Storage volume requirement = 2.69 in-ac/ac, or (2.69 in-ac/ac)(58 ac)(1 ft/12 in)= 13 ac-f**