

Technical 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. Second notice (NAPD-Notice of Preliminary Decision)
 - English
 - Alternative Language (Spanish)
- 4. Application materials *
- 5. Draft permit *
- 6. Technical summary or fact sheet *



Portada de Paquete Técnico

Este archivo contiene los siguientes documentos:

- 1. Resumen de la solicitud (en lenguaje sencillo)
 - Inglés
 - Idioma alternativo (español)
- 2. Primer aviso (NORI, Aviso de Recepción de Solicitud e Intención de Obtener un Permiso)
 - Inglés
 - Idioma alternativo (español)
- 3. Segundo aviso (NAPD, Aviso de Decisión Preliminar)
 - Inglés
 - Idioma alternativo (español)
- 4. Materiales de la solicitud **
- 5. Proyecto de permiso **
- 6. Resumen técnico u hoja de datos **

Section 15. Plain Language Summary (Instructions Page 40)

If you are subject to the alternative language notice requirements in <u>30 Texas Administrative Code</u> <u>\$39.426</u>, you must provide a translated copy of the completed plain language summary in the appropriate alternative language as part of your application package</u>. For your convenience, a Spanish template has been provided below.

ENGLISH TEMPLATE FOR TPDES or TLAP NEW/RENEWAL/AMENDMENT APPLICATIONS

DOMESTIC WASTEWATER

The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 30 Texas Administrative Code Chapter 39. The information provided in this summary may change during the technical review of the application and are not federal enforceable representations of the permit application. Oak National Holdings, LLC (604905935) proposes to operate Cook Additions WWTP (RN112001086). a domestic wastewater facility. The facility will be located approximately 0.65 miles NE of the intersection of FM 548 and Gateway Boulevard, in Forney, Kaufman County, Texas 75126.

The applicant is currently applying to the Texas Commission on Environmental Quality for a Texas Pollutant Discharge Elimination System (TPDES) Permit in order to discharge a maximum of 125,000 gallons per day of treated domestic wastewater from the proposed Wastewater Treatment Plant that is to be installed on the site.

Discharges from the facility are expected to contain no pollutants.Domestic wastewater will be treated by MBR (membrane bio-reactor) treatment technology. The facility includes an influent pump station, equalization, fine screen, anoxic, oxic, and membrane cells with ultraviolet disinfection and a sludge press.

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

AGUAS RESIDUALES DOMÉSTICAS

Oak National Holdings, LLC (CN604905935) propone operar Cook Additions WWTP (RN112001086), una Planta de Tratamiento de Aguas Residuales. La instalación estará ubicada aproximadamente 0,65 millas al NE de la intersección de FM 548 y Gateway Blvd en Forney, TX.

El solicitante está actualmente solicitando a la Comisión de Calidad Ambiental de Texas un Permiso del Sistema de Eliminación de Contaminantes de Texas (TPDES) para descargar un máximo de 125.000 galones por día de aguas residuales domésticas tratadas de la Instalación de Tratamiento de Aguas Residuales propuesta que se instalará en el sitio.

Se espera que la descarga de la instalación no contenga contaminantes. Las aguas residuales domésticas serán tratadas mediante tecnología de tratamiento MBR (Reactor biológico con membranas). La instalación incluye una estación de bombeo de afluentes, ecualización, pantalla fina, celdas anóxicas, óxicas y de membranas de desinfección ultravioleta, y una prensa de lodos.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



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

PROPOSED PERMIT NO. WQ0016566001

APPLICATION. Oak National Holdings, LLC, 5763 South State Highway 205, Suite 100, Rockwall, Texas 75032, has applied to the Texas Commission on Environmental Quality (TCEQ) for proposed Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0016566001 (EPA I.D. No. TX0146269) to authorize the discharge of treated wastewater at a volume not to exceed a daily average flow of 125,000 gallons per day. The domestic wastewater treatment facility will be located approximately 0.65 miles northeast of the intersection of Farm-to-Market Road 548 and Gateway Boulevard, near the city of Forney, in Kaufman County, Texas 75126. The discharge route will be from the plant site to a man-made swale; thence to Mustang Creek; thence to East Fork Trinity River. TCEQ received this application on June 28, 2024. The permit application will be available for viewing and copying at Kaufman County Library, Reference Desk, 3790 South Houston Street, Kaufman, 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=-96.429722,32.761666&level=18

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

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

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

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

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

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

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

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

INFORMATION AVAILABLE ONLINE. For details about the status of the application, visit the Commissioners' Integrated Database at <u>www.tceq.texas.gov/goto/cid</u>. 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 <u>https://www14.tceq.texas.gov/epic/eComment/</u>, 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 <u>www.tceq.texas.gov/goto/pep</u>. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from Oak National Holdings, LLC at the address stated above or by calling Mr. Andrew Cansler, P.E. of reUse Engineering, Inc. at 214-682-5206.

Issuance Date: July 31, 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

PERMISO PROPUESTO NO. WQ0016566001

SOLICITUD. Oak National Holdings, LLC, 5763 South State Highway 205, Suite 100, Rockwall, Texas 75032 ha solicitado a la Comisión de Calidad Ambiental del Estado de Texas (TCEQ) para el propuesto Permiso No. WQ0016566001 (EPA I.D. No. TX 0146269) 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 diario de 125.000 galones por día. La planta está ubicada aproximadamente 0.65 millas al noreste de la intersección de Farm-to-Market Road 548 y Gateway Boulevard en el Condado de Kaufman, Texas 75126. La ruta de descarga será desde el sitio de la planta hasta un canal artificial; de allí a Mustang Creek; desde allí hasta East Fork Trinity River. La TCEQ recibió esta solicitud el 28 de junio de 2024. La solicitud para el permiso estará disponible para leerla y copiarla en Kaufman County Library, mostrador de referencia, 3790 South Houston Street, Kaufman, Texas antes de la fecha de publicación de este aviso en el periódico. La solicitud (cualquier actualización y aviso inclusive) está disponible electrónicamente en la siguiente página web: https://www.tceg.texas.gov/permitting/wastewater/pending-permits/tpdes-applications.Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación es proporcionado como una cortesía y no es parte de la solicitud o del aviso. Para la ubicación

exacta, consulte la solicitud.

https://gisweb.tceq.texas.gov/LocationMapper/?marker=-96.429722,32.761666&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 reconsideración de la solicitor de la solicitor es un procedimiento legal similar a un procedimiento legal civil en un tribunal de distrito del estado.

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

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

LISTA DE CORREO. Si somete comentarios públicos, un pedido para una audiencia administrativa de lo contencioso o una reconsideración de la decisión del Director Ejecutivo, la Oficina del Secretario Principal enviará por correo los avisos públicos en relación con la solicitud. Ademas, puede pedir que la TCEQ ponga su nombre en una or mas de las listas correos siguientes (1) la lista de correo permanente para recibir los avisos de el solicitante indicado por nombre y número del permiso específico y/o (2) la lista de correo de todas las solicitudes en un condado específico. 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 Oak National Holdings, LLC a la dirección indicada arriba o llamando a Andrew Cansler, P.E., reUse Engineering, Inc. al 214-682-5206.

Fecha de emisión 31 de julio de 2024

Texas Commission on Environmental Quality



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

NEW

PERMIT NO. WQ0016566001

APPLICATION AND PRELIMINARY DECISION. Oak National Holdings, LLC, 5763 South State Highway 205, Suite 100, Rockwell, Texas 75032, has applied to the Texas Commission on Environmental Quality (TCEQ) for new Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0016566001, to authorize the discharge of treated domestic wastewater at a daily average flow not to exceed 125,000 gallons per day. TCEQ received this application on June 28, 2024.

The facility will be located approximately 0.65 miles northeast of the intersection of Farm-to-Market Road 548 and Gateway Boulevard, in Kaufman County, Texas 75126. The treated effluent will be discharged to a ditch, thence to Mustang Creek, thence to East Fork Trinity River in Segment No. 0819 of the Trinity River Basin. The unclassified receiving water use is limited aquatic life use for the ditch and Mustang Creek. The designated uses for Segment No. 0819 are primary contact recreation and intermediate aquatic life use. In accordance with 30 TAC § 307.5 and the Procedures to Implement the Texas Surface Water Quality Standards (June 2010), an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in East Fork Trinity River, which has been identified as having intermediate aquatic life use. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received. 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=-96.429722,32.761666&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 Kaufman County Library, Reference Desk, 3790 South Houston Street, Kaufman, Texas. The application, including any updates, and associated notices are available electronically at the following webpage: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications.

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.

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 <u>www.tceq.texas.gov/goto/cid</u>. 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 <u>www.tceq.texas.gov/goto/comment</u>, 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 <u>www.tceq.texas.gov/goto/pep</u>. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from Oak National Holdings, LLC at the address stated above or by calling Mr. Andrew Cansler, P.E. of reUse Engineering, Inc. at 214-682-5206.

Issuance Date: March 6, 2025

Comisión De Calidad Ambiental Del Estado De Texas



ANUNCIO DE SOLICITUD Y DECISIÓN PRELIMINAR PARA EL PERMISO TPDES PARA AGUAS RESIDUALES MUNICIPALES

NUEVO

PERMISO Nº WQ0016566001

SOLICITUD Y DECISIÓN PRELIMINAR. Oak National Holdings, LLC, 5763 South State Highway 205, Suite 100, Rockwell, Texas 75032, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) un nuevo Permiso No. WQ0016566001, autorizar la descarga de aguas residuales domésticas tratadas a un caudal promedio diario que no exceda los 125,000 galones por día. TCEQ recibió esta solicitud el 28 de junio de 2024.

La instalación estará ubicada aproximadamente a 0.65 millas al noreste de la intersección de Farm-to-Market Road 548 v Gateway Boulevard, en el condado de Kaufman, Texas 75126. El efluente regenerado se descargará a una zanja, de allí a Mustang Creek, de allí a East Fork Trinity River en el Segmento No. 0819 de la cuenca del río Trinity. El uso no clasificado del agua receptora es el uso limitado de la vida acuática para la zanja y el arroyo Mustang. Los usos designados del Segmento No. 0819 son el contacto primario, la recreación y el uso intermedio de la vida acuática. De acuerdo con 30 Código Administrativo de Texas §307.5 y los Procedimientos para Implementar los Estándares de Calidad de Aguas Superficiales de Texas (junio de 2010), se realizó una revisión antidegradación de las aguas receptoras. Una revisión antidegradación de Nivel 1 ha determinado preliminarmente que los usos de la calidad del agua existentes no se verán afectados por esta acción de permiso. Se mantendrán los criterios numéricos y descriptivos para proteger los usos existentes. Una revisión de Nivel 2 ha determinado preliminarmente que no se espera una degradación significativa de la calidad del agua en el río East Fork Trinity, que se ha identificado como de uso intermedio de vida acuática. Se mantendrán y protegerán los usos existentes. La determinación preliminar puede ser reexaminada y puede ser modificada si se recibe nueva información. Este enlace a un mapa electrónico de la ubicación general del sitio o instalación se proporciona como cortesía pública y no es parte de la solicitud o aviso. Para conocer la ubicación exacta, consulte la aplicación. https://gisweb.tceq.texas.gov/LocationMapper/?marker=-96.429722,32.761666&level=18

El Director Ejecutivo de la TCEQ ha completado el examen técnico de la solicitud y ha preparado un proyecto de permiso. El borrador del permiso, de ser aprobado, establecería las condiciones bajo las cuales la instalación debe operar. El Director Ejecutivo ha tomado una decisión preliminar de que este permiso, si se expide, cumple con todos los requisitos legales y reglamentarios. La solicitud de permiso, la decisión preliminar del Director Ejecutivo y el borrador del permiso están disponibles para ver y copiar en la Biblioteca del Condado de Kaufman, Reference Desk, 3790 South Houston Street, Kaufman, Texas. La solicitud, incluidas las actualizaciones, y los avisos asociados están disponibles electrónicamente en la siguiente página web:

https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications

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

COMENTARIO PÚBLICO / REUNIÓN PÚBLICA. Puede enviar comentarios públicos o solicitar una reunión pública sobre esta solicitud. El propósito de una reunión pública es brindar la oportunidad de enviar comentarios o hacer preguntas sobre la solicitud. TCEQ lleva a cabo una reunión pública si el Director Ejecutivo determina que existe un grado significativo de interés público en la solicitud o si lo solicita un legislador local. Una reunión pública no es una audiencia de caso impugnado.

OPORTUNIDAD PARA UNA AUDIENCIA DE CASO IMPUGNADO. Después de la fecha límite para presentar comentarios públicos, el Director Ejecutivo considerará todos los comentarios oportunos y preparará una respuesta a todos los comentarios públicos relevantes, materiales o significativos. A menos que la solicitud se remita directamente para una audiencia de caso impugnado, la respuesta a los comentarios se enviará por correo a todos los que presentaron comentarios públicos y a las personas que están en la lista de correo de esta solicitud. Si se reciben comentarios, el correo también proporcionará instrucciones para solicitar una audiencia de caso impugnado o una reconsideración de la decisión del Director Ejecutivo. Una audiencia de caso impugnado es un procedimiento legal similar a un juicio civil en un tribunal de distrito estatal.

PARA SOLICITAR UNA AUDIENCIA DE CASO IMPUGNADO, DEBE INCLUIR LOS SIGUIENTES ELEMENTOS EN SU SOLICITUD: su nombre, dirección, número de teléfono; nombre del solicitante y número de permiso propuesto; la ubicación y distancia de su propiedad/actividades en relación con la instalación propuesta; una descripción específica de cómo se vería afectado negativamente por la instalación de una manera que no es común para el público en general; una lista de todas las cuestiones de hecho en disputa que envíe durante el período de comentarios; y la declaración "[Yo/nosotros] solicito una audiencia de caso impugnado". Si la solicitud de audiencia de caso impugnado se presenta en nombre de un grupo o asociación, la solicitud debe designar al representante del grupo para recibir correspondencia futura; identificar por nombre y dirección física a un miembro individual del grupo que se vería afectado negativamente por la instalación o actividad propuesta; proporcionar la información mencionada anteriormente con respecto a la ubicación y la distancia del miembro afectado de la instalación o actividad; explicar cómo y por qué el miembro se vería afectado; y explicar cómo los intereses que el grupo busca proteger son relevantes para el propósito del grupo.

Después del cierre de todos los períodos de comentarios y solicitudes aplicables, el Director Ejecutivo enviará la solicitud y cualquier solicitud de reconsideración o de una audiencia de caso impugnado a los Comisionados de TCEQ para su consideración en una reunión programada de la Comisión. La Comisión solo puede conceder una solicitud de audiencia de un caso impugnado sobre cuestiones que el solicitante presentó en sus comentarios oportunos que no fueron retirados posteriormente. Si se concede una audiencia, el tema de una audiencia se limitará a cuestiones de hecho en disputa o preguntas mixtas de hecho y derecho relacionadas con preocupaciones relevantes y materiales sobre la calidad del agua presentadas durante el período de comentarios.

ACCIÓN DEL DIRECTOR EJECUTIVO. El Director Ejecutivo puede emitir la aprobación final de la solicitud a menos que se presente una solicitud de audiencia de caso impugnado a tiempo o una solicitud de reconsideración. Si se presenta una solicitud de audiencia oportuna o una solicitud de reconsideración, el Director Ejecutivo no emitirá la aprobación final del permiso y enviará la solicitud y la solicitud a los Comisionados de TCEQ para su consideración en una reunión programada de la Comisión.

LISTA DE CORREO. Si presenta comentarios públicos, una solicitud para una audiencia de caso impugnado o una reconsideración de la decisión del Director Ejecutivo, se le agregará a la lista de correo de esta solicitud específica para recibir avisos públicos futuros enviados por correo por la Oficina del Secretario Principal. Además, puede solicitar ser incluido en: (1) la lista de correo permanente para un nombre de solicitante específico y un número de permiso; y/o (2) la lista de correo de un condado específico. Si desea ser incluido en la lista de correo permanente y/o del condado, especifique claramente qué lista(s) y envíe su solicitud a la Oficina del Secretario Principal de TCEQ a la dirección que se indica a continuación.

Todos los comentarios públicos por escrito y las solicitudes de reuniones públicas deben enviarse a la Oficina del Secretario Principal, MC 105, Comisión de Calidad Ambiental de Texas, P.O. Box 13087, Austin, TX 78711-3087 o electrónicamente en www.tceq.texas.gov/goto/comment dentro de los 30 días a partir de la fecha de publicación de este aviso en el periódico.

INFORMACIÓN DISPONIBLE EN LÍNEA. Para obtener detalles sobre el estado de la solicitud, visite la Base de Datos Integrada de los Comisionados en www.tceq.texas.gov/goto/cid. Busque en la base de datos utilizando el número de permiso para esta solicitud, que se proporciona en la parte superior de este aviso.

CONTACTOS E INFORMACIÓN DE LA AGENCIA. Los comentarios y solicitudes públicas deben presentarse electrónicamente en www.tceq.texas.gov/goto/comment, o por escrito a la Comisión de Calidad Ambiental de Texas, Oficina del Secretario Principal, MC 105, P.O. Box 13087, Austin, Texas 78711-3087. Cualquier información personal que envíe a la TCEQ se convertirá en parte del registro de la agencia; Esto incluye 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 TCEQ, línea gratuita, 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 más información de Oak National Holdings, LLC en la dirección indicada anteriormente o llamando al Sr. Andrew Cansler, P.E., de reUse Engineering, Inc., al 214-682-5206.

Fecha de emission: 6 de marzo de 2025



TPDES PERMIT NO. WQ0016566001 [For TCEQ office use only - EPA I.D. No. TX0146269]

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

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

Oak National Holdings, LLC

whose mailing address is

5763 South State Highway 205, Suite 100 Rockwell, Texas 75032

is authorized to treat and discharge wastes from the Cook Additions Wastewater Treatment Facility, SIC Code 4952

located approximately 0.65 miles northeast of the intersection of Farm-to-Market Road 548 and Gateway Boulevard, in Kaufman County, Texas 75126

to a ditch, thence to Mustang Creek, thence to East Fork Trinity River in Segment No. 0819 of the Trinity 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

Oak National Holdings, LLC

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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 daily average flow of effluent shall not exceed 0.125 million gallons per day (MGD), nor shall the average discharge during any twohour period (2-hour peak) exceed 347 gallons per minute.

| Effluent Characteristic | Discharge Limitations | | | | Min. Self-Monitoring Requirements | |
|--|-----------------------|-----------|-----------|-------------|--------------------------------------|------------------|
| | Daily Avg | 7-day Avg | Daily Max | Single Grab | Report Daily Avg. & Max. Single Grab | |
| | 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) | 5 (5.2) | 10 | 20 | 30 | One/week | Grab |
| Total Suspended Solids | 5 (5.2) | 10 | 20 | 30 | One/week | Grab |
| Ammonia Nitrogen | 2 (2.1) | 5 | 10 | 15 | One/week | Grab |
| Total Phosphorus | 0.5(0.52) | 1 | 2 | 3 | One/week | Grab |
| <i>E. coli</i> , colony-forming units or most probable number per 100 ml | 126 | N/A | N/A | 399 | Five/week | Grab |

- 2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. 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 month 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 5.0 mg/l and shall be monitored once per week by grab sample.

Page 2

TPDES Permit No. WQ0016566001

Outfall Number 001

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 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 24hour 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 continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).

- b. Grab sample an individual sample collected in less than 15 minutes.
- 4. Treatment Facility (facility) wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
- 5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids that have not been classified as hazardous waste separated from wastewater by unit processes.
- 6. The term "biosolids" is defined as sewage sludge that has been tested or processed to meet Class A, Class AB, or Class B pathogen standards in 30 TAC Chapter 312 for beneficial use.
- 7. Bypass the intentional diversion of a waste stream from any portion of a treatment facility.

MONITORING AND REPORTING REQUIREMENTS

1. Self-Reporting

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, effluent monitoring data shall be submitted each month, to the Enforcement Division (MC 224), by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be submitted online using the NetDMR reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. Monitoring results must be signed and certified as required by Monitoring and Reporting Requirements No. 10.

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

- 2. Test Procedures
 - a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.
 - b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC § 25, Environmental Testing Laboratory Accreditation and Certification.
- 3. Records of Results
 - a. Monitoring samples and measurements shall be taken at times and in a manner so as to

be representative of the monitored activity.

- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use or biosolids and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.
- c. Records of monitoring activities shall include the following:
 - i. date, time and place of sample or measurement;
 - ii. identity of individual who collected the sample or made the measurement.
 - iii. date and time of analysis;
 - iv. identity of the individual and laboratory who performed the analysis;
 - v. the technique or method of analysis; and
 - vi. the results of the analysis or measurement and quality assurance/quality control records.

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

4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

5. Calibration of Instruments

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

6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later

than 14 days following each schedule date to the Regional Office and the Enforcement Division (MC 224).

- 7. Noncompliance Notification
 - a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Except as allowed by 30 TAC § 305.132, report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. For Publicly Owned Treatment Works (POTWs), effective December 21, 2025, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEO website unless the permittee requests and obtains an electronic reporting waiver. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
 - b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
 - i. Unauthorized discharges as defined in Permit Condition 2(g).
 - ii. Any unanticipated bypass that exceeds any effluent limitation in the permit.
 - iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.
 - c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.
 - d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.
- 8. In accordance with the procedures described in 30 TAC §§ 35.301 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.
- 9. Changes in Discharges of Toxic Substances

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

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - i. One hundred micrograms per liter (100 μ g/L);
 - ii. Two hundred micrograms per liter (200 μ g/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 μ g/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 μ g/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 upon the effective 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 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.

TCEQ Revision 06/2020

SLUDGE PROVISIONS

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

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

A. General Requirements

- 1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge or biosolids.
- 2. In all cases, if the person (permit holder) who prepares the sewage sludge 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

Sewage sludge or biosolids shall be tested once during the term of this permit in 1. 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 4) within seven (7) days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped, and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. The permittee must submit this annual report by September 30th of each year, using the online electronic reporting system available through TCEQ's website. If the pemittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 4) and the Enforcement Division (MC 224).

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

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

TABLE 1

* 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:

<u>Alternative 1</u> - 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:

<u>Alternative 2</u> - 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

<u>Alternative 3</u> - 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)(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

<u>Alternative 4</u> - 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).

<u>Alternative 2</u> - 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.

<u>Alternative 3</u> - 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.

- <u>Alternative 1</u> The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%.
- <u>Alternative 2</u> 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.
- <u>Alternative 3</u> 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.
- <u>Alternative 4</u> 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.
- <u>Alternative 5</u> 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.
- <u>Alternative 6</u> 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.
- <u>Alternative 7</u> 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.

- <u>Alternative 8</u> 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.
- <u>Alternative 9</u> 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.
- <u>Alternative 10</u>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 is 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 | - once during the term of this permit |
|--|---------------------------------------|
| (TCLP) Test | |
| PCBs | - once during the term of this permit |

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 (*) <u>metric tons per 365-day period</u> | 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 FOR APPLICATION TO THE LAND MEETING CLASS A, CLASS AB or B BIOSOLIDS PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3

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

Table 2

A. Pollutant Limits

| | Table 2 | |
|--|---------|--|
| Pollutant Arsenic Cadmium Chromium Copper Lead Mercury Molybdenum Nickel Selenium Zinc | | Cumulative Pollutant Loading Rate (<u>pounds per acre</u>)* 36 35 2677 1339 268 15 Report Only 375 89 2500 |
| | Table 3 | |
| <u>Pollutant</u> Arsenic Cadmium Chromium | | Monthly Average Concentration (<u>milligrams per kilogram</u>)* 41 39 1200 |

1500

300

420

2800

36

Report Only

17

B. Pathogen Control

Copper

Mercury

Selenium

Nickel

Zinc

Molvbdenum

Lead

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.

*Dry weight basis

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 biosolids enters a wetland or other waters in the State.
- 2. Bulk biosolids not meeting Class A biosolids requirements shall be land applied in a manner which complies with Applicability in accordance with 30 TAC §312.41 and the Management Requirements in accordance with 30 TAC § 312.44.
- 3. Bulk biosolids shall be applied at or below the agronomic rate of the cover crop.
- 4. An information sheet shall be provided to the person who receives bulk Class A or AB biosolids sold or given away. The information sheet shall contain the following information:
 - a. The name and address of the person who prepared the Class A or AB biosolids that are sold or given away in a bag or other container for application to the land.
 - b. A statement that application of the 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 <u>five years</u>. 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), <u>or</u> 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 <u>indefinitely</u>. 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 is 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 must submit this annual report by September 30th of each year, using the online electronic reporting system available through TCEQ's website. If the pemittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 4) and the Enforcement Division ((MC 224).

- 1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
- 2. Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.
- 3. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
- 4. The frequency of monitoring listed in Section I.C. that applies to the permittee.
- 5. Toxicity Characteristic Leaching Procedure (TCLP) results.
- 6. PCB concentration in sludge or biosolids in mg/kg.
- 7. Identity of hauler(s) and TCEQ transporter number.
- 8. Date(s) of transport.
- 9. Texas Commission on Environmental Quality registration number, if applicable.
- 10. Amount of sludge or biosolids disposal dry weight (lbs/acre) at each disposal site.
- 11. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.
- 12. Level of pathogen reduction achieved (Class A, Class AB or Class B).
- 13. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B biosolids, include information on how site restrictions were met.
- 14. Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.
- 15. Vector attraction reduction alternative used as listed in Section I.B.4.

- 16. Amount of sludge or biosolids transported in dry tons/year.
- 17. The certification statement listed in either 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge or biosolids treatment activities, shall be attached to the annual reporting form.
- 18. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.
 - a. The location, by street address, and specific latitude and longitude.
 - b. The number of acres in each site on which bulk biosolids are applied.
 - c. The date and time bulk biosolids are applied to each site.
 - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk biosolids applied to each site.
 - e. The amount of biosolids (i.e., dry tons) applied to each site.

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

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

- A. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge or biosolids meets the requirements in 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge or biosolids and supplies that sewage sludge or biosolids to the owner or operator of a municipal solid waste landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.
- C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge or biosolids disposal practice.
- D. Sewage sludge or biosolids shall be tested once during the term of this permit 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 4) 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 4) and the Enforcement Division (MC 224) of the by September 30th of each year.

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

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

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

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

G. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permitee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 4) and the Enforcement Division (MC 224).

- 1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
- 2. Toxicity Characteristic Leaching Procedure (TCLP) results.
- 3. Annual sludge or biosolids production in dry tons/year.
- 4. Amount of sludge or biosolids disposed in a municipal solid waste landfill in dry tons/year.
- 5. Amount of sludge or biosolids transported interstate in dry tons/year.
- 6. A certification that the sewage sludge or biosolids meets the requirements of 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
- 7. Identity of hauler(s) and transporter registration number.
- 8. Owner of disposal site(s).
- 9. Location of disposal site(s).
- 10. Date(s) of disposal.

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

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

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

A. General Requirements

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

B. Record Keeping Requirements

- 1. For sludge or biosolids transported by an approved pipeline, the permittee must maintain records of the following:
 - a. the amount of sludge or biosolids transported;
 - b. the date of transport;
 - c. the name and TCEQ permit number of the receiving facility or facilities;
 - d. the location of the receiving facility or facilities;
 - e. the name and TCEQ permit number of the facility that generated the waste; and
 - f. copy of the written agreement between the permittee and the receiving facility to accept sludge or biosolids.
- 2. For sludge transported by a registered transporter, the permittee must maintain records of the completed trip tickets in accordance with 30 TAC § 312.145(a)(1)-(7) and amount of sludge or biosolids transported.
- 3. The above records shall be maintained on-site on a monthly basis and shall be made available to the TCEQ upon request. These records shall be retained for at least five years.

C. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permitee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 4) and the Enforcement Division (MC 224).

- 1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
- 2. the annual sludge or biosolids production;
- 3. the amount of sludge or biosolids transported;
- 4. the owner of each receiving facility;
- 5. the location of each receiving facility; and
- 6. the date(s) of disposal at each receiving facility.

TCEQ Revision 06/2020

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 C facility must be operated by a chief operator or an operator holding a Class C 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. The permittee shall provide nuisance odor prevention for the treatment facility in accordance with 30 TAC § 309.13(e)(2). Prior to construction, the permittee shall submit a nuisance odor prevention request for approval by the Executive Director in care of the TCEQ Wastewater Permitting Section (MC 148). The request for nuisance odor prevention shall be in the form of an engineering report, prepared and sealed by a licensed professional engineer, in support of the request according to the requirements of 30 TAC § 309.13(e)(2). The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). See Attachment A.
- 4. The permittee shall provide facilities for the protection of its wastewater treatment facility from a 100-year flood.
- 5. 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, five/week may be reduced to three/week. 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.
- 6. Prior to construction of the treatment facility, the permittee shall submit to the TCEQ Wastewater Permitting Section (MC 148) a summary transmittal letter in accordance with the requirements in 30 TAC § 217.6(d). If requested by the Wastewater Permitting Section,

the permittee shall submit plans and specifications and a final engineering design report which comply with 30 TAC Chapter 217, Design Criteria for Domestic Wastewater Systems. The permittee shall clearly show how the treatment system will meet the permitted effluent limitations required on Page 2 of this permit. A copy of the summary transmittal letter shall be available at the plant site for inspection by authorized representatives of the TCEQ.

7. Reporting requirements according to 30 TAC §§ 319.1-319.11 and any additional effluent reporting requirements contained in this permit are suspended from the effective date of the permit until plant startup or discharge from the facility described by this permit, whichever occurs first. The permittee shall provide written notice to the TCEQ Regional Office (MC Region 4) and the Applications Review and Processing Team (MC 148) of the Water Quality Division, in writing at least forty-five days prior to plant startup or anticipated discharge, whichever occurs first, on Notification of Completion Form 20007.



Attachment 'A' – Buffer Zone Map

STATEMENT OF BASIS/TECHNICAL SUMMARY AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

DESCRIPTION OF APPLICATION

| Applicant: | Oak National Holdings, LLC; Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0016566001, EPA I.D. No. TX0146269 |
|----------------------|--|
| Regulated Activity: | Domestic Wastewater Permit |
| Type of Application: | New Permit |
| Request: | New Permit |
| Authority: | Federal Clean Water Act (CWA) § 402; Texas Water Code § 26.027; 30 Texas Administrative Code (TAC) Chapters 30, 305, 307, 309, 312, and 319; Commission policies; and United States Environmental Protection Agency (EPA) guidelines. |

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**.

REASON FOR PROJECT PROPOSED

The applicant has applied to the Texas Commission on Environmental Quality (TCEQ) for a new permit to authorize the discharge of treated domestic wastewater at a daily average flow not to exceed 0.125 million gallons per day (MGD). The proposed wastewater treatment facility will serve a residential development in Kaufman County.

PROJECT DESCRIPTION AND LOCATION

The Cook Additions Wastewater Treatment Facility will be a membrane bioreactor (MBR) system. Treatment units will include fine screens, an aerobic tank, two anoxic tanks, membrane cells, a sludge press, and an Ultraviolet (UV) disinfection system. The facility has not been constructed.

The draft permit authorizes the disposal of sludge at a TCEQ-authorized land application site, codisposal landfill, wastewater treatment facility, or facility that further processes sludge.

The plant site will be located approximately 0.65 miles northeast of the intersection of Farm-to-Market Road 548 and Gateway Boulevard, in Kaufman County, Texas 75126.

Outfall Location:

| Outfall Number | Latitude | Longitude |
|----------------|-------------|-------------|
| 001 | 32.760499 N | 96.424622 W |

The treated effluent will be discharged to a ditch, thence to Mustang Creek, thence to East Fork Trinity River in Segment No. 0819 of the Trinity River Basin. The unclassified receiving water use is limited aquatic life use for the ditch and Mustang Creek. The designated uses for Segment No. 0819 are primary contact recreation and intermediate aquatic life use. The effluent limitations in the draft permit will maintain and protect the existing instream uses. In accordance with 30 TAC § 307.5 and the *Procedures*

Oak National Holdings, LLC TPDES Permit No. WQ0016566001 Statement of Basis/Technical Summary and Executive Director's Preliminary Decision

to Implement the Texas Surface Water Quality Standards (June 2010), an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in East Fork Trinity River, which has been identified as having intermediate aquatic life use. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

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 Texas Surface Water Quality Standards (TSWQS) and the State of Texas Water Quality Management Plan (WQMP).

In a case such as this, end-of-pipe compliance with pH limits between 6.0 and 9.0 standard units reasonably assures instream compliance with the TSWQS for pH when the discharge authorized is from a minor facility. This technology-based approach reasonably assures instream compliance with TSWQS criteria due to the relatively smaller discharge volumes authorized by these permits. This conservative assumption is based on TCEQ sampling conducted throughout the state which indicates that instream buffering quickly restores pH levels to ambient conditions. Similarly, this approach has been historically applied within EPA issued NPDES general permits where technology-based pH limits were established to be protective of water quality criteria.

The effluent limitations in the draft permit have been reviewed for consistency with the WQMP. The proposed effluent limitations are not contained in the approved WQMP. However, these limits will be included in the next WQMP update.

The discharge from this permit action is not expected to have an effect on any federal endangered or threatened aquatic or aquatic-dependent species or proposed species or their critical habitat. This determination is based on the United States Fish and Wildlife Service's (USFWS's) biological opinion on the State of Texas authorization of the TPDES (September 14, 1998; October 21, 1998, update). To make this determination for TPDES permits, TCEQ and EPA only considered aquatic or aquatic-dependent species occurring in watersheds of critical concern or high priority as listed in Appendix A of the USFWS biological opinion. The determination is subject to reevaluation due to subsequent updates or amendments to the biological opinion. The permit does not require EPA review with respect to the presence of endangered or threatened species.

Segment No. 0819 is currently listed on the state's inventory of impaired and threatened waters (the 2022 CWA § 303(d) list). The listing is for bacteria in water from the confluence with the Trinity River in Kaufman County to Rockwall-Forney Dam in Kaufman County (Assessment Unit 0819_01). This facility is designed to provide adequate disinfection and, when operated properly, should not add to the bacterial impairment of the segment. In addition, in order to ensure that the proposed discharge meets the stream bacterial standard, an effluent limitation of 126 colony-forming units (CFU) or most probable number (MPN) of *Escherichia coli* (*E. coli*) per 100 ml has been added to the draft permit.

SUMMARY OF EFFLUENT DATA

Self-reporting data is not available since the facility is not in operation.

DRAFT PERMIT CONDITIONS

The draft permit authorizes a discharge of treated domestic wastewater at a volume not to exceed a daily average flow of 0.125 MGD.

Oak National Holdings, LLC TPDES Permit No. WQ0016566001 Statement of Basis/Technical Summary and Executive Director's Preliminary Decision

The effluent limitations in the draft permit, based on a 30-day average, are 5 mg/l five-day carbonaceous biochemical oxygen demand (CBOD₅), 5 mg/l total suspended solids (TSS), 2 mg/l ammonia-nitrogen (NH₃-N), 0.5 mg/l total phosphorus (TP), 126 CFU or MPN of *E. coli* per 100 ml, and 5.0 mg/l minimum dissolved oxygen (DO). The permittee shall utilize an UV system for disinfection purposes and shall not exceed a daily average *E. coli* limit of 126 CFU or MPN per 100 ml.

The draft permit includes a requirement for the permittee to provide nuisance odor prevention for the treatment facility according to 30 TAC § 309.13(e)(2).

The draft permit includes Sludge Provisions according to the requirements of 30 TAC Chapter 312, Sludge Use, Disposal, and Transportation. 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.

SUMMARY OF CHANGES FROM APPLICATION

The applicant requested effluent limitations, based on a 30-day average, of 5 mg/l CBOD₅, 5 mg/l TSS, 2 mg/l NH₃-N, **1.0 mg/l TP**, 126 CFU or MPN of *E. coli* per 100 ml, and 5.0 mg/l minimum DO. However, effluent limitations of the draft permit based on a 30-day average, are 5 mg/l CBOD₅, 5 mg/l TSS, 2 mg/l NH₃-N, **0.5 mg/l TP**, 126 CFU or MPN of *E. coli* per 100 ml, and 5.0 mg/l minimum DO.

BASIS FOR DRAFT PERMIT

The following items were considered in developing the draft permit:

- 1. Application received on June 28, 2024, and additional information received on August 16, 2024.
- 3. 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.
- 4. 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.
- 5. Interoffice Memoranda from the Water Quality Assessment Section of the TCEQ Water Quality Division.
- 6. Consistency with the Coastal Management Plan: The facility is not located in the Coastal Management Program boundary.
- 7. *Procedures to Implement the Texas Surface Water Quality Standards* (IP), Texas Commission on Environmental Quality, June 2010, as approved by EPA, and the IP, January 2003, for portions of the 2010 IP not approved by EPA.
- 8. 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.
- 9. 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.

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 Shaun M. Speck at (512) 239-4549.

Shaun M. Speck

February 5, 2025

Shaun M. Speck Municipal Permits Team Wastewater Permitting Section (MC 148) Date



July 9, 2024

Ms. Abesha Michael Applications Review and Processing Team (MC148) Water Quality Division Texas Commission of Environmental Quality

RE: Application for Proposed Permit No.: WQ0016566001 (EPA I.D. No. TX0146269) Applicant Name: Oak National Holdings, LLC (CN604905935) Site Name: Cook Additions WWTP (RN112001086) Type of Application: New

Dear Ms. Michael,

Thank you for your review on the new application referenced above. Responses to the Notice of Deficiency issued on July 9, 2024 are detailed below:

1. The following is a portion of the NORI which contains information relevant to your application. Please read it carefully and indicate if it contains any errors or omissions. The complete notice will be sent to you once the application is declared administratively complete.

Please see excerpt below (and document attached) for revisions to the NORI:

APPLICATION. Oak National Holdings, LLC, 5763 State Highway 205, Suite 100, Rockwall, Texas 75032, has applied to the Texas Commission on Environmental Quality (TCEQ) for proposed Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0016566001 (EPA I.D. No. TX0146269) to authorize the discharge of treated wastewater at a volume not to exceed a daily average flow of 125,000 gallons per day. The domestic wastewater treatment facility will be located at approximately 0.65 miles northeast of the intersection of Farm-to-Market Road 548 and Gateway Boulevard, near the city of Forney, in Kaufman County, Texas 75126. The discharge route will be from the plant site to (Pending RWA) TCEQ received this application on June 28, 2024. The permit application will be available for viewing and copying at Kaufman County Library, Reference Desk, 3790 South Houston Street, Kaufman, 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:

<u>https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications</u>. 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. <u>https://gisweb.tceq.texas.gov/LocationMapper/?marker=-96.429722,32.761666&level=18</u>



Further information may also be obtained from Oak National Holdings, LLC at the address stated above or by calling Mr. Andrew Cansler, P.E. of reUse Engineering, Inc. at 214-682-5206.

2. The application indicates that public notices in Spanish are required. After confirming the portion of the NORI above does not contain any errors or omissions, please use the attached template to translate the NORI into Spanish. Only the first and last paragraphs are unique to this application and require translation. Please provide the translated Spanish NORI in a Microsoft Word document.

Please see attached document for the Spanish translation of the NORI, which includes the requested revisions in Item 1, NORI Review.

Thank you again for your prompt review of the permit application. Please contact me if you have any questions or comments.

Sincerely,

| Pol

Hilary Bond Director of Permitting and Entitlements reUse Engineering, Inc.

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

PERMISO PROPUESTO NO. WQoo_____

SOLICITUD. Oak National Holdings, LLC, 5763 State Highway 205, Suite 100, Rockwall, Texas 75032 ha solicitado a la Comisión de Calidad Ambiental del Estado de Texas (TCEQ) para el propuesto Permiso No. WQoo16566001 (EPA I.D. No. TX 0146269) 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 diario de 125.000 galones por día. La planta está ubicada aproximadamente 0,65 millas al noreste de la intersección de Farm-to-Market Road 548 y Gateway Boulevard en el Condado de Kaufman, Texas. La ruta de descarga es del sitio de la planta a *[en un canal de drenaje construido ubicado* alrededor del perímetro de la propiedad adyacente. La ubicación del emisario es el aliviadero de la cuenca de retención/detención del desarrollo. Se debe considerar la cuenca existente y *construir su aliviadero]*. La TCEQ recibió esta solicitud el 28 de junio de 2024. La solicitud para el permiso estará disponible para leerla y copiarla en Kaufman County Library, mostrador de referencia, 3790 South Houston Street, Kaufman, 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=-96.429722,32.761666&level=18

[Include the following non-italicized sentence if the facility is located in the Coastal Management Program boundary. The Coastal Management Program boundary is the area along the Texas Coast of the Gulf of México as depicted on the map in 31 TAC §503.1 and includes part or all of the following counties: Cameron, Willacy, Kenedy, Kleberg, Nueces, San Patricio, Aransas, Refugio, Calhoun, Victoria, Jackson, Matagorda, Brazoria, Galveston, Harris, Chambers, Jefferson y Orange.] El Director Ejecutivo de la TCEQ ha revisado esta medida para ver si está de acuerdo con los objetivos y las regulaciones del Programa de Administración Costero de Texas (CMP) de acuerdo con las regulaciones del Consejo Coordinador de la Costa (CCC) y ha determinado que la acción es conforme con las metas y regulaciones pertinentes del CMP.

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

COMENTARIO PUBLICO / REUNION PUBLICA. Usted puede presentar

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

OPORTUNIDAD DE UNA AUDIENCIA ADMINISTRATIVA DE LO CONTENCIOSO.

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

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

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

LISTA DE CORREO. Si somete comentarios públicos, un pedido para una audiencia

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

CONTACTOS E INFORMACIÓN A LA AGENCIA. Todos los comentarios públicos y solicitudes deben ser presentadas electrónicamente vía

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

También se puede obtener información adicional del Oak National Holdings, LLC a la dirección indicada arriba o llamando a Andrew Cansler, P.E., reUse Engineering, Inc. al 214-682-5206.

Fecha de emisión _____ [Date notice issued]

Jon Niermann, *Chairman* Bobby Janecka, *Commissioner* Catarina R. Gonzales, *Commissioner* Kelly Keel, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 28, 2024

Dear Applicant:

Re: Confirmation of Submission of the New Private Domestic Wastewater Individual Permit Application

This is an acknowledgement that you have successfully completed Private Domestic Wastewater Individual Permit Application.

ER Account Number: ER105186 Application Reference Number: 663409 Authorization Number: WQ0016566001 Site Name: Cook Additions WWTP Regulated Entity: RN112001086 - COOK ADDITIONS WWTP Customer(s): CN604905935 - Oak National Holdings, LLC

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

P.O. Box 13087 * Austin, Texas 78711-3087 * 512-239-1000 * tceq.texas.gov

Texas Commission on Environmental Quality

New Domestic or Industrial Individual Permit

Site Information (Regulated Entity)

| What is the name of the site to be authorized? | Cook Additions WWTP |
|---|---|
| Does the site have a physical address? | No |
| Because there is no physical address, describe how to locate this site: | The WWTF site is located appx 0.65 mi NE of the intersection of FM 548 and Gateway Blvd in Forney, TX |
| City | Forney |
| State | ТХ |
| ZIP | 75126 |
| County | KAUFMAN |
| Latitude (N) (##.######) | 32.761799 |
| Longitude (W) (-###.######) | -96.429652 |
| 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)? | |
| What is the name of the Regulated Entity (RE)? | Cook Additions WWTP |
| Does the RE site have a physical address? | No |
| Because there is no physical address, describe how to locate this site: | The WWTF site is located appx 0.65 mi NE of the intersection of FM 548 and Gateway Blvd in Forney, TX |
| City | Forney |
| State | ТХ |
| ZIP | 75126 |
| County | KAUFMAN |
| Latitude (N) (##.######) | 32.761799 |
| Longitude (W) (-###.######) | -96.429652 |
| Facility NAICS Code | 221320 |
| What is the primary business of this entity? | WW treatment for residential community addition |
| | |

OAK NAT-Customer (Applicant) Information (Owner)

How is this applicant associated with this site? What is the applicant's Customer Number (CN)? Type of Customer Full legal name of the applicant: Legal Name Texas SOS Filing Number Federal Tax ID State Franchise Tax ID State Sales Tax ID Local Tax ID Owner CN604905935 Partnership

OAK NATIONAL HOLDINGS, LLC 801270303

32041875595

| DUNS Number | |
|---|---|
| DUNS Number | |
| Number of Employees Independently Owned and Operated? | Yes |
| I certify that the full legal name of the entity applying for this permit has | Yes |
| been provided and is legally authorized to do business in Texas. | 105 |
| Responsible Authority Contact | |
| Organization Name | OAK NATIONAL HOLDINGS, LLC |
| Prefix | MR |
| First | Jay |
| Middle | |
| Last | Webb |
| Suffix | |
| Credentials | |
| Title | Director |
| Responsible Authority Mailing Address | |
| Enter new address or copy one from list: | |
| Address Type | Domestic |
| Mailing Address (include Suite or Bldg. here, if applicable) | 5763 S STATE HIGHWAY 205 STE 100 |
| Routing (such as Mail Code, Dept., or Attn:) | |
| City | ROCKWALL |
| State | ТХ |
| ZIP | 75032 |
| Phone (###-####-#####) | 2145021021 |
| Extension | |
| Alternate Phone (###-####-####) | |
| Fax (###-#####) | |
| | |
| E-mail | jayw@alturahomes.com |
| E-mail | jayw@alturahomes.com |
| E-mail Billing Contact | jayw@alturahomes.com |
| | jayw@alturahomes.com |
| Billing Contact | CN604905935, OAK NATIONAL |
| Billing Contact Responsible contact for receiving billing statements: Select the permittee that is responsible for payment of the annual fee. | CN604905935, OAK NATIONAL HOLDINGS, LLC |
| Billing Contact Responsible contact for receiving billing statements: Select the permittee that is responsible for payment of the annual fee. Organization Name | CN604905935, OAK NATIONAL HOLDINGS, LLC OAK NATIONAL HOLDINGS, LLC |
| Billing Contact Responsible contact for receiving billing statements: Select the permittee that is responsible for payment of the annual fee. Organization Name Prefix | CN604905935, OAK NATIONAL HOLDINGS, LLC OAK NATIONAL HOLDINGS, LLC MR |
| Billing Contact Responsible contact for receiving billing statements: Select the permittee that is responsible for payment of the annual fee. Organization Name Prefix First | CN604905935, OAK NATIONAL HOLDINGS, LLC OAK NATIONAL HOLDINGS, LLC |
| Billing Contact Responsible contact for receiving billing statements: Select the permittee that is responsible for payment of the annual fee. Organization Name Prefix First Middle | CN604905935, OAK NATIONAL HOLDINGS, LLC OAK NATIONAL HOLDINGS, LLC MR Jay |
| Billing Contact Responsible contact for receiving billing statements: Select the permittee that is responsible for payment of the annual fee. Organization Name Prefix First Middle Last | CN604905935, OAK NATIONAL HOLDINGS, LLC OAK NATIONAL HOLDINGS, LLC MR |
| Billing Contact Responsible contact for receiving billing statements: Select the permittee that is responsible for payment of the annual fee. Organization Name Prefix First Middle Last Suffix | CN604905935, OAK NATIONAL HOLDINGS, LLC OAK NATIONAL HOLDINGS, LLC MR Jay |
| Billing Contact Responsible contact for receiving billing statements: Select the permittee that is responsible for payment of the annual fee. Organization Name Prefix First Middle Last Suffix Credentials | CN604905935, OAK NATIONAL HOLDINGS, LLC OAK NATIONAL HOLDINGS, LLC MR Jay Webb |
| Billing Contact Responsible contact for receiving billing statements: Select the permittee that is responsible for payment of the annual fee. Organization Name Prefix First Middle Last Suffix Credentials Title | CN604905935, OAK NATIONAL HOLDINGS, LLC OAK NATIONAL HOLDINGS, LLC MR Jay Webb Director |
| Billing Contact Responsible contact for receiving billing statements: Select the permittee that is responsible for payment of the annual fee. Organization Name Prefix First Middle Last Suffix Credentials | CN604905935, OAK NATIONAL HOLDINGS, LLC OAK NATIONAL HOLDINGS, LLC MR Jay Webb |
| Billing Contact Responsible contact for receiving billing statements: Select the permittee that is responsible for payment of the annual fee. Organization Name Prefix First Middle Last Suffix Credentials Title | CN604905935, OAK NATIONAL HOLDINGS, LLC OAK NATIONAL HOLDINGS, LLC MR Jay Webb Director CN604905935, OAK NATIONAL |
| Billing Contact Responsible contact for receiving billing statements: Select the permittee that is responsible for payment of the annual fee. Organization Name Prefix First Middle Last Suffix Credentials Title Enter new address or copy one from list: | CN604905935, OAK NATIONAL HOLDINGS, LLC OAK NATIONAL HOLDINGS, LLC MR Jay Webb Director CN604905935, OAK NATIONAL |
| Billing Contact Responsible contact for receiving billing statements: Select the permittee that is responsible for payment of the annual fee. Organization Name Prefix First Middle Last Suffix Credentials Title Enter new address or copy one from list: Mailing Address | CN604905935, OAK NATIONAL HOLDINGS, LLC OAK NATIONAL HOLDINGS, LLC MR Jay Webb Director CN604905935, OAK NATIONAL HOLDINGS, LLC |
| Billing Contact Responsible contact for receiving billing statements: Select the permittee that is responsible for payment of the annual fee. Organization Name Prefix First Niddle Last Suffix Credentials Title Enter new address or copy one from list: Mailing Address Address Type | CN604905935, OAK NATIONAL HOLDINGS, LLC OAK NATIONAL HOLDINGS, LLC MR Jay Webb Director CN604905935, OAK NATIONAL HOLDINGS, LLC Domestic |
| Billing Contact Responsible contact for receiving billing statements: Select the permittee that is responsible for payment of the annual fee. Organization Name Prefix First Niddle Last Suffix Credentials Title Enter new address or copy one from list: Mailing Address Address Type Mailing Address (include Suite or Bldg. here, if applicable) | CN604905935, OAK NATIONAL HOLDINGS, LLC OAK NATIONAL HOLDINGS, LLC MR Jay Webb Director CN604905935, OAK NATIONAL HOLDINGS, LLC Domestic |
| Billing Contact Responsible contact for receiving billing statements: Select the permittee that is responsible for payment of the annual fee. Organization Name Prefix First Middle Last Suffix Credentials Title Enter new address or copy one from list: Mailing Address Address Type Mailing Address (include Suite or Bldg. here, if applicable) Routing (such as Mail Code, Dept., or Attn:) | CN604905935, OAK NATIONAL HOLDINGS, LLC OAK NATIONAL HOLDINGS, LLC MR Jay Webb Director CN604905935, OAK NATIONAL HOLDINGS, LLC Domestic 5763 S STATE HIGHWAY 205 STE 100 |

Phone (###-#####) Extension Alternate Phone (###-#####) Fax (###-#######) E-mail 2145021021

jayw@alturahomes.com

Application Contact

| Person TCEQ should contact for questions about this application | n: |
|---|---|
| Same as another contact? | |
| Organization Name | reUse Engineering Inc |
| Prefix | MRS |
| First | Hilary |
| Middle | |
| Last | Bond |
| Suffix | |
| Credentials | |
| Title | Director of Permitting and Entitlements |
| Enter new address or copy one from list: | |
| Mailing Address | |
| Address Type | Domestic |
| Mailing Address (include Suite or Bldg. here, if applicable) | 4411 S INTERSTATE 35 STE 100 |
| Routing (such as Mail Code, Dept., or Attn:) | |
| City | GEORGETOWN |
| State | ТХ |
| ZIP | 78626 |
| Phone (###-#####) | 5122850302 |
| Extension | |
| Alternate Phone (###-#####) | |
| Fax (###-#####) | |
| E-mail | hilary@reuseeng.com |

Technical Contact

| Person TCEQ should contact for questions about this application: | |
|--|------------------------------|
| Same as another contact? | |
| Organization Name | reUse Engineering Inc |
| Prefix | MR |
| First | Andrew |
| Middle | |
| Last | Cansler |
| Suffix | |
| Credentials | PE |
| Title | Water Resource Engineer |
| Enter new address or copy one from list: | |
| Mailing Address | |
| Address Type | Domestic |
| Mailing Address (include Suite or Bldg. here, if applicable) | 4411 S INTERSTATE 35 STE 100 |
| Routing (such as Mail Code, Dept., or Attn:) | |

| City |
|----------------------------|
| State |
| ZIP |
| Phone (###-###-####) |
| Extension |
| Alternate Phone (###-####) |
| Fax (###-###-####) |
| E-mail |
| |

DMR Contact

| Person responsible for submitting Discharge Monitoring Report Forms: | |
|---|--|
| Same as another contact? | CN604905935, OAK NATIONAL HOLDINGS, LLC |
| Organization Name | OAK NATIONAL HOLDINGS, LLC |
| Prefix | MR |
| First | Jay |
| Middle | |
| Last | Webb |
| Suffix | |
| Credentials | |
| Title | Director |
| Enter new address or copy one from list: | |
| Mailing Address: | |
| Address Type | Domestic |
| Mailing Address (include Suite or Bldg. here, if applicable) | 5763 S STATE HIGHWAY 205 STE 100 |
| Routing (such as Mail Code, Dept., or Attn:) | |
| City | ROCKWALL |
| State | ТХ |
| ZIP | 75032 |
| Phone (###-#####) | 2145021021 |
| Extension | |
| Alternate Phone (###-#####) | |
| Fax (###-####) | |
| E-mail | jayw@alturahomes.com |
| | |

Section 1# Permit Contact

| Permit Contact#: 1 | |
|--|--|
| Person TCEQ should contact throughout the permit term. | |
| 1) Same as another contact? | CN604905935, OAK NATIONAL HOLDINGS, LLC |
| 2) Organization Name | OAK NATIONAL HOLDINGS, LLC |
| 3) Prefix | MR |
| 4) First | Jay |
| 5) Middle | |
| 6) Last | Webb |
| 7) Suffix | |

GEORGETOWN TX 78626 2146825206

andrew@reuseeng.com

| 8) Credentials | |
|---|----|
| 9) Title | |
| Mailing Address | |
| 10) Enter new address or copy one from list | |
| 11) Address Type | |
| 11.1) Mailing Address (include Suite or Bldg. here, if applicable | e) |
| 11.2) Routing (such as Mail Code, Dept., or Attn:) | |
| 11.3) City | |
| 11.4) State | |
| 11.5) ZIP | |
| 12) Phone (###-###-####) | |
| 13) Extension | |
| 14) Alternate Phone (###-######) | |
| 15) Fax (###-###-####) | |
| 16) E-mail | |
| | |

Section 2# Permit Contact

Permit Contact#: 2

Person TCEQ should contact throughout the permit term. 1) Same as another contact? **Application Contact** 2) Organization Name reUse Engineering Inc 3) Prefix MRS 4) First Hilary 5) Middle 6) Last Bond 7) Suffix 8) Credentials 9) Title Mailing Address 10) Enter new address or copy one from list Domestic 11) Address Type 11.1) Mailing Address (include Suite or Bldg. here, if applicable) 11.2) Routing (such as Mail Code, Dept., or Attn:) GEORGETOWN 11.3) City 11.4) State ТΧ 11.5) ZIP 78626 12) Phone (###-####-####) 5122850302 13) Extension 14) Alternate Phone (###-####-#####) 15) Fax (###-####-####) 16) E-mail hilary@reuseeng.com

Public Notice Information

Individual Publishing the Notices

1) Prefix 2) First and Last Name 3) Credential

Director

Domestic 5763 S STATE HIGHWAY 205 STE 100

ROCKWALL ТΧ 75032 2145021021

jayw@alturahomes.com

Director of Permitting and Entitlements

4411 S INTERSTATE 35 STE 100

MRS Hilary Bond

| 4) Title | Director of Permitting and Entitlements |
|--|---|
| 5) Organization Name | reUse Engineering Inc |
| 6) Mailing Address | 4411 S INTERSTATE 35 STE 100 |
| 7) Address Line 2 | |
| 8) City | GEORGETOWN |
| 9) State | TX |
| 10) Zip Code | 78626 |
| 10/210 Code 11) Phone (###-######) | 5122850302 |
| 12) Extension | 3122030302 |
| 13) Fax (###-######) | |
| 14) Email | hilary@reuseeng.com |
| | mary@reuseeng.com |
| Contact person to be listed in the Notices 15) Prefix | MR |
| 16) First and Last Name | Andrew Cansler |
| | PE |
| 17) Credential | |
| 18) Title | Water Resource Engineer |
| 19) Organization Name | reUse Engineering Inc |
| 20) Phone (###-#####) | 2146825206 |
| 21) Fax (###-#####) | |
| 22) Email | andrew@reuseeng.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? | Yes |
| 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 | KAUFMAN |
| 2) Public building name | Kaufman County Library |
| 3) Location within the building | Reference Desk |
| 4) Physical Address of Building | 3790 S Houston St |
| 5) City | Kaufman |
| 6) Contact Name | |
| 7) Phone (###-####-####) | 9729326222 |
| 8) Extension | |
| 9) Is the location open to the public? | Yes |

Owner Information

Owner of Treatment Facility

1) Prefix

| 2) First and Last Name | |
|---|------------------------------------|
| 3) Organization Name | Oak National Holdings LLC |
| 4) Mailing Address | 5763 S State Highway 205 Suite 100 |
| 5) City | Rockwall |
| 6) State | ТХ |
| 7) Zip Code | 75032 |
| 8) Phone (###-######) | 2145021021 |
| 9) Extension | |
| 10) Email | jayw@alturahomes.com |
| 11) What is ownership of the treatment facility? | Private |
| Owner of Land (where treatment facility is or will be) | |
| 12) Prefix | |
| 13) First and Last Name | |
| 14) Organization Name | Oak National Holdings LLC |
| 15) Mailing Address | 5763 S State Highway 205 Suite 100 |
| 16) City | Rockwall |
| 17) State | ТХ |
| 18) Zip Code | 75032 |
| 19) Phone (###-#####) | 2145021021 |
| 20) Extension | |
| 21) Email | jayw@alturahomes.com |
| 22) Is the landowner the same person as the facility owner or co- applicant? | Yes |
| | |

Admin General Information

| 1) Is the facility located on or does the treated effluent cross American Indian Land? | No |
|--|-----------------------------------|
| 2) What is the authorization type that you are seeking? | Private Domestic Wastewater |
| 2.1) Is the facility previously authorized under a Water Quality individual permit? | No |
| 2.2) What is the proposed total flow in MGD discharged at the facility? | .125 |
| 2.3) Select the applicable fee | >=0.10 MGD but < 0.25 MGD - \$850 |
| 3) What is your facility operational status? | Inactive |
| 4) What is the classification for your authorization? | TPDES |
| 4.1) City nearest the outfall(s): | Forney |
| 4.2) County where the outfalls are located: | KAUFMAN |
| 4.3) Is or will the treated wastewater discharge to a city, county, or state highway right-of-way, or a flood control district drainage ditch? | No |
| 4.4) Is the daily average discharge at your facility of 5 MGD or more? | No |
| 5) Did any person formerly employed by the TCEQ represent your company and get paid for service regarding this application? | No |
| | |

Plain Language

 1) Plain Language

 [File Properties]

 File Name
 LANG_10053 Admin English PLS.pdf

 Hash
 C331A8A339E80D9E6ABE5970F61F65EF65D55436A46789F60B79C955DEF8B0AD

 MIME-Type
 application/pdf

LANG_10053 Admin Spanish PLS - Forney.pdf D64201A3BC1F10517E3C4A75B40F7DD0CED88C820E84A328F10AF1BB30371427 application/pdf

| Supplemental Permit Information Form | | | |
|---|--------------------------------------|---|--|
| 1) Supplemental Permit Information Fo [File Properties] | rm (SPIF) | | |
| File Name | | SPIF_10053 SPIF CForney.docx | |
| Hash | 302CC8FBD9F281566A03107D36 | F4E6C1ABD194B7967A42D68BEDF896C7DB0510 | |
| МІМЕ-Туре | | application/vnd.openxmlformats- officedocument.wordprocessingml.document | |
| Domestic Attachments | | | |
| 1) Have you clearly outlined and labele original full size USGS Topographic Ma | | Yes | |
| 1.1) I certify that I have clearly outlined [File Properties] | and labeled the required information | on the Topographic map and attached here. | |
| File Name | | MAP_10053 XC1 TX_Forney_North_20220719_TM_geo.pdf | |
| Hash | 7B9A8104F9948DD2D7C4B28FA | C27B23BADB35E84110975CF81B883456D7D1307 | |
| МІМЕ-Туре | | application/pdf | |
| [File Properties] | | | |
| File Name | | MAP_10053 XC2 TX_Forney_South_20220719_TM_geo.pdf | |
| Hash | DCF92868CF2B2B5D4711FA9E9 | 93733907461F46CE3B096E6C922F3E513B19759F | |
| MIME-Type | | application/pdf | |
| 2) Public Involvement Plan attachment | (TCEQ Form 20960) | | |
| [File Properties] | | | |
| File Name | | PIP_10053 XB PIP - CForney.pdf | |
| Hash | F5DA092BDE2F2ADB72CDB0BB14 | 41390196F968AAA4CBA81B40555613AB1CF945A | |
| МІМЕ-Туре | | application/pdf | |
| 3) Administrative Report 1.1 | | | |
| [File Properties] | | | |
| File Name | | ARPT_10053 Admin Report 1.pdf | |
| Hash | 8DB41BDFE1A10911BD4FA4481E | BE13A82CEA007519BA26B21BE3F7E11526F245C | |
| МІМЕ-Туре | | application/pdf | |
| 4) I confirm that all required sections or complete and will be included in the Te | | Yes | |
| 4.1) I confirm that Technical Report 1.1 Technical Attachment. | is complete and included in the | Yes | |
| 4.2) I confirm that Worksheet 2.0 (Receincluded in the Technical Attachment. | eiving Waters) is complete and | Yes | |

| 4.3) Are you planning to include Work Characteristics) in the Technical Attac | | Νο |
|---|----------------------------|--|
| 4.4) Are you planning to include Work Requirements) in the Technical Attac | | Νο |
| 4.5) Are you planning to include Worl Requirements) in the Technical Attac | | No |
| 4.6) Are you planning to include Worl Inventory/Authorization Form) in the | | No |
| 4.7) Technical Attachment | | |
| [File Properties] | | |
| File Name | | TECH_10054 Tech Rpt - CForney.docx |
| Hash | C25C3E82A3C530E964E3AD293 | F3AA13B53BC230995789BCAA78BFF7672F4CF0B |
| MIME-Type | | application/vnd.openxmlformats- |
| | | officedocument.wordprocessingml.document |
| | | |
| 5) Affected Landowners Map | | |
| [File Properties] | | |
| File Name | | LANDMP_10053 XD1 Landowners Map CF.pdf |
| Hash | 0698DD73ACD421486044FD08A | 167E508060F9364CC9AADEC4A5EDD2E77529F91 |
| MIME-Type | | application/pdf |
| 51 | | 11 1 |
| 6) Landowners Cross Reference List | | |
| [File Properties] | | |
| File Name | | LANDCRL_10053 XD2 Landowners List - |
| | | CForney (REV24.06.25).pdf |
| Hash | 3C16C682B6D8CB041C3E90AC | FD48627324E91844D2B5F836687379B0F8EA730C |
| MIME-Type | | application/pdf |
| | | |
| 7) Landowner Avery Template | | |
| [File Properties] | | |
| File Name | | LANDAT_10053 XD2 Landowner Labels CF.doc |
| Hash | 26046930182B2A3B63F812467 | 785DAE1CF94A9701C884D50D00565768B2FB5B31 |
| MIME-Type | | application/msword |
| | | |
| 8) Buffer Zone Map | | |
| [File Properties] | | |
| File Name | | BUFF_ZM_10053 XF Buffer Zone Map |
| | | CF.signed.pdf |
| Hash | 8FD40302B334D54CD659CD39D/ | A6FD60F1B2DAF78BBB2871D4794F26CBF33AC6E |
| MIME-Type | | application/pdf |
| | | |
| 9) Flow Diagram | | |
| [File Properties] | | |
| File Name | | FLDIA_10054 X1 Process Flow Diagram.pdf |
| Hash | 5536494E88B5787B104F790BE | DE8B7523F1BAD5168F17C80355BB519D8F360D53 |
| MIME-Type | | application/pdf |
| | | |
| 10) Site Drawing | | |
| [File Properties] | | |
| File Name | | SITEDR_10054 X2 Site Plan.signed.pdf |
| Hash | BF58EF50BBAB6BC531EA794FDF | 23EF29CDC23F5BCD9528E4BC14AD102F0E48BF |
| MIME-Type | | application/pdf |
| - | | |

| 11) Original Photographs | | |
|----------------------------|-----------------------------|---|
| [File Properties] | | |
| File Name | | ORIGPH_10053 XE Photos - CForney.pdf |
| Hash | 5DCDBF61B643A6B9E52497AC64 | C3E76947B2940204349CC37D3949D5FA0FA5B4 |
| MIME-Type | | application/pdf |
| | | |
| 12) Design Calculations | | |
| [File Properties] | | |
| File Name | | DES_CAL_10054 X5 BP979 MBR 125000 gpd.pdf |
| Hash | D658C2215CC5998D6C01A4D2D4 | E88AC651C98CFF138786371CEE748EAF9616D8 |
| MIME-Type | | application/pdf |
| 13) Solids Management Plan | | |
| [File Properties] | | |
| File Name | | SMP_10054 X7 Solids Management Plan.docx |
| Hash | 92990532F66CEF530EAC5FD6F80 | BFB0C29AAC4FC80248293CD3FD7414507A50D |
| MIME-Type | | application/vnd.openxmlformats- |
| | | officedocument.wordprocessingml.document |
| 14) Water Balance | | |
| [File Properties] | | |
| File Name | | WB_Item NA.docx |
| Hash | 0C64EA5E13490D372EA24EEBE7 | 53E44E14D39B2D0E3707FA95651DC9E21321DB |
| MIME-Type | | application/vnd.openxmlformats- |
| | | officedocument.wordprocessingml.document |
| | | |
| 15) Other Attachments | | |
| [File Properties] | | |
| File Name | | OTHER_10054 X6 Wind Rose CF.pdf |
| Hash | 0BE0A33ABE42F9B071A536DC2E0 | 09FF6AB2D2BF6C7C95B9B9EF2C7959B1300589 |
| MIME-Type | | application/pdf |
| [File Properties] | | |
| File Name | | OTHER_10054 X4.1 CCN MAP.pdf |
| Hash | EDBFA2AEB78F9FF6CAC0EB0EFF | AF3755558E130CA53D0ED907B513229224A163 |
| MIME-Type | | application/pdf |
| | | |
| [File Properties] | | |
| File Name | | OTHER_10054 X4.2 WW Outfalls.pdf |
| Hash | F0DCBC7D4687B6651CE7E34E00 | 5BD804EF59B974A5CA08E750073D0E8F8F546B |
| MIME-Type | | application/pdf |
| [File Properties] | | |
| File Name | | OTHER_10054 X4.2 Denial Request FWSD.pdf |
| Hash | D918F38A4810B6B3B43DC22657 | FD6426775BC98F620E72B961A6D1B56836EA64 |
| MIME-Type | | application/pdf |
| | | |
| [File Properties] | | |
| File Name | | OTHER_10053 Signature Authorization.signed.pdf |

| Hash MIME-Type | 0F9A47616DCEC7FE1A71535512 | 36B6F4AC01C613AF0B983DFB4E7A3CF010F5BE application/pdf |
|---|----------------------------|--|
| [File Properties] File Name Hash MIME-Type | 2DE8AED9412B99DFD9E6160F83 | OTHER_01 Cover Sheet CF.signed.pdf 3FBF87A5E8561BA4DCF3D620757710F9F21541D application/pdf |
| [File Properties] File Name Hash MIME-Type | 2E4E48A527CD3CCF7D4FBC6571 | OTHER_01 TABLE OF CONTENTS.docx 86FC7D033375734D4431ADC9A1208E8D4D7E4F application/vnd.openxmlformats- officedocument.wordprocessingml.document |
| [File Properties] File Name Hash MIME-Type | B2A6D6971B2006A743A786ACB1 | OTHER_10053 XG USGS TOPO (SPIF).pdf DE4FFA632E63742BBB310B0A1666961AC95AFE application/pdf |
| [File Properties] File Name Hash MIME-Type | C13C8B0F2EBAAA384850B56C4 | OTHER_10053 Payment Vouchers CForney.pdf BA5742C121908ED130B0C9658724D2549AB5631 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 Randall Nelson, the owner of the STEERS account ER105186.
- 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 New Domestic or Industrial Individual Permit.
- 9. My signature indicates that I am in agreement with the information on this form, and authorize its submittal to the TCEQ.

OWNER Signature: Randall Nelson OWNERCustomer Number:CN604905935Legal Name:OAK NATIONAL HOLDINGS, LLCAccount Number:ER105186Signature IP Address:72.106.148.11Signature Date:2024-06-28Signature Hash:38BF6283B2907AF14FA76904D80382CE012C396242A6CD109F25084C755FD49B

Fee Payment

| Transaction by: | The application fee payment transaction was made by ER105186/Randall Nelson |
|-----------------------------|---|
| Paid by: | The application fee was paid by HILARY BOND |
| Fee Amount: | \$800.00 |
| Paid Date: | The application fee was paid on 2024-06-28 |
| Transaction/Voucher number: | The transaction number is 582EA000615985 and the voucher number is 711405 |
| Submission | |
| Reference Number: | The application reference number is 663409 |
| Submitted by: | The application was submitted by ER105186/Randall Nelson |
| Submitted Timestamp: | The application was submitted on 2024-06-28 at 16:20:25 CDT |
| Submitted From: | The application was submitted from IP address 72.106.148.11 |
| | The confirmation number is 548688 |
| Confirmation Number: | |

Application Creator: This account was created by Randall Nelson

TCEQ DOMESTIC WASTEWATER DISCHARGE PERMIT APPLICATION (TPDES)

OAK NATIONAL HOLDINGS, LLC

DOMESTIC WASTEWATER ADMINISTRATIVE AND TECHNICAL REPORTS WITH ATTACHMENTS

COOK ADDITION WWTP

Farm-to-Market 548 approximately 1.7 miles northwest of Forney, TX Kaufman County, TX

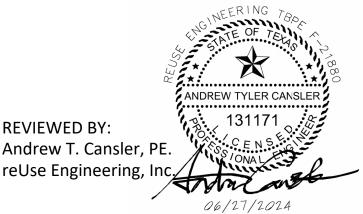


PREPARED BY: Rane A. Wilson, P.G. reUse Engineering, Inc.

June 27, 2024



4411 S Interstate 35, Ste 100 Georgetown, Texas 78626







May 22, 2024

Board of Directors, Kaufman County FWSD No. 1-A c/o Ross Martin, Winstead PC 2728 N. Harwood Street, Suite 500 Dallas, Texas 75201 (214) 745-5353 Emailed to: <u>rmartin@winstead.com</u>

 RE: Request for Service Denial
 Proposed Wastewater Treatment Plant (Cook Addition WWTP)
 FM 548, appx. 0.93 mi southwest of the intersection of FM 548 and Falcon Way (32.762673, -96.429042)

reUse Engineering, Inc. is in the process of submitting a request to the Texas Commission on Environmental Quality (TCEQ) for a Domestic Wastewater Discharge Permit for a proposed Wastewater Treatment Plant at the above referenced location. The client's property is located approximately 2.5 miles northwest of the outfall of Kaufman County FWSD No. 1-A, permit no 13910-001.

We are requesting that the Kaufman County FWSD No. 1-A either express interest in providing wastewater services to this site or that Kaufman County FWSD No. 1-A provides us a letter of Denial of Service, stating that it cannot/will not provide wastewater service to this site. A response is requested within 30 days of receipt of this letter, though an expedited response is greatly appreciated if at all possible.

Please contact me if you have any additional questions.

Respectfully Submitted,

Hilary Bond Director of Permitting and Entitlements reUse Engineering, Inc. 4411 South IH-35 Suite 100 Georgetown, TX 78626 (512) 285-0302

| | | | ED ST | ATES RVICE® | |
|---|---|---|--|--|---------|
| 651 N BUSIN NEW BRAUNFE | BRAUNFELS ESS IH 35 STE 420 .S, TX 78130-9808 | | | | |
| (800 | 275-8777 | | 12:56 PM | | |
| Product | | | | | |
| | | Unit Price | | | |
| Priority Mail® Flat Rate Env Dallas, TX 75201 Flat Rate Expected Delivery Date Fri 05/24/2024 Insurance | 1 | | \$9.85 \$0.00 | | |
| Up to \$100.00 included Certified Mail® Tracking #: | | | \$4.40 | | |
| <u>9589 0710 5270 1998 735</u> Total | <u>3 46</u> | | \$14.25 | | |
| Grand Total: | | | \$14.25 | | |
| Credit Card Remit Card Name: AMEX Account #: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX | | | \$14.25 | | |
| Associate c Text your tracking to get the latest and Data rates m visit https://lin 1-800 Save this rec insurance. For In insuranc. https://link.ed or call Previe Track y Sign u https://link.e All sales final Refunds for guar Thank you f Tell us abou Go to: ht | <pre>status. Standard M y apply. You may y c.edgepilot.com/s/i -222-1811. tipt as evidence or formation on filing e claim go to gepilot.com/s/2915- L-800-222-1811 y your Mail uur Packages o for FREE @ dgepilot.com/s/19ff on stamps and post anteed services on; ny your business. t your experience.</pre> | 2USPS) essage also a2clbe24/xRh7(f g an f08e/vqsEtqli 91219/nYAnb02(age. ly. | ZUmzMwcGIBg HwkqSWcnGYc | Lhajg?u=http://www.usps.com/ USPS Track w?u=https://www.usps.com/help/claims.ht tg?u=https://informeddelivery.usps.com, 1EGgBnFyJYnfFQ?u=https://postalexperied | tm / |
| UFN: 486320-0331 Receipt #: 840-57800205-1-6346980-2 Clerk: 10 Privacy Act Statement: Your informa electronic receipt for your purchas authorized by 39 USC 401, 403, and - voluntary, but if not provided, we receive an electronic receipt. We d parties without your consent, excep on your behalf or request, or as le following limited circumstances: to to financial entities regarding fin Postal Service auditor; to entities by law or in legal proceeding; to to fulfill the service (service pro government agencis if needed as pa government agency for violations an information on our privacy policies https://link.edgepilot.com/s/069c61 This is an automated email. Please message is for the designated recip proprietary, or otherwise private i error, please delete. Any other use | a transaction via a load provide the provided | email. Collec: information process your r information e transaction is includes ti ffice on your issues; to a forcement, as her entities s servers; to ; and to a fo ns of law. Fo ondYSATQ2u=htt is message. Ti contain privi | <pre>tion is is request to to third , to act he behalf; U.S. required aiding us domestic reign r more p://www.usp his leged, d it in</pre> | com/privacypolicy. | |

Tracking Number: 9589071052701998735346

🗋 Copy 🛛 🛠 Add to Informed Delivery

Latest Update

Your item was delivered to an individual at the address at 10:54 am on May 24, 2024 in DALLAS, TX 75201.

Get More Out of USPS Tracking: 🛱 USPS Tracking Plus®

C Delivered Delivered, Left with Individual DALLAS, TX 75201 May 24, 2024, 10:54 am See All Tracking History

What Do USPS Tracking Statuses Mean?



OAK NATIONAL HOLDINGS, LLC COOK ADDITION WWTP DOMESTIC WASTEWATER PERMIT APPLICATION

TABLE OF CONTENTS

| DOMESTIC ADMIN | ISTRATIVE REPORT 1.0 AND 1.1 | Required by Section |
|---|--|--|
| Attachment A. | Core Data Form | Admin 1.0 § 3.C |
| Attachment B. | Public Involvement Plan | Admin 1.0 § 7 |
| Attachment C. | USGS Topographic Map | Admin 1.0 § 13 |
| | C.1 Forney North, TX | |
| | C.2 Forney South, TX | |
| Attachment D. | Affected Landowner Information | Admin 1.1 § 1 |
| | Landowners Map | |
| | Landowners Cross Reference List | |
| Attachment E. | Original Photographs | Admin 1.1 § 2 |
| Attachment F. | Buffer Zone Map | Admin 1.1 § 3 |
| SUPPLEMENTAL PE | RMIT INFORMATION FORM (SPIF) | Required by Section |
| | | |
| Attachment G. | USGS Topographic Map II | SPIF Item # 5 |
| Attachment G. | USGS Topographic Map II Forney North, TX | SPIF Item # 5 |
| | | SPIF Item # 5 Required by Section |
| | Forney North, TX | |
| DOMESTIC TECHNI | Forney North, TX CAL REPORT 1.0 AND 1.1 | Required by Section |
| DOMESTIC TECHNI Attachment 1. | Forney North, TX CAL REPORT 1.0 AND 1.1 Process Flow Diagram | Required by Section Tech 1.0 § 2.C |
| DOMESTIC TECHNI Attachment 1. Attachment 2. | Forney North, TX CAL REPORT 1.0 AND 1.1 Process Flow Diagram Site Drawing | Required by Section Tech 1.0 § 2.C Tech 1.0 § 3 |
| DOMESTIC TECHNI Attachment 1. Attachment 2. Attachment 3. | Forney North, TX CAL REPORT 1.0 AND 1.1 Process Flow Diagram Site Drawing Justification of Permit Need (LUEs) | Required by Section Tech 1.0 § 2.C Tech 1.0 § 3 Tech 1.1 § 1.A |
| DOMESTIC TECHNI Attachment 1. Attachment 2. Attachment 3. | Forney North, TX CAL REPORT 1.0 AND 1.1 Process Flow Diagram Site Drawing Justification of Permit Need (LUEs) Utility CCN & Wastewater Outfalls | Required by Section Tech 1.0 § 2.C Tech 1.0 § 3 Tech 1.1 § 1.A |
| DOMESTIC TECHNI Attachment 1. Attachment 2. Attachment 3. | Forney North, TX CAL REPORT 1.0 AND 1.1 Process Flow Diagram Site Drawing Justification of Permit Need (LUEs) Utility CCN & Wastewater Outfalls 4.1 Utility (Sewer) CCN Map | Required by Section Tech 1.0 § 2.C Tech 1.0 § 3 Tech 1.1 § 1.A |
| DOMESTIC TECHNI Attachment 1. Attachment 2. Attachment 3. Attachment 4. | Forney North, TX CAL REPORT 1.0 AND 1.1 Process Flow Diagram Site Drawing Justification of Permit Need (LUEs) Utility CCN & Wastewater Outfalls 4.1 Utility (Sewer) CCN Map 4.2 Wastewater Outfall Map | Required by Section Tech 1.0 § 2.C Tech 1.0 § 3 Tech 1.1 § 1.A Tech 1.1 § 1.B.2 |
| DOMESTIC TECHNI Attachment 1. Attachment 2. Attachment 3. Attachment 4. Attachment 5. | Forney North, TX CAL REPORT 1.0 AND 1.1 Process Flow Diagram Site Drawing Justification of Permit Need (LUEs) Utility CCN & Wastewater Outfalls 4.1 Utility (Sewer) CCN Map 4.2 Wastewater Outfall Map Design Calculations | Required by Section Tech 1.0 § 2.C Tech 1.0 § 3 Tech 1.1 § 1.A Tech 1.1 § 1.B.2 Tech 1.1 § 4 |

DOMESTIC ADMINISTRATIVE REPORT 1.1

The following information is required for new and amendment applications.

Section 1. Affected Landowner Information (Instructions Page 41)

- **A.** Indicate by a check mark that the landowners map or drawing, with scale, includes the following information, as applicable:
 - ☑ The applicant's property boundaries
 - The facility site boundaries within the applicant's property boundaries
 - The distance the buffer zone falls into adjacent properties and the property boundaries of the landowners located within the buffer zone
 - The property boundaries of all landowners surrounding the applicant's property (Note: if the application is a major amendment for a lignite mine, the map must include the property boundaries of all landowners adjacent to the new facility (ponds).)
 - The point(s) of discharge and highlighted discharge route(s) clearly shown for one mile downstream
 - The property boundaries of the landowners located on both sides of the discharge route for one full stream mile downstream of the point of discharge
 - The property boundaries of the landowners along the watercourse for a one-half mile radius from the point of discharge if the point of discharge is into a lake, bay, estuary, or affected by tides
 - □ The boundaries of the effluent disposal site (for example, irrigation area or subsurface drainfield site) and all evaporation/holding ponds within the applicant's property
 - □ The property boundaries of all landowners surrounding the effluent disposal site
 - □ The boundaries of the sludge land application site (for land application of sewage sludge for beneficial use) and the property boundaries of landowners surrounding the applicant's property boundaries where the sewage sludge land application site is located
 - □ The property boundaries of landowners within one-half mile in all directions from the applicant's property boundaries where the sewage sludge disposal site (for example, sludge surface disposal site or sludge monofill) is located
- **B.** Indicate by a check mark that a separate list with the landowners' names and mailing addresses cross-referenced to the landowner's map has been provided.
- **C.** Indicate by a check mark in which format the landowners list is submitted:
 - \boxtimes USB Drive \square Four sets of labels
- **D.** Provide the source of the landowners' names and mailing addresses: <u>https://gis.bisclient.com/kaufmancad/</u>
- **E.** As required by *Texas Water Code § 5.115*, is any permanent school fund land affected by this application?
 - 🗆 Yes 🖾 No

If **yes**, provide the location and foreseeable impacts and effects this application has on the land(s):

Section 2. Original Photographs (Instructions Page 44)

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

- At least one original photograph of the new or expanded treatment unit location
- At least two photographs of the existing/proposed point of discharge and as much area downstream (photo 1) and upstream (photo 2) as can be captured. If the discharge is to an open water body (e.g., lake, bay), the point of discharge should be in the right or left edge of each photograph showing the open water and with as much area on each respective side of the discharge as can be captured.
- □ At least one photograph of the existing/proposed effluent disposal site
- A plot plan or map showing the location and direction of each photograph

Section 3. Buffer Zone Map (Instructions Page 44)

- **A.** Buffer zone map. Provide a buffer zone map on 8.5 x 11-inch paper with all of the following information. The applicant's property line and the buffer zone line may be distinguished by using dashes or symbols and appropriate labels.
 - The applicant's property boundary;
 - The required buffer zone; and
 - Each treatment unit; and
 - The distance from each treatment unit to the property boundaries.
- **B.** Buffer zone compliance method. Indicate how the buffer zone requirements will be met. Check all that apply.
 - ⊠ Ownership
 - ☑ Restrictive easement
 - □ Nuisance odor control
 - □ Variance
- **C.** Unsuitable site characteristics. Does the facility comply with the requirements regarding unsuitable site characteristic found in 30 TAC § 309.13(a) through (d)?



Section 15. Plain Language Summary (Instructions Page 40)

If you are subject to the alternative language notice requirements in <u>30 Texas Administrative Code</u> <u>\$39.426</u>, you must provide a translated copy of the completed plain language summary in the appropriate alternative language as part of your application package</u>. For your convenience, a Spanish template has been provided below.

ENGLISH TEMPLATE FOR TPDES or TLAP NEW/RENEWAL/AMENDMENT APPLICATIONS

DOMESTIC WASTEWATER

The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 30 Texas Administrative Code Chapter 39. The information provided in this summary may change during the technical review of the application and are not federal enforceable representations of the permit application. Oak National Holdings, LLC (604905935) proposes to operate Cook Additions WWTP 5. Enter Regulated Entity Number here (i.e., RN1#######). a domestic wastewater facility. The facility will be located approximately 0.65 miles NE of the intersection of FM 548 and Gateway Boulevard, in Forney, Kaufman County, Texas 75126.

The applicant is currently applying to the Texas Commission on Environmental Quality for a Texas Pollutant Discharge Elimination System (TPDES) Permit in order to discharge a maximum of 125,000 gallons per day of treated domestic wastewater from the proposed Wastewater Treatment Plant that is to be installed on the site.

Discharges from the facility are expected to contain no pollutants.Domestic wastewater will be treated by MBR (membrane bio-reactor) treatment technology. The facility includes an influent pump station, equalization, fine screen, anoxic, oxic, and membrane cells with ultraviolet disinfection and a sludge press.

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

AGUAS RESIDUALES DOMÉSTICAS

Oak National Holdings, LLC propone operar Cook Additions WWTP, una Planta de Tratamiento de Aguas Residuales. La instalación estará ubicada aproximadamente 0,65 millas al NE de la intersección de FM 548 y Gateway Blvd en Forney, TX.

El solicitante está actualmente solicitando a la Comisión de Calidad Ambiental de Texas un Permiso del Sistema de Eliminación de Contaminantes de Texas (TPDES) para descargar un máximo de 125.000-galones por día de aguas residuales domésticas tratadas de la Instalación de Tratamiento de Aguas Residuales propuesta que se instalará en el sitio.

Se espera que la descarga de la instalación no contenga contaminantes. Las aguas residuales domésticas serán tratadas mediante tecnología de tratamiento MBR (Reactor biológico con membranas). La instalación incluye una estación de bombeo de afluentes, ecualización, pantalla fina, celdas anóxicas, óxicas y de membranas de desinfección ultravioleta, y una prensa de lodos.



⁷ Texas Commission on Environmental Quality

Public Involvement Plan Form for Permit and Registration Applications

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

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

Section 1. Preliminary Screening

New Permit or Registration Application

New Activity - modification, registration, amendment, facility, etc. (see instructions)

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

Section 2. Secondary Screening

Requires public notice,

Considered to have significant public interest, and

Located within any of the following geographical locations:

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

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

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

This project is not expected to receive significant public interest. Other projects in Kaufman County and projects of similar scope (</= 0.5MGD) in neighboring counties received no public interest. See WQ0016242001 in Kaufman County, WQ0016316001 in Hunt County, WQ0005392000 and WQ0014795002 in Ellis County.

| Section 3 | B. Applicat | tion Inform | nation | | |
|-----------|--------------|-------------------------------|--------------------|--------------------------------------|-----------------------------------|
| Type of A | pplication | (check all t | hat apply): | | |
| Air | Initial | Federal | Amendment | Standard Permit | Title V |
| Waste | - | ll Solid Wast ive Material | | and Hazardous Waste Underground I | e Scrap Tire injection Control |
| Water Qua | ality | | | | |
| Texas | Pollutant D | oischarge Eli | mination System | (TPDES) | |
| Te | xas Land A | pplication P | ermit (TLAP) | | |
| Sta | ate Only Co | ncentrated A | Animal Feeding O | peration (CAFO) | |
| Wa | ater Treatm | ient Plant Re | siduals Disposal | Permit | |
| Class I | B Biosolids | Land Applic | ation Permit | | |
| Dome | stic Septage | e Land Appli | cation Registratio | n | |
| W. D. | | | | | |
| 0 | hts New Pe | | | | |
| | | on of Water | | | |
| New o | r existing r | eservoir | | | |
| Amendme | ent to an Ex | isting Water | Right | | |
| Add a | New Appro | priation of | Water | | |
| Add a | New or Exi | sting Reserv | oir | | |
| Major | Amendmer | nt that could | affect other wat | er rights or the enviro | nment |

Section 4. Plain Language Summary

Provide a brief description of planned activities.

| Section 5. Community and Demographic Information |
|---|
| Community information can be found using EPA's EJ Screen, U.S. Census Bureau information, or generally available demographic tools. |
| Information gathered in this section can assist with the determination of whether alternative language notice is necessary. Please provide the following information. |
| inguage notice to necessary) i rease provide the ronoving mornation |
| (City) |
| |
| (County) |
| |
| (Census Tract) |
| Please indicate which of these three is the level used for gathering the following information. |
| City County Census Tract |
| (a) Percent of people over 25 years of age who at least graduated from high school |
| |
| (b) Per capita income for population near the specified location |
| |
| |
| (c) Percent of minority population and percent of population by race within the specified location |
| |
| (d) Percent of Linguistically Isolated Households by language within the specified location |
| (a) referre of Englistically isolated flousenoids by language within the specifica location |
| |
| (e) Languages commonly spoken in area by percentage |
| |
| |
| (f) Community and/or Stakeholder Groups |
| |
| (g) Historic public interest or involvement |
| |
| |

| (a) Is this application subject to the public participation requirements of Title 30 Texas Administrative Code (30 TAC) Chapter 39? Yes No (b) If yes, do you intend at this time to provide public outreach other than what is required by rule? Yes No If yes, please describe. If you answered "yes" that this application is subject to 30 TAC Chapter 39, answering the remaining questions in Section 6 is not required. (c) Will you provide notice of this application in alternative languages? Yes No Please refer to Section 5. If more than 5% of the population potentially affected by your application is Limited English Proficient, then you are required to provide notice in the alternative language. If yes, how will you provide notice in alternative languages? Publish in alternative language newspaper Posted on Commissioner's Integrated Database Website Mailed by TCEQ's Office of the Chief Clerk Other (specify) |
|---|
| (b) If yes, do you intend at this time to provide public outreach other than what is required by rule? Yes No If you answered "yes" that this application is subject to 30 TAC Chapter 39, answering the remaining questions in Section 6 is not required. (c) Will you provide notice of this application in alternative languages? Yes No Please refer to Section 5. If more than 5% of the population potentially affected by your application is Limited English Proficient, then you are required to provide notice in the alternative language. If yes, how will you provide notice in alternative languages? Publish in alternative language newspaper Posted on Commissioner's Integrated Database Website Mailed by TCEQ's Office of the Chief Clerk |
| Yes No If Yes, please describe. If you answered "yes" that this application is subject to 30 TAC Chapter 39, answering the remaining questions in Section 6 is not required. (c) Will you provide notice of this application in alternative languages? Yes No Please refer to Section 5. If more than 5% of the population potentially affected by your application is Limited English Proficient, then you are required to provide notice in the alternative language. If yes, how will you provide notice in alternative languages? Publish in alternative language newspaper Posted on Commissioner's Integrated Database Website Mailed by TCEQ's Office of the Chief Clerk |
| If Yes, please describe. If you answered "yes" that this application is subject to 30 TAC Chapter 39, answering the remaining questions in Section 6 is not required. (c) Will you provide notice of this application in alternative languages? Yes No Please refer to Section 5. If more than 5% of the population potentially affected by your application is Limited English Proficient, then you are required to provide notice in the alternative language. If yes, how will you provide notice in alternative languages? Publish in alternative language newspaper Posted on Commissioner's Integrated Database Website Mailed by TCEQ's Office of the Chief Clerk |
| If you answered "yes" that this application is subject to 30 TAC Chapter 39, answering the remaining questions in Section 6 is not required. (c) Will you provide notice of this application in alternative languages? Yes No Please refer to Section 5. If more than 5% of the population potentially affected by your application is Limited English Proficient, then you are required to provide notice in the alternative language. If yes, how will you provide notice in alternative languages? Publish in alternative language newspaper Posted on Commissioner's Integrated Database Website Mailed by TCEQ's Office of the Chief Clerk |
| answering the remaining questions in Section 6 is not required. (c) Will you provide notice of this application in alternative languages? Yes No Please refer to Section 5. If more than 5% of the population potentially affected by your application is Limited English Proficient, then you are required to provide notice in the alternative language. If yes, how will you provide notice in alternative languages? Publish in alternative language newspaper Posted on Commissioner's Integrated Database Website Mailed by TCEQ's Office of the Chief Clerk |
| Please refer to Section 5. If more than 5% of the population potentially affected by your application is Limited English Proficient, then you are required to provide notice in the alternative language. If yes, how will you provide notice in alternative languages? Publish in alternative language newspaper Posted on Commissioner's Integrated Database Website Mailed by TCEQ's Office of the Chief Clerk |
| application is Limited English Proficient, then you are required to provide notice in the alternative language. If yes, how will you provide notice in alternative languages? Publish in alternative language newspaper Posted on Commissioner's Integrated Database Website Mailed by TCEQ's Office of the Chief Clerk |
| Publish in alternative language newspaper Posted on Commissioner's Integrated Database Website Mailed by TCEQ's Office of the Chief Clerk |
| Posted on Commissioner's Integrated Database Website Mailed by TCEQ's Office of the Chief Clerk |
| Mailed by TCEQ's Office of the Chief Clerk |
| |
| Other (specify) |
| |
| (d) Is there an opportunity for some type of public meeting, including after notice? |
| Yes No |
| (e) If a public meeting is held, will a translator be provided if requested? |
| Yes No |
| (f) Hard copies of the application will be available at the following (check all that apply): |
| TCEQ Regional Office TCEQ Central Office |
| Public Place (specify) |

Section 7. Voluntary Submittal

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

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

Yes No

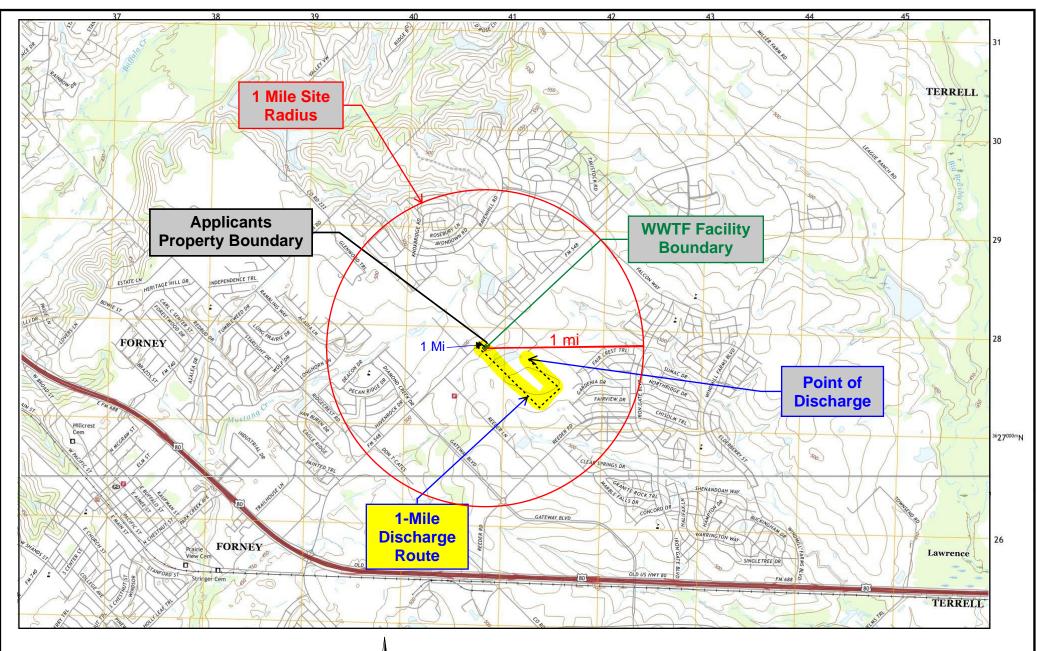
What types of notice will be provided?

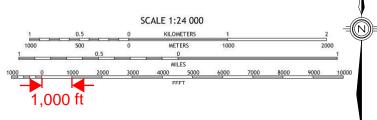
Publish in alternative language newspaper

Posted on Commissioner's Integrated Database Website

Mailed by TCEQ's Office of the Chief Clerk

Other (specify)







OAK NATIONAL HOLDINGS, LLC TPDES PERMIT APPLICATION KAUFMAN COUNTY, TEXAS

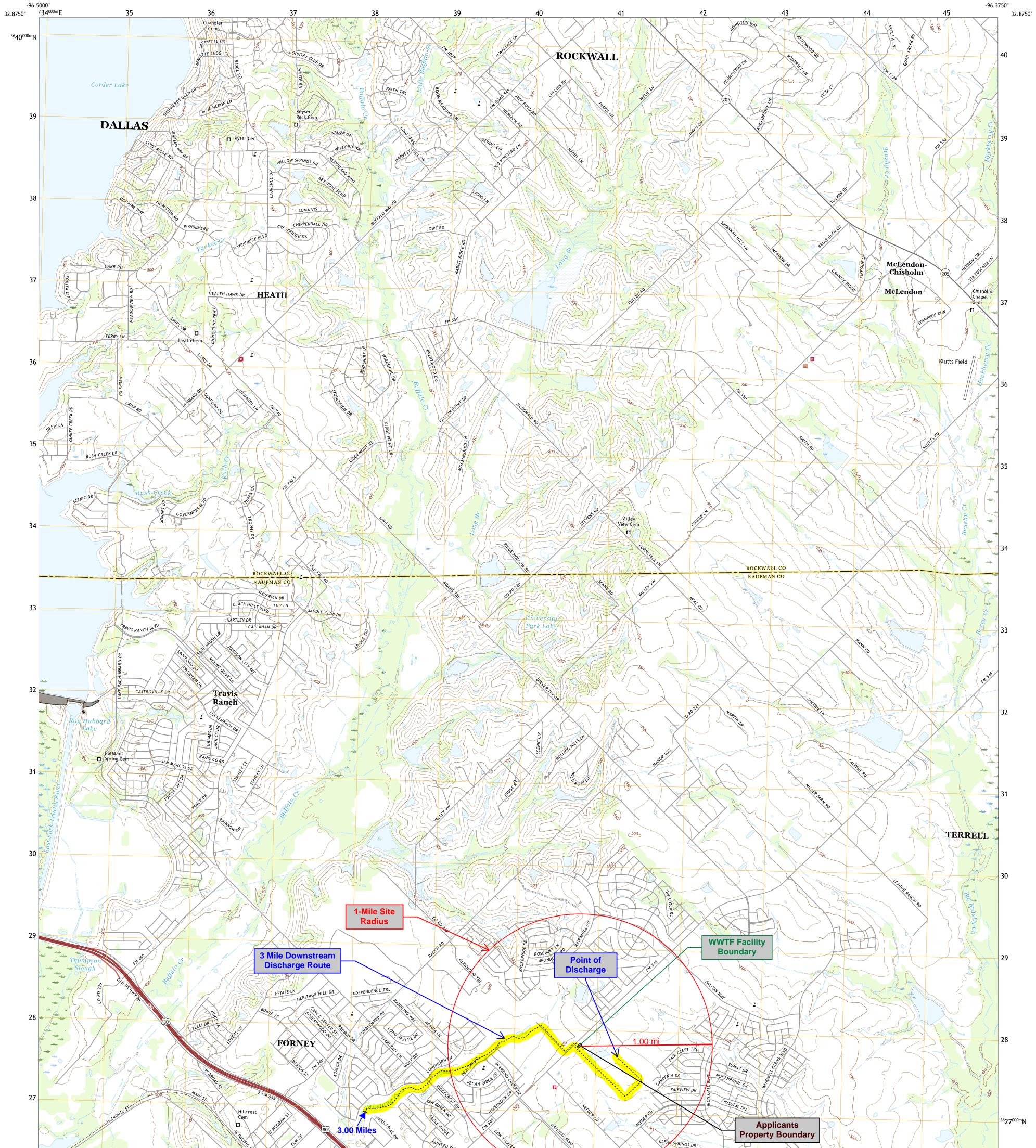
USGS TOPOGRAPHIC MAP II (SPIF Reduced Portion) Attachment G



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



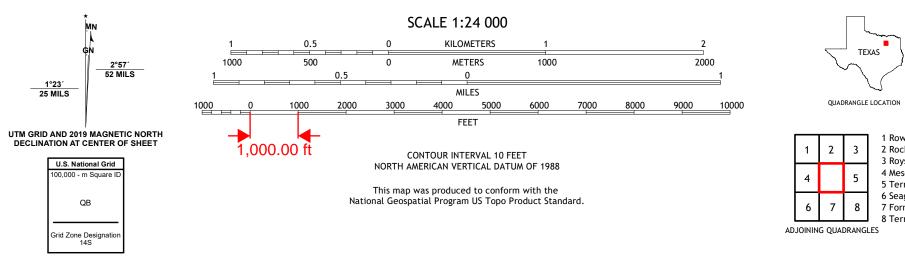
FORNEY NORTH QUADRANGLE TEXAS 7.5-MINUTE SERIES

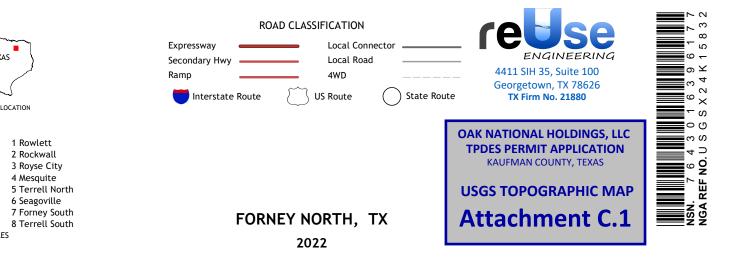




Produced by the United States Geological Survey North American Datum of 1983 (NAD83) World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid:Universal Transverse Mercator, Zone 14S This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery... Roads..... Names.... Hydrography..... Contours.. Boundaries... ..FWS National Wetlands Inventory Not Available Wetlands...





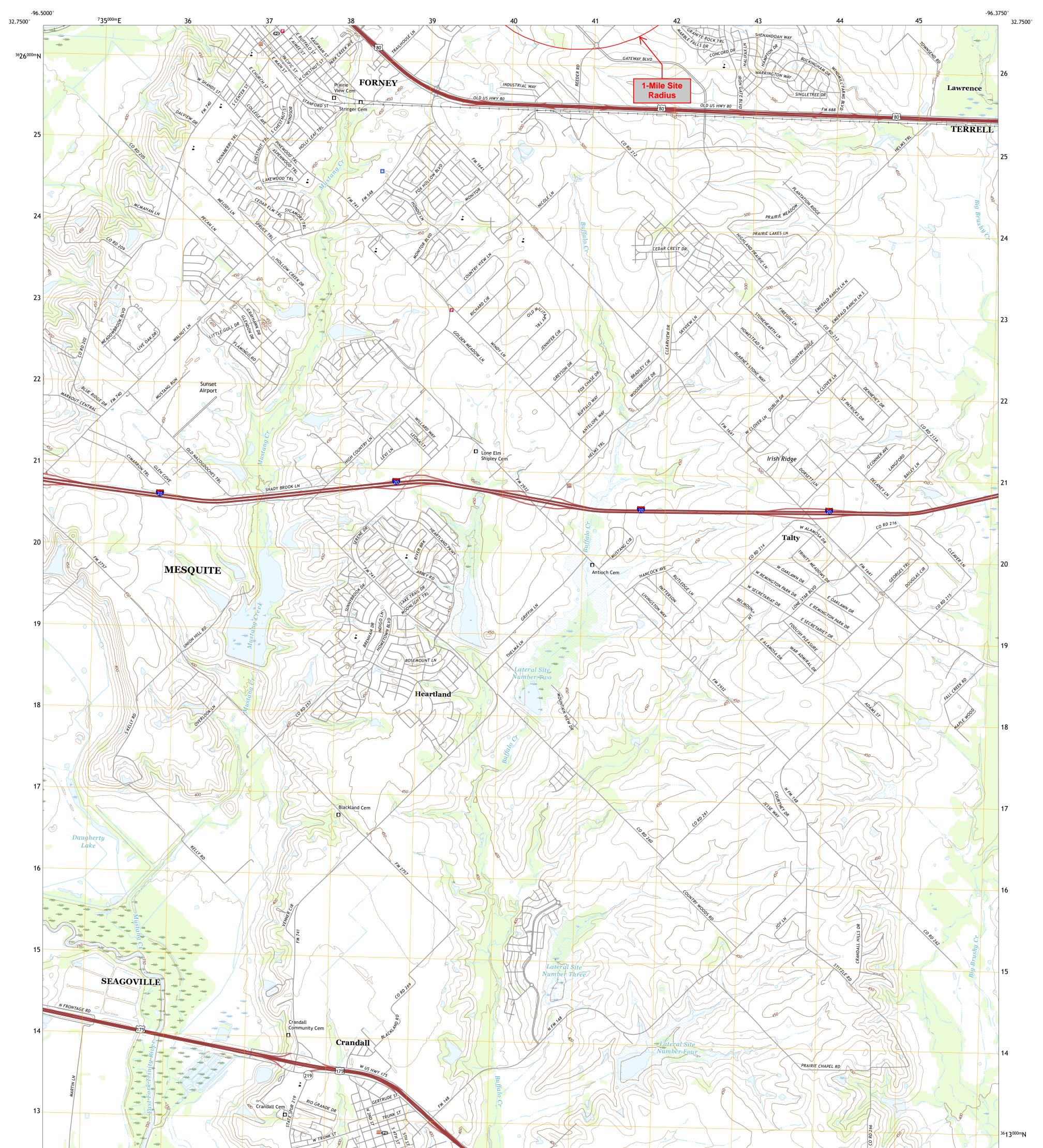
TEXAS



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

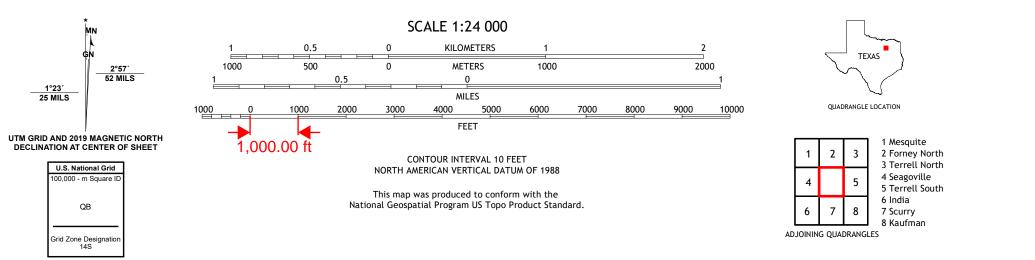




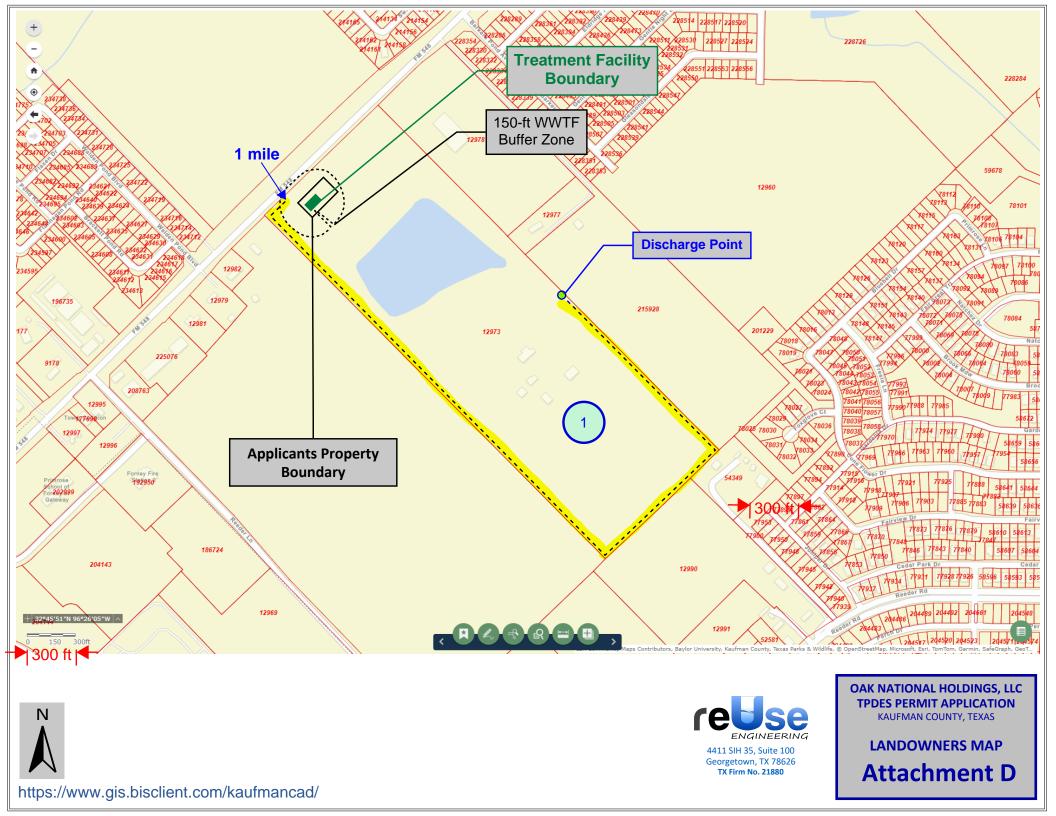


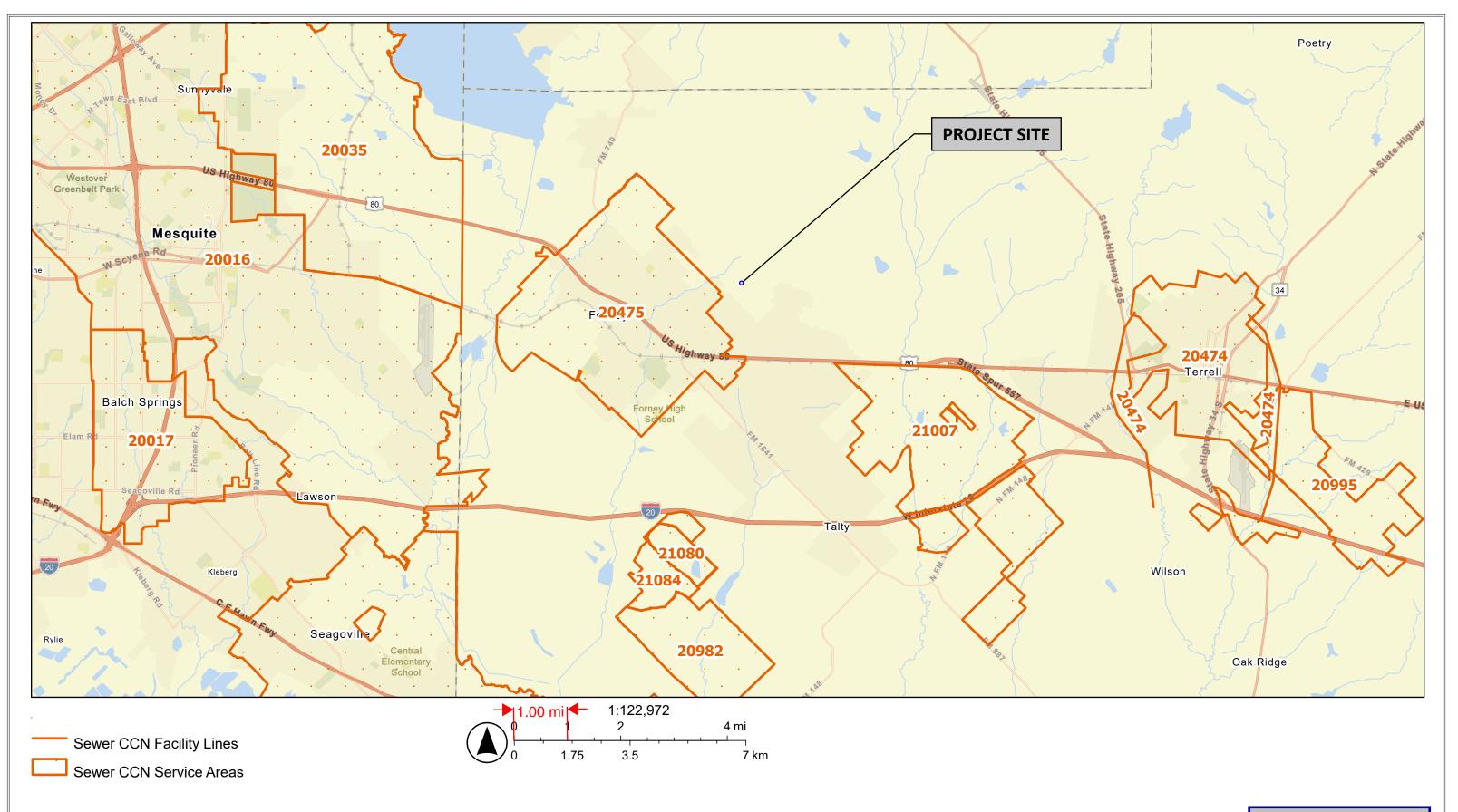


Produced by the United States Geological Survey North American Datum of 1983 (NAD83) World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid:Universal Transverse Mercator, Zone 14S This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.











OAK NATIONAL HOLDINGS, LLC TPDES PERMIT APPLICATION KAUFMAN COUNTY, TEXAS

UTILITY (SEWER) CCN MAP
Attachment 4.1

 Oak National Development, LLC 5763 S State Highway 205 Ste 100 Rockwall, Texas 75032

| OAK NATIONAL DEVELOPMENT LLC 5763 S STATE HWY 205 STE 100 ROCKWALL TX 75032 | |
|---|--|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |







A3-USA, Inc 1674 Fountaintown Road Chinquapin, NC 28521

Process Summary

Sludge

Aerobic

Membrane

0 scfm

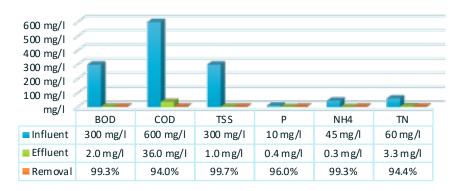
339 scfm

662 scfm

0.0 psi

6.0 psi

6.0 psi



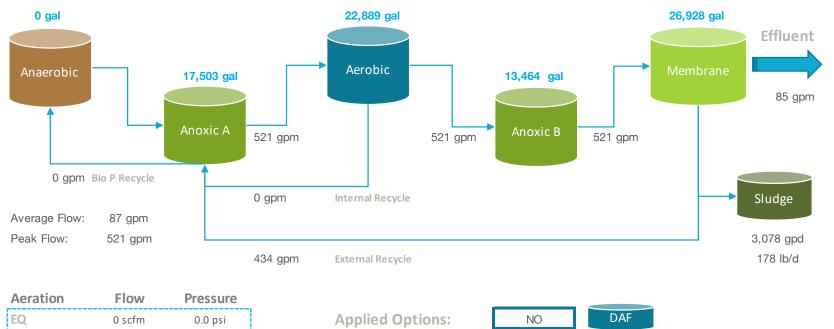
Influent & Effluent Parameters

PROCESS PARAMETERS

RO

NO

| Sludge Age | 25 d |
|-------------------------------|------------|
| Total Reactor Volume | 80,784 gal |
| Total SOR | 719 kgO2/d |
| MLSS in Anoxic / Aerobic Tank | 6,906 mg/l |
| MLSS in Membrane Tank | 8,359 mg/l |
| HRT | 16 h |
| F/M RATIO (BOD) | 0.070 |
| F/M RATIO (COD) | 0.139 |
| Total Membrane Surface | 39,670 sf |
| | |



4/2/24

Biological Process Calculation

| nfluent Charateristics | Symbol | Value | Units | Influent Charateristics | Symbol | Value | Units |
|---|-----------------------|----------------------|--------------|------------------------------------|----------------------|-------|---------|
| Type of wastewater | | municipal | | NO ₃ | N _{NO3,i} | 0.0 | mg/l |
| Temperature | Т | 20 °C | | NH4 | N _{a,i} | 45.0 | mg/l |
| pH | - | 7.5 - | | TKN | N _{TKN,i} | 60.0 | mg/l |
| H ₂ CO ₃ alkalinity | Alki | 250 mg | g∕l as CaCO₃ | TP | Pi | 10.0 | mg/l |
| Site pressure / elevation | P _{a,i} | 14.5 ps | i | Dissolved Oxygen | S _{O2,i} | 0.0 | mg/l |
| Average daily flow | Qi | 125,000 gp | d | FSA fraction | f _{a/TKN,i} | 0.8 | - |
| Peak daily flow | Q _{i, max,d} | 312,500 gp | d | Fixed (inorganic) suspended solids | $X_{\text{FSS},i}$ | 47.5 | mgISS/I |
| Hourly peak flow | Qi, max,p | 521 gp | m | TSS concentration | S _{TSS,i} | 300.0 | mgTSS/l |
| Peak factor | - | 6.0 - | | Total BOD mass | $FS_{BOD,i}$ | 141.9 | kgBOD/d |
| Average daily flow | Qi | 473 m ³ | ³/d | Total COD mass | FS _{COD,i} | 283.9 | kgCOD/d |
| Max. monthly average daily flow | Q _{i, max,d} | 1,183 m ³ | ³/d | Total NH ₄ mass | FS _{a,i} | 21.3 | kgNH₄/d |
| Hourly peak flow | Qi, max,h | 118.3 m ³ | ³/h | Total TKN mass | FS _{TKN,i} | 28.4 | kgTKN/d |
| Total BOD | S _{BOD,i} | 300 mg | gBOD/I | Total P mass | $FS_{P,i}$ | 4.7 | kgP/d |
| Total COD | S _{COD,i} | 600 mg | gCOD/I | | | | |
| COD/BOD ratio | - | 2.00 - | | | | | |
| Rapidly biodegradable COD | S _{s,i} | 150 mg | gCOD/I | Effluent Characteristics | Symbol | Value | Units |
| Volitale fatty acids (VFA) | S _{VFA,i} | 23 mg | gCOD/I | Waste Sludge | FXt | 178 | lb/d |
| Fermentable COD | S _{F,i} | 127 mg | gCOD/I | Waste Sludge | Q _w | 3,078 | gpd |
| Slowly biodegradable COD | S _{ss,i} | 324 mg | gCOD/I | Effluent BOD | $S_{\text{BOD,e}}$ | < 3 | mgBOD/l |
| Biodegradable COD | S _{bio,i} | 474 mg | gCOD/I | Effluent COD | S _{COD,e} | 36 | mgCOD/l |
| Soluble inert COD | S _{SIN,i} | 36 mg | gCOD/I | Effluent TSS | S _{TSS,e} | 1.0 | mgTSS/l |
| Particulate inert COD | S _{PIN,i} | 90 mg | gCOD/I | Effluent P | Pe | 0.4 | mgP/l |
| | | | | Effluent NH ₄ | N _{a,e} | 0.3 | mgN/l |
| | | | | | | | |

Effluent NO3

Effluent TN (Nne + Nte)

N_{NO3,e}

N_{t,e}

1.2 mgN/l

3.3 mgN/l

| oreactor Characteristics | Symbol | Value | Units | Biological Oxygen Demand | Symbol | Value | Units |
|--|-----------------------|--------|---------------------|---------------------------------------|-------------------|-------|---|
| Temperature | T _{bio} | 20 | °C | OD for synth & endo respiration (PAO) | FO _{PAO} | 0 | kgO ₂ /d |
| Sludge retention time / Sludge age | SRT | 25 | d | OD for synth & endo respiration (OHO) | FO _{OHO} | 182 | kgO ₂ /d |
| Reactor volume | $V_{\text{P,chosen}}$ | 80,784 | gallons | Mass carbonaceous oxygen demand | FOc | 182 | kgO ₂ /d |
| Reactor volume | V _{P,chosen} | 306 | m ³ | Carbonaceous oxygen utilization rate | Oc | 60% | - |
| Reactor volume | $V_{P,calc}$ | 76,941 | gallons | Nitrification oxygen demand | FOn | 94 | kgO ₂ /d |
| Average MLSS concentration | X _{TSS} | 7,000 | mgTSS/I | Total oxygen demand | FOt | 276 | kgO ₂ /d |
| Food to microorganism ratio | $F/M_{BOD,used}$ | 0.070 | kgBOD/kgMLSS | Oxygen recovered by denitrification | FOd | 57 | kgO ₂ /d |
| Food to microorganism ratio | $F/M_{COD,used}$ | 0.139 | kgCOD/kgMLSS | Net total oxygen demand (AOR) | FO _{td} | 219 | kgO ₂ /d |
| Membrane tank MLSS concentration | X _M | 8,359 | mgTSS/I | Oxygen saturation @ operating temp. | Cs | 9.2 | mg/l |
| Aerobic/Anoxic tank MLSS concentration | X _{Bio} | 6,906 | mgTSS/I | Desired oxygen level | Cx | 2.0 | mg/l |
| Number of anaerobic zones | # _{AN} | 0 | - | Transfer coefficient | α | 0.40 | - |
| Number of anoxic zones | # _{AO} | 1 | - | Diffuser water depth | DWD | 10 | feet |
| Number of aerobic zones | # _{AE} | 1 | - | Oxygen transfer efficiency | OTE | 2 | % |
| External recycle ratio | m | 5 | - | Standard total oxygen demand (SOR) | SOR | 719 | kgO ₂ /d |
| nternal recycle ratio | а | 0 | - | Required air flow | Qair | 323 | scfm |
| DO in m recycle | Om | 1 | mgO ₂ /I | Oxygen requir. per volume & depth | OS | 17.9 | gO ₂ /(Nm ₃ *m _D |
| DO in a recycle | Oa | 0 | mgO ₂ /I | | | | |
| Recycle ratio to anaerobic tank (PAO) | S | 0 | - | | | | |
| DO in s recycle | S _{O2,s} | 0 | mgO ₂ /I | | | | |
| Nitrate on s recycle | S _{NO3,s} | 0 | mg/l | | | | |
| FKN/COD ratio | f _{TKN/COD} | 0.100 | mgTKN/mgCOD | | | | |
| Carbon source addition (Micro C) | B _{MicroC} | 0.0 | lb/d | | | | |
| Carbon source addition (Micro C) | S _{MicroC} | 0.00 | gpd | | | | |
| Nominal hydraulic retention time | HRTn | 15.5 | h | | | | |

Actual hydraulic retention time

HRTa

2.6 h

| Membrane Module Design | Symbol | Value | Units |
|---|------------------------------|--------|---|
| Permeate on cycle | To | 8 | minute |
| Permeate off cycle (relaxation) | Ts | 2 | minute |
| Effective membrane module surface | $A_{m,eff}$ | 87.8 | m ² |
| Effective membrane module surface | $A_{m,eff}$ | 945 | ft ² |
| Total number of membrane modules | N _M | 42 | - |
| Total membrane module surface | A _{total} | 3,686 | m ² |
| Total membrane module surface | A _{total} | 39,670 | ft ² |
| Nominal average daily flux | Q _{ave,n} | 6.7 | lmh |
| Nominal max. daily flux | Q _{ave, n, max, mo} | 16.7 | lmh |
| Nominal peak hourly flux | $Q_{\text{peak},n}$ | 40.1 | lmh |
| Average daily flux (excluding rest cycle) | Q _{ave,n} | 3.2 | gfd |
| Max. Daily flux (ex. rest cycle) | Qave, n, max, mo | 7.9 | gfd |
| Peak hourly flux (ex. rest cycle) | $Q_{\text{peak},n}$ | 18.9 | gfd |
| Total membrane module displacement vol. | V _{modules} | 462 | ft ³ |
| Total membrane module displacement vol. | Vmodules | 3,456 | gallons |
| Aeration modules | A# | 21 | - |
| Membrane module aeration requirement | Qam | 28.5 | acfm |
| Total membrane modules aeration | Q _{am,total} | 599 | acfm |
| Membrane diffuser water depth | DWDm | 9.5 | feet |
| Oxygen requirement per volume & depth | OS | 13 | gO ₂ /(Nm ₃ *m _D) |
| Standard oxygen rate, membrane aeration | SORm | 2,077 | lbO ₂ /d |
| Standard oxygen rate, membrane aeration | SORm | 951 | kgO ₂ /d |
| | | | |



- ✓ Patented, innovative A3's MaxFlow[™] membrane filtration modules manufactured in USA.
- ✓ The MaxFlow[™] module "open channel design" provides optimal biofilm control, minimizes the quantity of chemical cleaning procedures and avoids module clogging.
- ✓ The compact module design enables dual-stack and triple-stack installations. It allows for a high membrane packing density resulting in a small footprint and high energy efficiency.
- ✓ Most existing conventional treatment plants can be retrofitted with MaxFlow[™] membranes due to the

| Kinetic Constants | Symbol | Value | Units | Stoichiometric Constants | Symbol | Value | Units |
|---|----------------------|---------|-------------|---|-----------------------------|-------|----------------------|
| Yield coefficient OHO | Y _{OHO} | 0.40 n | ngVSS/mgCOD | COD/BOD ratio | - | 2.00 |) – |
| Yield coefficient OHO,OBS | $Y_{\text{OHO,obs}}$ | 0.06 n | ngVSS/mgCOD | Readily biodeg. org. fraction (RBCOD) | f _{s,COD} | 0.25 | g/gTCOD |
| Fermentation rate at 20°C | k _{F,20} | 0.06 n | n3/gVSSd | Non-biodegradable particulate COD | f _{PNb,COD} | 0.18 | g/gTCOD |
| Temperature coefficient for $k_{\text{F},\text{T}}$ | Θ_{kF} | 1.029 - | | Non-biodegradable soluble COD | f _{SNb,COD} | 0.06 | g/gTCOD |
| Fermentation rate at T | k _{F,T} | 0.06 n | n3/gVSSd | SVFA fraction of RBCOD | f _{SVFA,SSi} | | g/gCOD _{SS} |
| Endogenous respiration rate (decay) | b _{оно,20} | 0.24 g | JVSS/gVSSd | VSS/TSS of activated sludge | \mathbf{f}_{VT} | 0.70 | mgvSS/mg1S |
| Endogenous respiration rate T | b _{оно,т} | 0.24 g | JVSS/gVSSd | COD/VSS of activated sludge | f_{cv} | | kgCOD/kgVSS |
| Yield coefficient FSA | Y _A | 0.10 n | ngVSS/mgFSA | True synthesis fraction | f _s ⁰ | 0.57 | - |
| Nitri. pH sensitivity coefficient | Kı | 1.13 - | | Endogenous residue fraction | f _{H/E,OHO} | 0.2 | 2 - |
| Nitri. pH sensitivity coefficient | K _{max} | 9.50 - | | ISS content of OHOs | f _{ISS,OHO} | 0.15 | 5 - |
| Nitri. pH sensitivity coefficient | KII | 0.30 - | | Active fraction - VSS | f _{avOHO} | 23% |) - |
| Max. specific growth rate at 20°C | μ _{Am} | 0.45 1 | /d | Active fraction - TSS | f _{at} | 16% |) – |
| Max. spec. growth rate - Temp/pH | µАтрн | 0.44 1 | /d | Influent FSA fraction | f _{FSA,i} | 0.75 | 5 - |
| Half saturation coefficient | Kn | 0.75 n | ngFSA/I | Non-bio. soluble orgN fraction (inerts) | f _{SNb,N} | 0.03 | } - |
| Half saturation coefficient - Temp | K _{nT} | 0.75 n | ngFSA/I | Non-bio. particulate orgN fraction | fn | 0.12 | 2 - |
| Endogenous respiration rate (decay) | b _A | 0.04 1 | /d | Permissible unaer. sludge mass fraction | f_{xm} | 0.78 | 3 - |
| Temperature coefficient for $k_{\text{F},\text{T}}$ | θη | 1.123 - | | Design unaerated sludge mass fraction | f_{xt} | 0.38 | 3 - |
| Endogenous respiration rate T | b _{AT} | 0.040 1 | /d | Minimum primary anoxic mass fraction | f _{x1min} | 0.04 | |
| Temperature sensitivity coefficient | Θ_{nk1} | 1.20 - | | Primary anoxic mass fraction | f _{x1} | 0.22 | 2 - |
| Temperature sensitivity coefficient | Θ_{nk2} | 1.05 - | | Secondary anoxic mass fraction | f _{x2} | 0.17 | · _ |
| Temperature sensitivity coefficient | Θ_{nk3} | 1.03 - | | Anaerobic mass fraction | f _{AN} | 0.00 |) – |
| Denitrification rates at 20°C | k1 | 0.70 - | | Non-bio. particulate orgP fraction | f _{P,XE,OHO} | 0.05 | mgP/mgVSS |
| Denitrification rates at 20°C | k ₂ | 0.10 - | | Endogenous residue fraction | f _{XE,PAO} | 0.25 | gEVSS/gAVSS |
| Denitrification rates at 20°C | k ₃ | 0.08 - | | P fraction in active PAO mass | f _{P,PAO} | 0.38 | gP/gAVSS |
| Denitrification rates | k _{1T} | 0.700 - | | VSS/TSS ratio for PAO active mass | f _{VT,PAO} | 0.46 | gVSS/gTSS |
| Denitrification rates | k _{2T} | 0.101 - | | Ratio of P release /VFA uptake | f _{PO4,REL} | 0.5 | gP/gCOD |
| Denitrification rates | k _{3T} | 0.080 - | | Frac. of fixed inorganic s. solids of PAO | f _{FSS,PAO} | 1.3 | gFSS/gAVSS |
| Yield coefficient PAO | Y _{PAO} | 0.45 g | JAVSS/gCOD | P content of TSS | f _{P,TSS} | 0.04 | gP/gTSS |
| Yield coefficient PAO | Y _{PAO,obs} | 0.20 g | JAVSS/gCOD | P content of VSS | f _{P,FSS,i} | 0.02 | gP/gVSS |
| Endogenous respiration rate (decay) | b _{PAO_20} | 0.04 g | jEVSS/gCOD | TKN/COD ratio | f _{ns} | 0.10 | mgIKN/mgCO |
| Temperature coefficient for $k_{\text{F},\text{T}}$ | $\Theta_{b,PAO}$ | 1.029 - | | Nitrogen content of active biomass | f _{N,VSS} | | gN/gAVSS |
| Endogenous respiration rate T | b _{PAO,T} | 0.04 g | JEVSS/gVSSd | | | | |
| | | | | | | | |

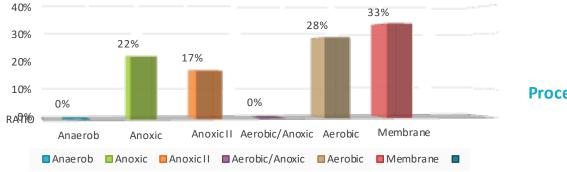
| Sludge ageSRT25 dAlkalinity mentators as CaCO3 (consense)AlkalinityAlkalinityMain110 mg/l as CaCReadiable biodegradable COD fluxFS $_{B,1}$ 71 kgCOD/dAlkalinity u^{i} Alkalinity u^{i} Alkalinity100 mg/l as CaCDaily flux of VFAsFS v_{rk1} 11 kgCOD/dAlkalinity u^{i} AlkalinityAlkalinity100 mg/l as CaCDaily flux of idegradable CODFS v_{rk1} 60 kgCOD/dAlkalinity v_{i} AlkalinityAlkalinity0.0 mg/l as CaCDaily flux of biodegradable CODFS v_{rk1} 43 kgCOD/dAlkalinity v_{aded} AlkalinityAlkalinity101 mg/l as CaCDaily flux of particulate inert CODFS v_{rk1} 43 kgCOD/dAlkalinity v_{aded} AlkalinityAlkalinity101 mg/l as CaCDaily flux of particulate inert CODFS v_{rk1} 22 kglSS/dAlkalinity vadedAlkalinityAlkalinity0.0 mg/l as CaCInfluent particulate nert CODFS v_{rk3} 29 kglSS/dDensity caustic solution (gsv)-12.76 lb/galMass of nitrate generated per dayFN _{ku2g} 7 kglVdAlkalinity vecoverAlkalinity wecoverAlkalinityMass of nitrate generated per dayFN _{ku23} 1.428 kg/QS-0.0 lb/dCaustic metad-0.0 lb/dReadiable biodegradable CODFCOD _{0,OD} 224 kg/QD/dCaustic metad-0.0 lb/dKalinityReadiable biodegradable CODFCOD _{0,OD} 224 kg/QD/dCaustic metad-0.0 lb/dReadiable biodegradable c | Biological Mass Balance | Symbol | Value | Units | Alkalinity | Symbol | Value | Units |
|--|---|-----------------------|---------|---------|---|------------------------------|------------------|-------------------------|
| Readiable biodegradable COD fluxFS FS rK1TkgCOD/dAlkalinity #Alka100 mg/l as CadDaily flux of VFAsFS VFAsFS VFAs11 kgCOD/dAlkalinity #AlkaAlka250 mg/l as CadDaily flux of VFAsFS VFAs11 kgCOD/dAlkalinity #Alka101 mg/l as CadDaily flux of formentable CODFS VFAs224 kgCOD/dAlkalinity Aun (oxeumed)Alkatad101 mg/l as CadDaily flux of biodegradable CODFS VFAs224 kgCOD/dAlkalinity Aun (oxeumed)Alkatad101 mg/l as CadDaily flux of particulate inert CODFS VFAs22 kg/SS/dAlkalinity Aund (oxeumed)Alkatad010 mg/l as CadDaily flux of fixed inorganic sus. solidsFS VFAs22 kg/SS/dAlkalinity Aund (oxeumed)Alkatad010 mg/l as CadMass of nitrate generated per dayFN VFAs stored by PAOsFS SP.N0224 kg/COD/dAlkalinity Aund (oxeus)-12.7610/gdMass of nitrate generated per dayFN VFAs71 kg/COD/dCaustic meeted-0.0 gd10/ddMass of nitrate generated per dayFN KAS22 kg/SSCaustic meeted-0.0 gdRemaining biodegradable CODFCODe, onto224 kg/COD/dCaustic meeted-0.0 gdRedogenous active biomass PAOMX MX VA322 kg/SSMXISS SMXISS SFK TS TS NSSFK TS S-0. gdNon-biodegradable particulate massMX MX MX </td <td>Sludge age</td> <td>SRT</td> <td>25 c</td> <td>l</td> <td>Alkalinity Nitrification as CaCO3 (consumed)</td> <td>Alk_{Nitri}</td> <td>310</td> <td>mg/l as CaCC</td> | Sludge age | SRT | 25 c | l | Alkalinity Nitrification as CaCO3 (consumed) | Alk _{Nitri} | 310 | mg/l as CaCC |
| Daily flux of VFAsFS $V_{75,1}$ 11 kgCOD/dAlkalinity rr Alka250 mg/l as CadDaily flux of fermentable CODFS $_{5;1}$ 60 kgCOD/dAlkalinity $trat$ Alkaum0.0 mg/l as CadDaily flux of biodegradable CODFS $_{516,1}$ 224 kgCOD/dAlkalinity $trat$ Alkaud101 mg/l as CadDaily flux of particulate inert CODFS $_{516,1}$ 22 kglSS/dAlkalinity $trat$ Alkauded10 mg/l as CadDaily flux of fixed inorganic sus. solidsFS $_{516,21}$ 22 kglSS/dAlkalinity $trat$ Alkauded0 lb/dInfluent particulate non-bio. CODFX $_{58,8,1}$ 22 kglSS/dDensity caustic solution (gen) -12.76 lb/galMass of nitrate generated per dayFN $_{503}$ 21 kgN/dCaustic needed-0.0 lb/dVFAs stored by PAOsFS $_{58,PAO}$ 0 kgCOD/dCaustic needed-0.0 lb/dMass nitrifiersMX $_{4}$ 26 kgVSSCaustic needed-0.0 gpdRedogenous active biomass PAOMX $_{600}$ 322 kgVSS $V_{70} = \frac{MX _{755}}{N_{755}}$ $V_{70} = \frac{MX _{755}}{N_{755}}$ Indogenous active biomass PAOMX $_{55}$ 1.428 kgVSSfor kgVSS $V_{70} = \frac{MX _{755}}{N_{755}}$ Indogenous residue massMX $_{55}$ 1.428 kgVSSfor kgVSS $V_{70} = \frac{MX _{755}}{N_{755}}$ Validie suspended solidi massMX $_{55}$ 1.428 kgVSS $V_{75} kgVSS/d$ Indogenous residue massMX $_{55}$ 2.039 kgTSS $MX _{55} kgVSS/d$ $MX _{55} kgVSS/d$ Interpreted solidis m | Mixed liquor suspended solids | X _{TSS} | 7,000 n | ngTSS/I | Alkalinity Denitrification as CaCO3 (recovered) | Alk _{Denitri} | 160 | mg/l as CaCC |
| Daily flux of fermentable COD $FS_{F,i}$ 60 kgCOD/d Alkalinity <i>xum</i> (consumet) AlkAum 0.0 mg/l as Cad Daily flux of biodegradable COD $FS_{F,i,i}$ 224 kgCOD/d Alkalinity <i>xum</i> (consumet) AlkAum 0.0 mg/l as Cad Daily flux of particulate inert COD $FS_{F,i,i}$ 224 kgCOD/d Alkalinity <i>xum</i> (consumet) AlkAum 0.0 mg/l as Cad Daily flux of fixed inorganic sus. solids $FS_{F,i,i,i}$ 22 kgISS/d Alkalinity <i>xum</i> (consumet) AlkAum 0.0 mg/l as Cad Daily flux of fixed inorganic sus. solids $FS_{F,i,i,i}$ 22 kgISS/d Alkalinity <i>xum</i> (consumet) AlkAum 0.0 mg/l as Cad Daily flux of fixed inorganic sus. solids $FS_{F,i,i,i}$ 22 kgISS/d Alkalinity <i>xum</i> (consumet) AlkAum 0.0 mg/l as Cad Daily flux of fixed inorganic sus. solids $FS_{F,i,i,i}$ 22 kgISS/d Alkalinity <i>xum</i> (consumet) AlkAum 0.0 mg/l as Cad Daily flux of fixed inorganic sus. solids $FS_{F,i,i,i}$ 22 kgISS/d Alkalinity <i>xum</i> (consumet) AlkAum 0.0 mg/l as Cad Daily flux of fixed inorganic sus. solids $FS_{F,i,i,i}$ 22 kgISS/d Alkalinity <i>xum</i> (consumet) AlkAum 0.0 mg/l as Cad Daily flux of fixed inorganic sus. solids $FS_{F,i,i,i}$ 22 kgISS/d Alkalinity <i>xum</i> (consumet) AlkAum 0.0 mg/l as Cad Mass of nitrate generated per day FN_{incos} 21 kgN/d Caustic rested - 0.0 lb/d Caustic rested - 0.0 lb/d Caustic rested - 0.0 gpd Remaining biodegradable COD $FOD_{i,OHO}$ 22 kg/SS Endogenous active biomass PAO $MX_{E,PAO}$ 0 kgEVSS Endogenous active biomass $MX_{E,OHO}$ 337 kg/SS Non-biodegradable particulate mass $MX_{E,OHO}$ 337 kg/SS Valatile suspended solids mass MX_{KSS} 1.428 kg/SS information M_{KSS} 3.1428 kg/SS in | Readiable biodegradabe COD flux | $FS_{S,i}$ | 71 k | gCOD/d | Alkalinity _{ef} | Alke | 100 | mg/l as CaCC |
| Daily flux of biodegradable CODFS bial224kgCOD/dAlkalinity radiAlkadid101mg/l as CadDaily flux of particulate inert CODFS mili43kgCOD/dAlkalinity AddedAlkadided-1mg/l as CadDaily flux of fixed inorganic sus. solidsFS mili22kg/SS/dAlkalinity AddedAlkadided-1mg/l as CadDaily flux of fixed inorganic sus. solidsFS mili22kg/SS/dAlkalinity AddedAlkadided-1mg/l as CadInfluent particulate non-bio. CODFX MSS.J29kg/SS/dDensity caustic solution (60%)-12.76lb/galMass nitrogen into sludge prod.FN militity7kg/VdAlkalinity meanedAlkmonite0.4lbCaCOs/lbMass of intrate generated per dayFN molas21kg/VdCaustic medical-0.0lb/dVFAs stored by PAOsFS mAva26kg/SSCaustic medical-0.0gd/dRemaining biodegradable CODFCOD _{D, OHO} 224kg/SSCaustic medical-0.0gd/dBio massMX26kg/SSSAltive organism massMX _{bio} 322kg/SSSEndogenous active biomass PAOMX _{bio} 322kg/SSMX _{bio} 322kg/SSMX _{bio} Non-biodegradable particulate massMX _{bio} 324kg/SSMX _{bio} 5KTKTNatifiesMX _{bio} 328kg/SS1.428kg/SSMX _{bio} 5KT <td>Daily flux of VFAs</td> <td>FS_{VFA,i}</td> <td>11 k</td> <td>gCOD/d</td> <td>Alkalinity _{inf}</td> <td>Alki</td> <td>250</td> <td>mg/l as CaCC</td> | Daily flux of VFAs | FS _{VFA,i} | 11 k | gCOD/d | Alkalinity _{inf} | Alki | 250 | mg/l as CaCC |
| Daily flux of particulate inert COD FS _{INI} 43 kgCOD/d Alkalinity Added Alkalinity Added distance of the dist | Daily flux of fermentable COD | $FS_{F,i}$ | 60 k | gCOD/d | Alkalinity Alum (consumed) | Alk _{Alum} | 0.0 | mg/l as CaCC |
| Daily flux of fixed inorganic sus. solids FS _{155,1} 22 kglSS/d Alkalinity Added XAlkadd 0 b/d influent particulate non-bio. COD FX _{VSS,1} 29 kgVSS/d Density caustic solution (dow) - 12.76 b/gal Mass nitrogen into sludge prod. FN _{51,620} 7 kg/Vd Alkalinity recovered Alk _{recovered} 0.4 b/CaCO ₂ /b Mass of nitrate generated per day FN ₅₀₃ 21 kg/Vd Caustic meeted - 0.0 b/d VFAs stored by PAOs FS _{5,7A0} 0 kgCOD/d Caustic meeted - 0.0 gpd Remaining biodegradable COD FCOD _{6,0H0} 224 kg/COD/d Caustic meeted - 0.0 gpd Remaining biodegradable COD FCOD _{6,0H0} 224 kg/COD/d Caustic meeted - 0.0 gpd Remaining biodegradable COD KCOD _{6,0H0} 224 kg/SS Endogenous active biomass PAO MX _{6,7A0} 0 kgEVSS Endogenous residue mass MX _{60H0} 322 kg/SS Active organism mass MX _{60H0} 387 kg/SS Inorganic suspended solids mass MX _{60K5} 1.428 kg/SS for kg/SS for kg/SS S Volatile suspended solids mass MX _{60K5} 2.039 kg/TSS Masted FX ₄ 82 kg/TSS Masted FX ₄ 82 kg/TSS Mass/Sludge TSS wasted FX ₄ 82 kg/TSS/d Mass/Sludge TSS wasted FX ₄ 82 kg/TSS/d Effluent COD Scop.e 17 kg/CD/d MX _{TSS} 46 mgCOD/l COD mass out (effluent and waste) FS _{COD,e} 17 kg/CD/d | Daily flux of biodegradable COD | FS _{bio,i} | 224 k | gCOD/d | Alkalinity _{Total} | Alk _{total} | 101 | mg/l as CaCC |
| Influent particulate non-bio. COD $F_{VrSS,i}$ 29 kgVSS/d Density caustic solution (50%) - 12.76 lb/gal Mass nitrogen into sludge prod. $F_{N_{53,i}}$ 21 kgN/d Alkalinity recovered Alk_recovered 0.4 lbCaCOy/lb Mass of nitrate generated per day $F_{N_{53}}$ 21 kgN/d Caustic needed - 0.0 lb/d VFAs stored by PAOs $F_{S_{5,PAO}}$ 0 kgCOD/d Remaining biodegradable COD $F_{COD_{0,OHO}}$ 224 kgCOD/d Mass nitrifiers MX_A 26 kgVSS Active biomass PAO MX_{PAO} 0 kgAVSS Endogenous active biomass PAO $MX_{E,PAO}$ 0 kgEVSS Bio mass MX_{OHO} 322 kgVSS Active organism mass $MX_{e,OHO}$ 387 kgVSS Endogenous residue mass $MX_{e,OHO}$ 387 kgVSS Non-biodegradable particulate mass MX_{VV} 719 kgVSS Volatile suspended solids mass MX_{VSS} 1.428 kgVSS Intra suspended solids mass MX_{SS} 610 kgISS Total suspended solids mass MX_{TSS} 2,039 kgTSS Mass/Sludge TSS wasted FX_{t} 82 kgTSS/d Mass/Sludge VSS wasted FX_{t} 82 kgTSS/d Effluent COD $S_{COD,e}$ 36 mgCOD/l COD mass out (effluent and waste) $FS_{COD,e}$ 17 kgCOD/d | Daily flux of particulate inert COD | FS _{PIN,i} | 43 k | gCOD/d | Alkalinity Added | Alkadded | -1 | mg/l as CaCC |
| Mass nitrogen into sludge prod.FNsurge FNsurge7 kgN/dAlkalinity recoveredAlkAlkMass of nitrate generated per dayFNso321 kgN/dCaustic recovered $Alk_{recovered}$ $Alk_{recovered}$ $0.0 \ lb/d$ Mass of nitrate generated per dayFNso321 kgN/dCaustic recovered $-0.0 \ lb/d$ $0.0 \ lb/d$ VFAs stored by PAOsFS.B.PAO $0 \ kgCOD/d$ Caustic received $-0.0 \ gpd$ Remaining biodegradable CODFCODb.OHD224 kgCOD/dCaustic received $-0.0 \ gpd$ Mass nitrifiersMXA26 kgVSSCaustic received $-0.0 \ gpd$ Active biomass PAOMX _{EPAO} $0 \ kgEVSS$ $V_p = \frac{MX_{TSS}}{X_{TSS}}$ $V_p = \frac{MX_{TSS}}{X_{TSS}}$ Bio massMX _{blo} 322 kgVSS S_{SRPAO} $V_p = \frac{MX_{TSS}}{X_{TSS}}$ Indogenous residue massMX _{blo} 322 kgVSS S_{SRT} Non-biodegradable particulate massMX _{VSS} $1.428 \ kgVSS$ M_{SSS} Inorganic suspended solid massMX _{SS} $1.428 \ kgVSS$ M_{SSS} India suspended solid massMX _{SS} $2.039 \ kgTSS$ MX_{SS} MX_{SS} Mass/Sludge VSS wastedFX, $82 \ kgTSS/d$ $MX_{TSS} = MX_{TSS} + MX_{VSS}$ CODScob.e $36 \ mgCOD/l$ $MX_{TSS} = MX_{TSS} + MX_{VSS}$ COD mass out (effluent and waste)FS _{COD.e} $17 \ kgCOD/d$ $MX_{TSS} = MX_{TSS} + MX_{VSS}$ | Daily flux of fixed inorganic sus. solids | FS _{ISS,i} | 22 k | gISS/d | Alkalinity Added | XAIkadded | 0 | lb/d |
| Mass of nitrate generated per dayFNN0321 kgN/dCaustic needed-0.0 lb/dVFAs stored by PAOsFS _{S,PAO} 0 kgCOD/dCaustic needed-0.0 gpdRemaining biodegradable CODFCOD _{b.0HO} 224 kgCOD/d-0.0 gpdMXa26 kgVSSKgAVSSKgAVSS-0.0 kgEVSSActive biomass PAOMXepAO0 kgEVSS $KgAVSS$ -Bio massMXbio322 kgVSS $KgVS$ $V_p = \frac{MX_{TSS}}{X_{TSS}}$ $V_p = \frac{MX_{TSS}}{X_{TSS}}$ Endogenous residue massMXoHO322 kgVSS MX_{SS} MX_{SS} $KgVSS$ Non-biodegradable particulate massMXvv719 kgVSS MX_{SS} MX_{SS} FX_t Non-biodegradable particulate massMXvs1.428 kgVSS MX_{TSS} TX_TSS TX_TSS Total suspended solid massMXrss2.039 kgTSS $KgSS/d$ $MX_{TSS} = 0.039 kgTSS$ $MX_{SS} = 1.428 kgVSS/d$ $MX_{TSS} = MX_{TSS} + MX_{VSS}$ CoD mass out (effluent and waste)FScoD_e17 kgCOD/d $MX_{TSS} = MX_{VSS} + MX_{VSS}$ $MX_{TSS} = MX_{VSS} + MX_{VSS}$ | nfluent particulate non-bio. COD | FX _{VSS,i} | 29 k | gVSS/d | Density caustic solution (50%) | - | 12.76 | lb/gal |
| VFAs stored by PAOsFSs.PAO0 kgCOD/dCaustic medied-0.0 gpdRemaining biodegradable CODFCOb_bOHO224 kgCOD/dCaustic medied-0.0 gpdMass nitrifiersMXA26 kgVSSCaustic medied-0.0 gpdActive biomass PAOMXpAO0 kgAVSS-0.0 gpdBio massMXbio322 kgVSS- $V_p = \frac{MX_{TSS}}{X_{TSS}}$ Active organism massMXbio322 kgVSS- $V_p = \frac{MX_{TSS}}{X_{TSS}}$ Chodgenous residue massMXuV719 kgVSSNon-biodegradable particulate massMXuS1,428 kgVSSNon-biodegradable particulate massMXuSS1,428 kgVSSNon-biodegradable solids massMXiSS610 kgISSTotal suspended solids massMXiSS2,039 kgTSSMass/Sludge TSS wastedFXv57 kgVSS/dEffluent CODScode36 mgCOD/lCOD mass out (effluent and waste)FScode17 kgCOD/d | Mass nitrogen into sludge prod. | FN _{Sludge} | 7 k | gN/d | Alkalinity recovered | Alkrecovered | 0.4 | lbCaCO ₃ /lb |
| Remaining biodegradable CODFCOD_b,OHO224kgCOD/dMass nitrifiersMX _A 26kgVSSActive biomass PAOMX _{PAO} 0KgAVSSEndogenous active biomass PAOMX _{EPAO} 0kgEVSSBio massMX _{bio} 322kgVSSActive organism massMX _{OHO} 322kgVSSEndogenous residue massMX _{eDHO} 387kgVSSNon-biodegradable particulate massMX _{VS} 1,428kgVSSNon-biodegradable particulate massMX _{VSS} 1,428kgVSSInorganic suspended solids massMX _{SS} 610kgISSTotal suspended solids massMX _{TSS} 2,039kgTSSMass/Sludge TSS wastedFX _t 82KgTSS/dMass/Sludge VSS wastedFX _v 57kgVSS/dEffluent CODScoDe36ngCOD/lCOD mass out (effluent and waste)FS _{CODe} 17kgCOD/d | Mass of nitrate generated per day | FN _{NO3} | 21 k | gN/d | Caustic needed | - | 0.0 | lb/d |
| Mass nitrifiersMXA26 kgVSSActive biomass PAOMXPAO0 KgAVSSEndogenous active biomass PAOMXEPAO0 kgEVSSBio massMXbio322 kgVSSActive organism massMXbio322 kgVSSActive organism massMXAV387 kgVSSNon-biodegradable particulate massMXVS1.428 kgVSSNon-biodegradable particulate massMXVSS1.428 kgVSSNon-biodegradable particulate massMXVSS1.428 kgVSSNon-biodegradable particulate massMXVSS1.428 kgVSSNon-biodegradable particulate massMXVSS610 kgISSTotal suspended solids massMXTSS2.039 kgTSSMass/Sludge VSS wastedFX82 KgTSS/dMass/Sludge VSS wastedFXv57 kgVSS/dEffluent CODScobe36 mgCOD/lCOD mass out (effluent and waste)FScobe,17 kgCOD/d | VFAs stored by PAOs | $FS_{S,PAO}$ | 0 k | gCOD/d | Caustic needed | - | 0.0 | gpd |
| Active biomass PAO MX _{PAO} 0 KgAVSS Endogenous active biomass PAO MX _{E,PAO} 0 kgEVSS Bio mass MX _{bio} 322 kgVSS Active organism mass MX _{OHO} 322 kgVSS Endogenous residue mass MX _{E,OHO} 387 kgVSS Non-biodegradable particulate mass MX _V 719 kgVSS Volatile suspended solids mass MX _{VSS} 1,428 kgVSS horganic suspended solids mass MX _{ISS} 610 kgISS Total suspended solids mass MX _{TSS} 2,039 kgTSS Mass/Sludge TSS wasted FX _t 82 KgTSS/d Mass/Sludge VSS wasted FX _v 57 kgVSS/d Effluent COD S _{COD,e} 36 mgCOD/i COD mass out (effluent and waste) FS _{COD,e} 17 kgCOD/d MX_{TSS} COD mass out (effluent and waste) FS _{COD,e} 17 kgCOD/d | Remaining biodegradable COD | FCOD _{b,OHO} | 224 k | gCOD/d | | | | |
| IndIndIndEndogenous active biomass PAO $MX_{E,PAO}$ 0kgEVSSBio mass MX_{bio} 322kgVSSActive organism mass MX_{OHO} 322kgVSSEndogenous residue mass $MX_{e,OHO}$ 387kgVSSNon-biodegradable particulate mass MX_{VV} 719kgVSSVolatile suspended solids mass MX_{VSS} 1,428kgVSSNorganic suspended solids mass MX_{TSS} 2,039kgTSSMass/Sludge TSS wasted FX_t 82kgTSS/dMass/Sludge VSS wasted FX_v 57kgVSS/dEffluent COD $S_{COD,e}$ 36mgCOD/lCOD mass out (effluent and waste) $FS_{COD,e}$ 17kgCOD/d | Mass nitrifiers | MXA | 26 k | gVSS | | | | |
| Bio massMXbio322 kgVSSMXISSMXISSMXISSMXISS $V_p = \frac{MX_{TSS}}{X_{TSS}}$ Active organism massMXoHO322 kgVSSMXISS $V_p = \frac{MX_{TSS}}{X_{TSS}}$ $V_p = \frac{MX_{TSS}}{X_{TSS}}$ Endogenous residue massMX _{VV} 719 kgVSS V_{VSS} $V_{VP} = \frac{MX_{TSS}}{X_{TSS}}$ $V_p = \frac{MX_{TSS}}{X_{TSS}}$ Non-biodegradable particulate massMX _{VSS} 1,428 kgVSS $V_{VP} = \frac{MX_{TSS}}{X_{TSS}}$ $FX_t = \frac{MX_{TSS}}{SRT}$ Volatile suspended solids massMX _{SS} 610 kgISS V_{SS} $FX_t = \frac{MX_{TSS}}{SRT}$ $FX_t = \frac{MX_{TSS}}{SRT}$ Mass/Sludge TSS wasted FX_t 82 kgTSS/d $FX_V = 57$ kgVSS/d $MX_{TSS} = MX_{ISS} + MX_{VSS}$ Effluent COD $S_{OD,e}$ 36 mgCOD/l $MX_{TSS} = MX_{ISS} + MX_{VSS}$ | Active biomass PAO | MX _{PAO} | 0 k | GAVSS | | | | |
| Endogenous residue mass $MX_{E,OHO}$ 387 kgVSS Non-biodegradable particulate mass MX_{Iv} 719 kgVSS Volatile suspended solids mass MX_{VSS} $1,428 \text{ kgVSS}$ Inorganic suspended solid mass MX_{VSS} 610 kgISS Total suspended solids mass MX_{TSS} $2,039 \text{ kgTSS}$ Mass/Sludge TSS wasted FX_t 82 KgTSS/d Mass/Sludge VSS wasted FX_v 57 kgVSS/d Effluent COD $S_{COD,e}$ 36 mgCOD/l MX_{TSS} = MX_{ISS} + MX_{VSS} $MX_{TSS} = MX_{ISS} + MX_{VSS}$ | Endogenous active biomass PAO | MX _{E,PAO} | 0 k | gEVSS | | | | |
| Endogenous residue mass $MX_{E,OHO}$ 387 kgVSS Non-biodegradable particulate mass MX_{VV} 719 kgVSS Volatile suspended solids mass MX_{VSS} $1,428 \text{ kgVSS}$ Norganic suspended solid mass MX_{ISS} 610 kgISS Total suspended solids mass MX_{TSS} $2,039 \text{ kgTSS}$ Mass/Sludge TSS wasted FX_t 82 KgTSS/d Mass/Sludge VSS wasted FX_V 57 kgVSS/d Effluent COD $S_{COD,e}$ 36 mgCOD/l COD mass out (effluent and waste) $FS_{COD,e}$ 17 kgCOD/d | Bio mass | MX _{bio} | 322 k | gVSS | | | 17 | MX _{TSS} |
| Endogenous residue mass $MX_{E,OHO}$ 387 kgVSS Non-biodegradable particulate mass MX_{VV} 719 kgVSS Volatile suspended solids mass MX_{VSS} $1,428 \text{ kgVSS}$ Norganic suspended solid mass MX_{ISS} 610 kgISS Total suspended solids mass MX_{TSS} $2,039 \text{ kgTSS}$ Mass/Sludge TSS wasted FX_t 82 KgTSS/d Mass/Sludge VSS wasted FX_V 57 kgVSS/d Effluent COD $S_{COD,e}$ 36 mgCOD/l COD mass out (effluent and waste) $FS_{COD,e}$ 17 kgCOD/d | Active organism mass | MX _{OHO} | 322 k | gVSS | 30% | | V _P : | $= \frac{100}{X_{TSS}}$ |
| Volatile suspended solids mass MX_{VSS} 1,428 kgVSS $FX_t = \frac{MX_{TSS}}{SRT}$ norganic suspended solid mass MX_{ISS} 610 kgISSTotal suspended solids mass MX_{TSS} 2,039 kgTSSMass/Sludge TSS wasted FX_t 82 KgTSS/dMass/Sludge VSS wasted FX_v 57 kgVSS/dEffluent COD $S_{COD,e}$ 36 mgCOD/lCOD mass out (effluent and waste) $FS_{COD,e}$ 17 kgCOD/d | Endogenous residue mass | MX _{E,OHO} | 387 k | gVSS | | | | 155 |
| Total suspended solids mass MX _{TSS} 2,039 kgTSS Mass/Sludge TSS wasted FXt 82 KgTSS/d Mass/Sludge VSS wasted FXv 57 kgVSS/d Effluent COD S _{COD,e} 36 mgCOD/l COD mass out (effluent and waste) FS _{COD,e} 17 kgCOD/d | Non-biodegradable particulate mass | MXIv | 719 k | gVSS | | | | |
| Total suspended solids mass MX _{TSS} 2,039 kgTSS Mass/Sludge TSS wasted FXt 82 KgTSS/d Mass/Sludge VSS wasted FXv 57 kgVSS/d Effluent COD Scode 36 mgCOD/l COD mass out (effluent and waste) FS _{COD,e} 17 kgCOD/d | Volatile suspended solids mass | MX _{VSS} | 1,428 k | gVSS | | | FX. | $=$ MX_{TSS} |
| Total suspended solids massMXTSS2,039 kgTSSMass/Sludge TSS wastedFXt82 KgTSS/dMass/Sludge VSS wastedFXv57 kgVSS/dEffluent CODScode36 mgCOD/lCOD mass out (effluent and waste)FSCOD,e17 kgCOD/d | Inorganic suspended solid mass | MXISS | 610 k | gISS | | | l | SRT |
| Mass/Sludge VSS wasted FXv 57 kgVSS/d Effluent COD Scop.e 36 mgCOD/l COD mass out (effluent and waste) FS _{COD,e} 17 kgCOD/d | Total suspended solids mass | MX _{TSS} | 2,039 k | gTSS | | 10/0 | | |
| Effluent COD S _{COD,e} 36 mgCOD/I COD mass out (effluent and waste) FS _{COD,e} 17 kgCOD/d | Mass/Sludge TSS wasted | FXt | 82 k | (gTSS/d | | | | |
| COD mass out (effluent and waste) $FS_{COD,e}$ 17 kgCOD/d $MX_{TSS} = MX_{ISS} + MX_{VSS}$ | Mass/Sludge VSS wasted | FX _V | 57 k | gVSS/d | | | | |
| COD mass out (effluent and waste) FS _{COD,e} 17 kgCOD/d | Effluent COD | S _{COD,e} | 36 n | ngCOD/I | | IV | | |
| Mass/Sludge COD wasted FX _{COD,s} 85 kgCOD/d | COD mass out (effluent and waste) | FS _{COD,e} | 17 k | gCOD/d | $MX_{TSS} = MX_{ISS} + N$ | $\mathbf{IA}_{\mathrm{VSS}}$ | | |
| | Mass/Sludge COD wasted | FX _{COD,s} | 85 k | gCOD/d | | | | |

| N Removal | Symbol | Value | Units | P Removal | Symbol | Value | Units |
|--|-------------------------|-------|--------------------------|------------------------------------|-----------------------|-------|--------------------------------------|
| Factor of safety | S _f | 1.2 | 2 - | COD lost in anaerobic reatcor | S _{F,ANn} | 0.0 | gCOD/m ³ |
| Nitrogen requirements | FN _{synth} | (| ∂ kgN/d | COD lost in anaerobic reatcor | S _{F,ANn*} | 0.0 | gCOD/m ³ |
| Nitrogen requirements | TKN _{i, synth} | 12.08 | 3 gN/m3 | Fermentable COD for AN reactor | $S_{\text{F,I,conv}}$ | 0.0 | gCOD/m ³ |
| Influent non-bio. soluble organic N | N _{nbios,i} | 1.8 | 3 mgN/l | DO in influent | S _{O2,i} | 0.0 | mgO ₂ /I |
| Influent non-bio. particulate org. N | N _{nbiop,i} | 7.3 | 3 mgN/l | PO ₄ release AN reactor | S _{PO4,rel} | 0.0 | gP/m ³ |
| Influent biodegradable organic N | N _{bio,i} | 13.2 | 2 mgN/l | P removal by PAOs | ΔP_{PAO} | 0.0 | gP/m ³ |
| Effluent non-bio. soluble organic N | $N_{nbios,e}$ | 1.8 | 3 mgN/I | P removal by OHOs | ΔΡομο | 0.8 | gP/m ³ |
| NH4 concentration avail. for nitri. | Nan | 43. | 7 mgN/l | P removal by endgeneous biomass | ΔP_{XE} | 1.6 | gP/m ³ |
| Effluent ammonia | N _{a,e} | 0.3 | 3 mgN/l | P removal by influent inert mass | ΔP _{XI} | 3.0 | gP/m ³ |
| Effluent TKN | N _{TKN,e} | 2.1 | 1 mgN/l | P into sludge production | Ps | 5.0 | gP/m ³ |
| N concentration into sludge prod. | Ns | 14. | 5 mgN/l | Potential P removal by system | $\Delta P_{SYS,POT}$ | 10.5 | gP/m ³ |
| Nitrification capacity | N _c | 43.4 | 4 mgN/l | Actual P removal by system | $\Delta P_{SYS,ACT}$ | 10.0 | gP/m ³ |
| Denitrification potential RBCOD | D _{p1RBCOD} | 21.2 | 2 mgNO ₃ -N/I | Effluent particulate P from TSS | X _{P,e} | 0.0 | gP/m ³ |
| Denitrification potential SBCOD | D _{p1SBCOD} | 14.9 | 9 mgNO ₃ -N/I | Influent total P | Pi | 10.0 | gP/m ³ |
| Denitrification potential RBCOD | D _{p3RBCOD} | 0.0 |) mgNO ₃ -N/I | Effluent total P | Pe* | 0.0 | gP/m ³ |
| Denitrification potential SBCOD | D _{p3SBCOD} | 9.1 | 1 mgNO ₃ -N/I | P precipitated | P _{prec} | 0.0 | mgP/l |
| Minimum sludge age for nitri. | SRTm | 4.3 | 3 d | Precipitation chemical | B _{Alum} | 0.0 | lb/d |
| Denitrification potential primary tank | D _{p1} | 36. | 1 mgN/l | Precipitation chemical | Solution | 0.0 | gal/d |
| Denitrification potential secondary tank | D _{p3} | 9.1 | 1 mgN/l | Density Alum | ZAL ³⁺ | 0.100 | lb _{AL} /lb _{prec} |
| Denitri. potential recycle rate ($f_{xm} = f_{xdm}$) | $D_{p^{\star}}$ | 37.9 | 9 mgN/l | Density Iron | ZFE ³⁺ | 0.077 | lb _{FE} /lb _{prec} |
| Effluent nitrate | N _{NO3,e} | 1.2 | 2 mgN/l | Alum efficiency | - | 40.0 | g/kg |
| Effluent nitrate @ fxdm & recycle rate | N _{NO3,e*} | 7.2 | ² mgN/l | Chemical precipitation sludge | - | 0.0 | lb/d |
| | | | | | | | |

Mechanical Process Calculation

| Trains | Length | Width | Dia. | Degree | Height | Liquid level | Volume per train | Volume Total | Volume Total |
|--------|---------------------------------|--|---|---|---|---|---|--|---|
| 0 | .00 ft | .00 ft | .00 ft | 0.0 | .00 ft | .00 ft | gal | gal | 0.0 m3 |
| 1 | 13.00 ft | 16.00 ft | .00 ft | 0.0 | 13.00 ft | 11.25 ft | 17,503 gal | 17,503 gal | 66.2 m3 |
| 1 | 17.00 ft | 16.00 ft | .00 ft | 0.0 | 13.00 ft | 11.25 ft | 22,889 gal | 22,889 gal | 86.6 m3 |
| 1 | 10.00 ft | 16.00 ft | .00 ft | 0.0 | 13.00 ft | 11.25 ft | 13,464 gal | 13,464 gal | 51.0 m3 |
| 0 | .00 ft | .00 ft | .00 ft | 0.0 | .00 ft | .00 ft | gal | gal | 0.0 m3 |
| 1 | 20.00 ft | 16.00 ft | .00 ft | 0.0 | 13.00 ft | 11.25 ft | 26,928 gal | 26,928 gal | 101.9 m3 |
| 0 | .00 ft | .00 ft | .00 ft | 0.0 | .00 ft | .00 ft | gal | gal | 0.0 m3 |
| 0 | .00 ft | .00 ft | .00 ft | 0.0 | .00 ft | .00 ft | gal | gal | 0.0 m3 |
| | 0 1 1 1 0 1 0 | 0 .00 ft 1 13.00 ft 1 17.00 ft 1 10.00 ft 0 .00 ft 1 20.00 ft 0 .00 ft | 0 .00 ft .00 ft 1 13.00 ft 16.00 ft 1 17.00 ft 16.00 ft 1 17.00 ft 16.00 ft 1 10.00 ft 16.00 ft 0 .00 ft .00 ft 1 20.00 ft .00 ft 0 .00 ft .00 ft | 0 .00 ft .00 ft .00 ft 1 13.00 ft 16.00 ft .00 ft 1 17.00 ft 16.00 ft .00 ft 1 17.00 ft 16.00 ft .00 ft 1 10.00 ft 16.00 ft .00 ft 0 .00 ft .00 ft .00 ft 1 20.00 ft .00 ft .00 ft 0 .00 ft .00 ft .00 ft | 0 .00 ft .00 ft .00 ft 0.0 1 13.00 ft 16.00 ft .00 ft 0.0 1 17.00 ft 16.00 ft .00 ft 0.0 1 17.00 ft 16.00 ft .00 ft 0.0 1 10.00 ft 16.00 ft .00 ft 0.0 0 .00 ft .00 ft .00 ft 0.0 1 20.00 ft 16.00 ft .00 ft 0.0 0 .00 ft .00 ft .00 ft 0.0 | 0 .00 ft .00 ft .00 ft 0.00 ft 0.00 ft 1 13.00 ft 16.00 ft .00 ft 0.00 ft 13.00 ft 1 17.00 ft 16.00 ft .00 ft 0.00 ft 13.00 ft 1 17.00 ft 16.00 ft .00 ft 0.00 ft 13.00 ft 1 10.00 ft 16.00 ft .00 ft 0.00 ft 0.00 ft 0 .00 ft .00 ft .00 ft 0.00 ft .00 ft .00 ft 1 20.00 ft 16.00 ft .00 ft .00 ft 0.00 ft .00 ft 0 .00 ft .00 ft .00 ft .00 ft .00 ft .00 ft 0 .00 ft .00 ft .00 ft .00 ft .00 ft .00 ft | 0 .00 ft .00 ft | Trains Length Width Dia. Degree Height Liquid level per train 0 .00 ft gal 1 13.00 ft 16.00 ft .00 ft .00 ft 0.00 ft 11.25 ft 17,503 gal 1 17.00 ft 16.00 ft .00 ft 0.0 13.00 ft 11.25 ft 22,889 gal 1 10.00 ft 16.00 ft .00 ft 0.0 13.00 ft 11.25 ft 13,464 gal 0 .00 ft .00 ft .00 ft 0.00 ft .00 ft gal 1 20.00 ft 16.00 ft .00 ft 0.0 .00 ft .00 ft gal 1 20.00 ft .00 ft .00 ft 0.0 .00 ft .00 ft gal 0 .00 ft .00 ft </td <td>Trains Length Width Dia. Degree Height Liquid level per train Total 0 .00 ft .00 ft</td> | Trains Length Width Dia. Degree Height Liquid level per train Total 0 .00 ft .00 ft |

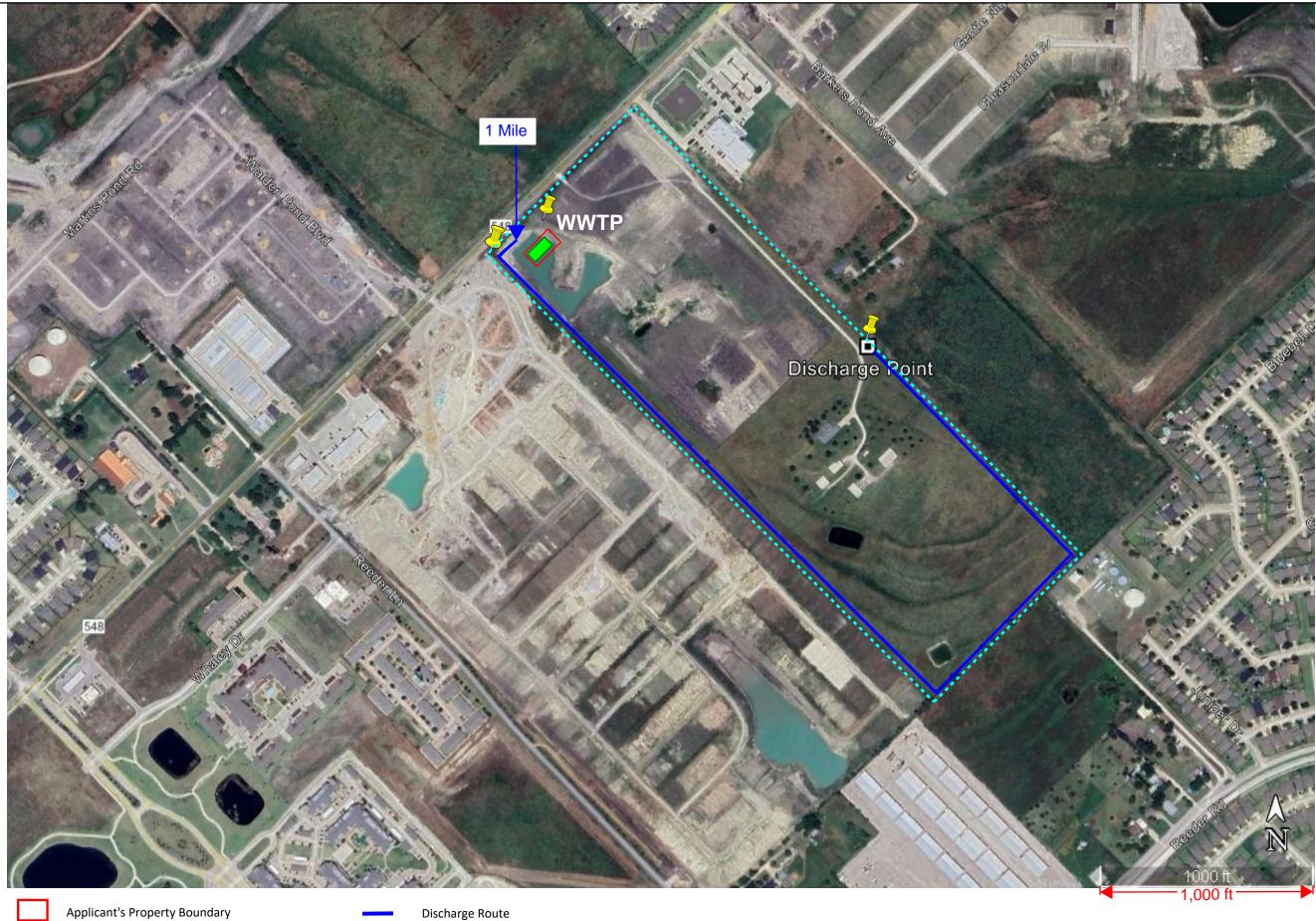
| Tank Design | Symbol | Value | Units | _ | |
|---|--------|--------------|-------|---------------|------------|
| Total process tank volume | 80,784 | gallons | | Weir level | 0.8 inches |
| Total process tank volume _{calc} | 76,941 | gallons | | Weir length | 16.0 ft |
| Unaerated tank percentage | 38 | % | | Velocity | 0.86 fps |
| Total tank volume | 80,784 | gallons | | Vertical tank | 0 |
| Membrane modules volume | 3,456 | gallons | | Horz. Tank | 0 |
| F/M _{used,BOD} | 0.070 | kgBOD/kgMLSS | | Diameter | 0 ft |
| $F/M_{used,COD}$ | 0.139 | kgCOD/kgMLSS | | | |



Process Volume Distribution

| Air Flow Design | Symbol | Membrane per train | Aerobic per train | Sludge | EQ | Unit |
|-------------------------------------|------------------------|-----------------------|----------------------|--------|------|-------------|
| Minimum air flow | Q _{A,re} | 599 | 323 | 0 | 0 | acfm / scfm |
| Chosen air flow - actual | Q _{A, chosen} | 602 | 317 | 0 | 0 | acfm |
| Chosen air flow - inlet | $Q_{A, chosen}$ | 1,124 | 576 | 0 | 0 | m³/h |
| Chosen air flow - inlet | QA, chosen | 662 | 339 | 0 | 0 | scfm |
| Chosen air flow - piping | QA, chosen | 468 | 240 | 0 | 0 | acfm |
| Pipe pressure | р _ь | 6.0 | 6.0 | 0.0 | 0.0 | psi |
| Pipe losses | Н | 0.18 | 0.39 | 0.00 | 0.00 | psi |
| Equivalent length in pipe looses | Lp | 600 | 600 | 400 | 400 | feet |
| Pipe diameter | d | 6.0 | 4.0 | 4.0 | 3.0 | inches |
| Internal pipe diameter | di | 6.36 | 4.26 | 4.26 | 3.26 | inches |
| Standard temperature | T ₁ | 293 | 293 | 293 | 293 | К |
| Pipe temperature | T ₂ | 323 | 323 | 293 | 293 | К |
| Constant | f | 0.02 | 0.02 | 0.09 | 0.09 | - |
| Air velocity | V | 35.4 | 40.4 | 0.0 | 0.0 | fps |
| Atmospheric pressure | p _{a,1} | 14.5 | 14.5 | 14.5 | 14.5 | psi |
| Absolute pressure | p ₂ | 20.5 | 20.5 | 14.5 | 14.5 | psi |
| Pressure due to tank liquid level | PDWD,m | 4.1 | 4.7 | 0.0 | 0.0 | psi |
| Pressure due to aeration device | Pdwd | 0.7 | 0.5 | 0.5 | 0.5 | psi |
| Pressure due to pipe losses & elev. | PDWD,S | 0.6 | 0.8 | 0.4 | 0.4 | psi |
| Total pipe losses | pt | 5.4 | 6.0 | 0.9 | 0.9 | psi |
| Total pipe losses | pt | 373.6 | 411.4 | 62.1 | 62.1 | mbar |

$$H = 9.82 \cdot 10^{-8} \cdot \frac{\left(f \cdot L_p T_2 Q_{A,chosen}\right)}{\left(p_2 d_i\right)^5}$$
$$f = \frac{\left(0.029 \cdot d_i^{0.027}\right)}{Q_{A,chosen}^{0.148}} \qquad T_2 = T_1 \left(\frac{p_2}{p_{a,1}}\right)^{0.283}$$





Applicant's Property Boundary

Treatment Facility Boundary



Photo Location

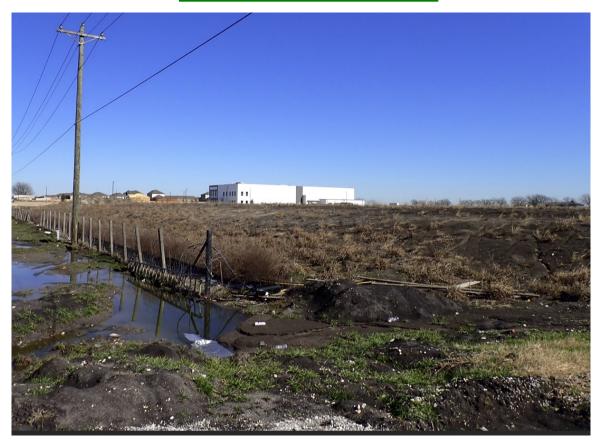


reuse ENGINEERING 4411 SIH 35, Suite 100 Georgetown, TX 78626 TX Firm No. 21880

OAK NATIONAL HOLDINGS, LLC TPDES PERMIT APPLICATION KAUFMAN COUNTY, TEXAS

ORIGINAL PHOTOGRAPHS Attachment E

WWTF



View facing East off FM 548



View to the Southwest

DISCHARGE POINT



View downstream (northwest)



View upstream (southeast)

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:RenewalMajor Am | endmentMinor AmendmentNew |
| 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 <u>WQ-ARPTeam@tceq.texas.gov</u> or by phone at (512) 239-4671.

The following applies to all applications:

1. Permittee: <u>Oak National Holdings, LLC</u>

Permit No. WQ00

EPA ID No. TX

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

<u>The WWTF site is located approximately 0.65 miles NE of the intersection of Farm to Market</u> (FM) 548 and Gateway Boulevard in Forney, TX (32.761799 and -96.429652).

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): <u>Mr.</u> First and Last Name: Rane Wilson

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

Title: <u>Lead Hydrogeologist</u>

Mailing Address: <u>4411 S Interstate 35 Suite 100</u>

City, State, Zip Code: Georgetown, TX 78626

Phone No.: <u>570-567-4297</u> Ext.: Fax No.:

E-mail Address: <u>Rane@reUseEng.com</u>

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

Point of discharge is located at (32.760499, -96.424622). Discharge is into a constructed drainage swale located around the perimeter of adjacent property. The outfall location is to spillway of the development's retention/detention basin. The existing basin is to be regarded and its spillway constructed.

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

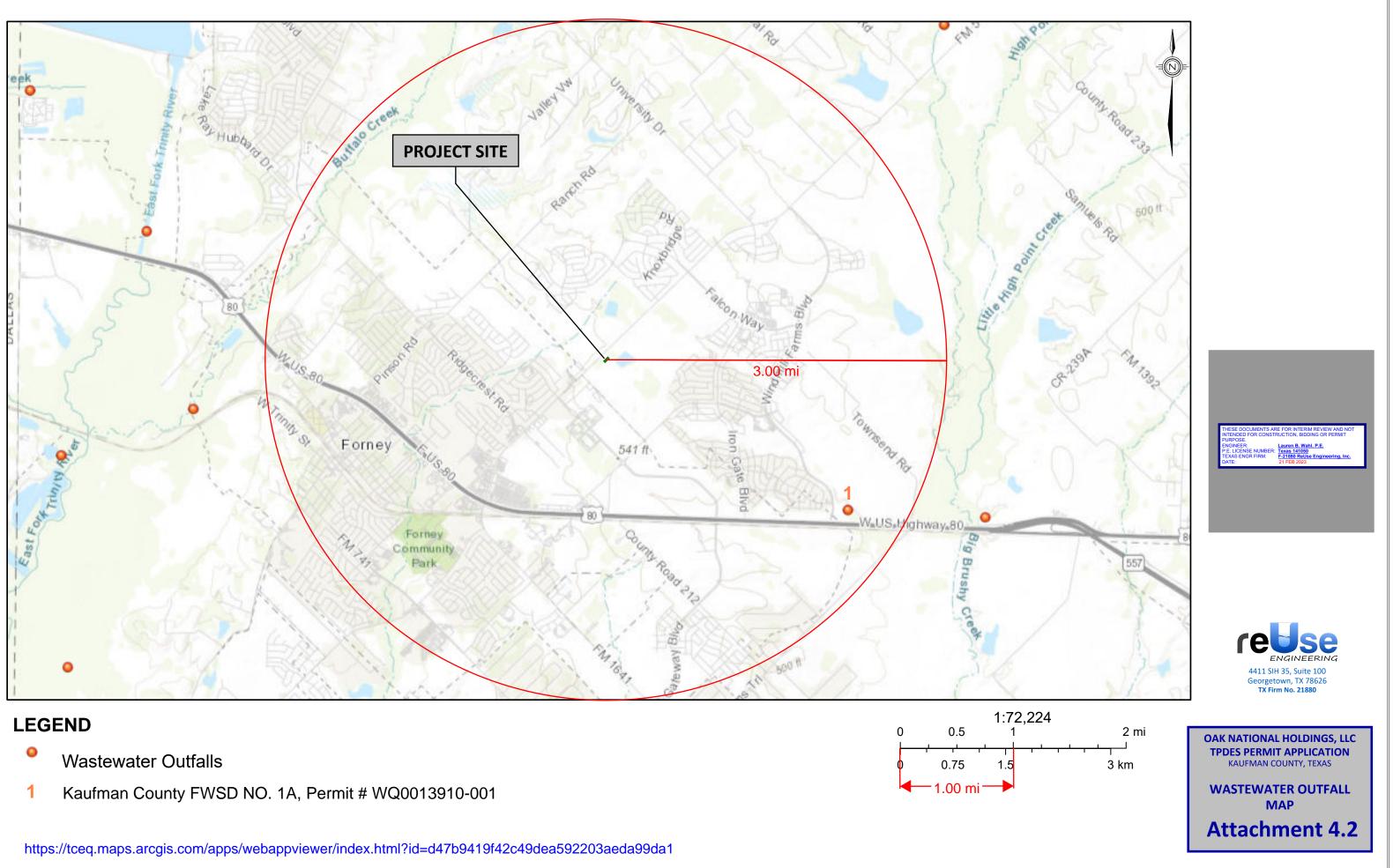
- Disturbance of vegetation or wetlands
- 1. List proposed construction impact (surface acres to be impacted, depth of excavation, sealing of caves, or other karst features):

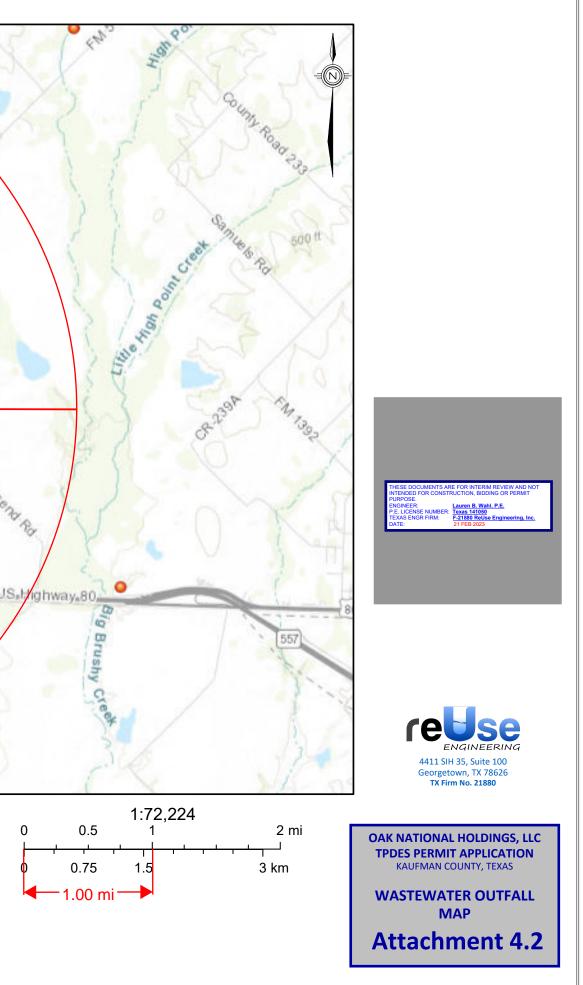
<u>No caves or karst features are anticipated to be impacted</u>. Approximately 1 acre will be <u>disturbed to construct the WWTF with additional disturbances for its discharge line</u>.

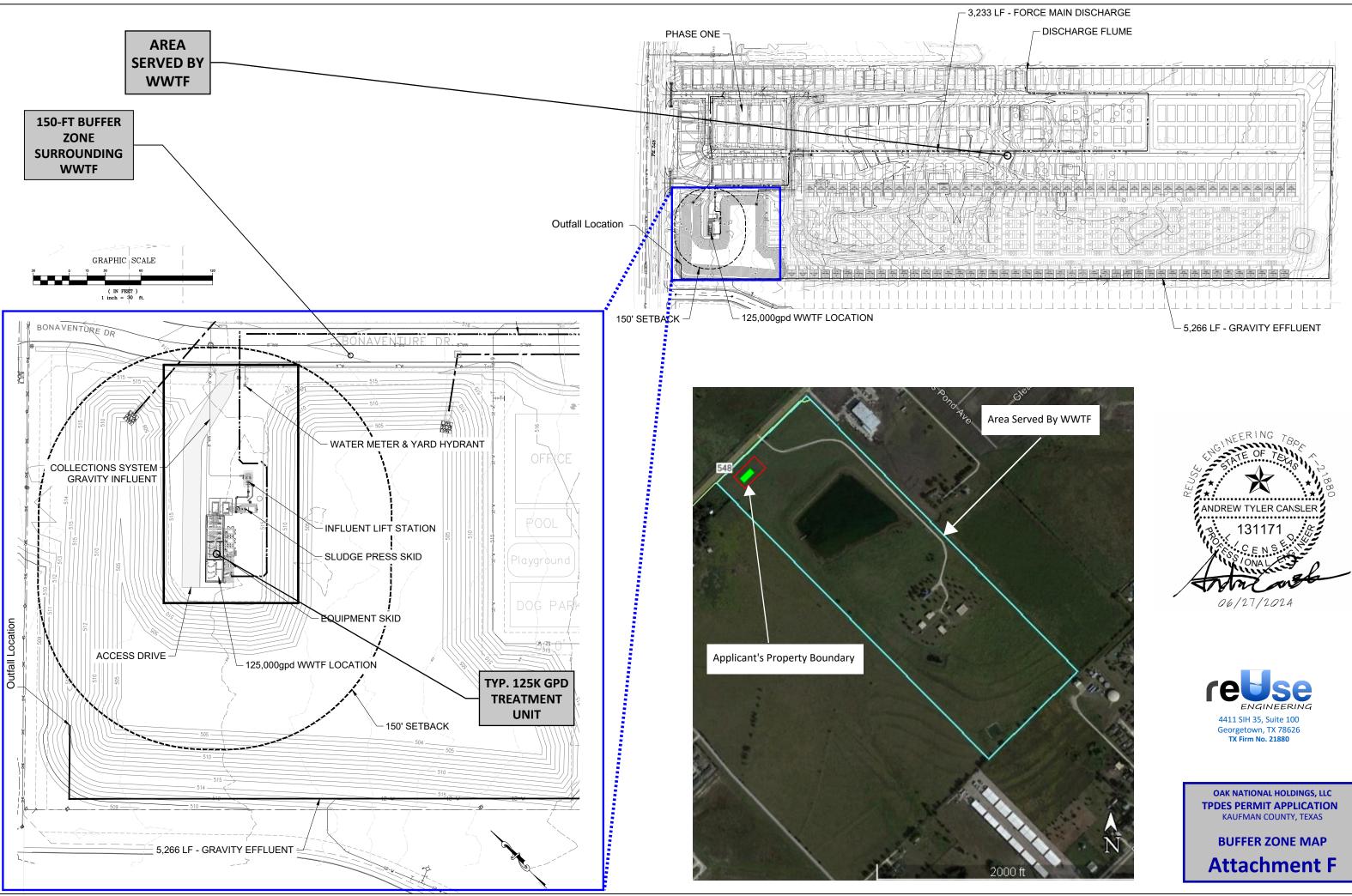
Describe existing disturbances, vegetation, and land use:
 <u>The proposed WWTF location was formerly agricultural land, which was graded/excavated for the proposed development in 2022.</u>

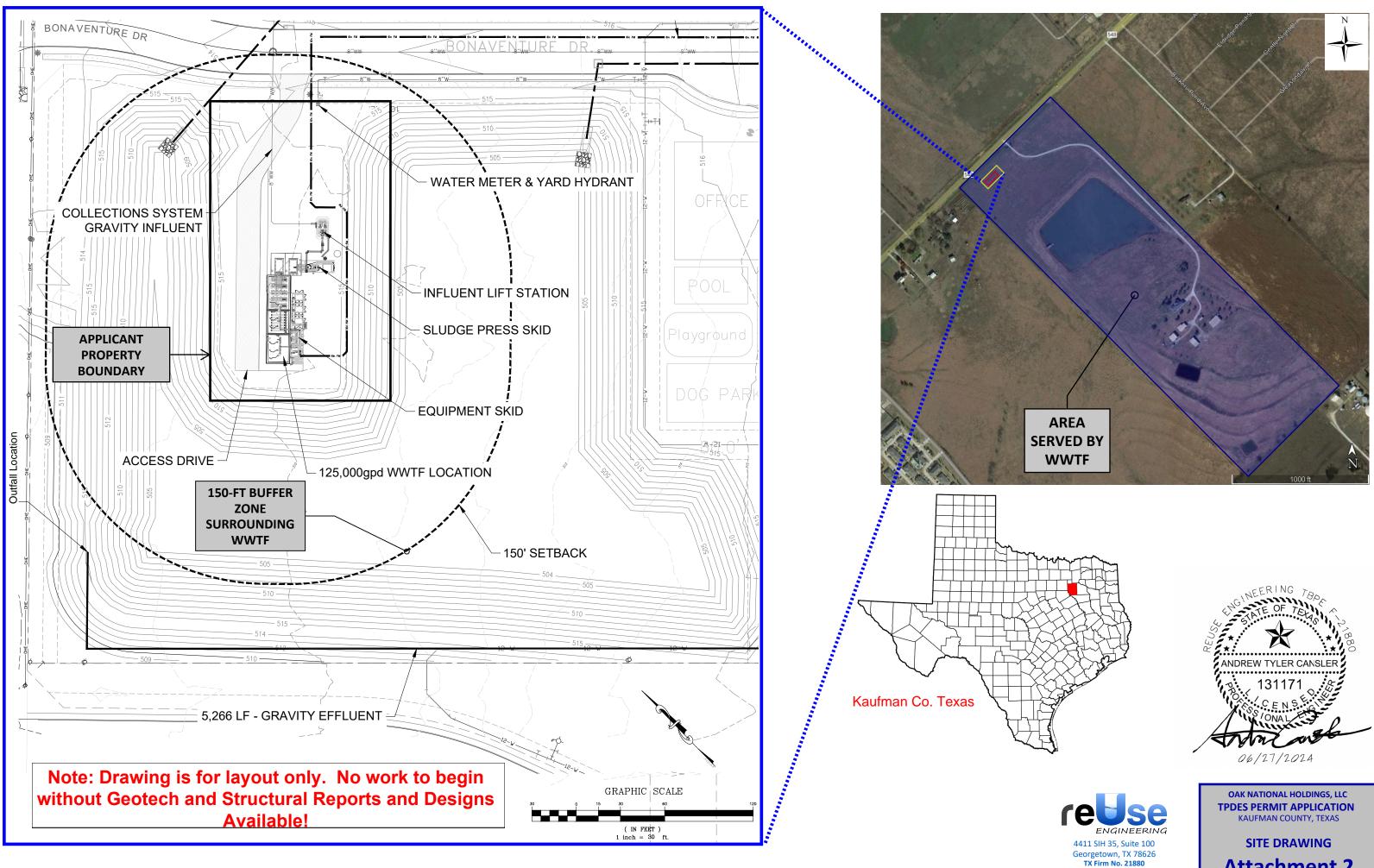
THE FOLLOWING ITEMS APPLY ONLY TO APPLICATIONS FOR NEW TPDES PERMITS AND MAJOR AMENDMENTS TO TPDES PERMITS

- 3. List construction dates of all buildings and structures on the property: <u>There are no existing buildings or structures on the property. Subdivision is proposed to be constructed on the property adjacent to the Applicant's property. Structures, individual homes, will be subject to individual property owners. No structures other than those related to the WWTF will be constructed on the Applicant's property.</u>
- 4. Provide a brief history of the property, and name of the architect/builder, if known. <u>The property is currently undeveloped. No architect/builder.</u>









Attachment 2



Questions or Comments >>

Your transaction is complete. Thank you for using TCEQ ePay.

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt and the vouchers for your records. An email receipt has also been sent.

| | n Information—— | | | | | | |
|---------------------------|--|---|---------------------------|--|--|--|--|
| | Trace Number: | 582EA000615620 | | | | | |
| | Date: 06/26/2024 02:48 PM | | | | | | |
| | Payment Method: CC - Authorization 0000265324 | | | | | | |
| | ePay Actor: | HILARY BOND | | | | | |
| | Actor Email: | hilary@reuseeng.com | | | | | |
| | IP: | 72.106.148.11 | | | | | |
| | TCEQ Amount: | \$850.00 | | | | | |
| | Texas.gov Price: | \$869.38* | | | | | |
| ongoing ope | rations and enhanced | as.gov, the official website of Texas. The price of this service includes funds that sup ments of Texas.gov, which is provided by a third party in partnership with the State. | | | | | |
| Payment C | ontact Information |] | | | | | |
| | | | | | | | |
| | Name: | HILARY BOND | | | | | |
| | | HILARY BOND REUSE ENGINEERING INC | | | | | |
| | Company: | | | | | | |
| | Company: Address: | REUSE ENGINEERING INC | | | | | |
| Cart Items | Company: Address: Phone: | REUSE ENGINEERING INC 4411 SOUTH IH-35 SUITE 100, GEORGETOWN, TX 78626 | | | | | |
| | Company: Address: Phone: | REUSE ENGINEERING INC 4411 SOUTH IH-35 SUITE 100, GEORGETOWN, TX 78626 512-285-0302 | | | | | |
| | Company: Address: Phone: | REUSE ENGINEERING INC 4411 SOUTH IH-35 SUITE 100, GEORGETOWN, TX 78626 512-285-0302 | Amount | | | | |
| Click on the v | Company: Address: Phone: oucher number to see Fee Description | REUSE ENGINEERING INC 4411 SOUTH IH-35 SUITE 100, GEORGETOWN, TX 78626 512-285-0302 the voucher details. | Amount \$800.00 | | | | |
| Click on the v Voucher | Company: Address: Phone: oucher number to see Fee Description WW PERMIT - FAC AMENDMENTS | REUSE ENGINEERING INC 4411 SOUTH IH-35 SUITE 100, GEORGETOWN, TX 78626 512-285-0302 the voucher details. | | | | | |

ePay Again Exit ePay

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt for your records.



Print this voucher for your records. If you are sending the TCEQ hardcopy documents related to this payment, include a copy of this voucher.

| — Transaction Information—— | |
|-----------------------------|------------------------------------|
| Transaction Information | |
| Voucher Number: | 711040 |
| Trace Number: | 582EA000615620 |
| Date: | 06/26/2024 02:48 PM |
| Payment Method: | CC - Authorization 0000265324 |
| Voucher Amount: | \$50.00 |
| Fee Type: | 30 TAC 305.53B WQ NOTIFICATION FEE |
| ePay Actor: | HILARY BOND |
| Actor Email: | hilary@reuseeng.com |
| IP: | 72.106.148.11 |
| | |

-Payment Contact Information-

Name:HILARY BONDCompany:REUSE ENGINEERING INCAddress:4411 SOUTH IH-35 SUITE 100, GEORGETOWN, TX 78626Phone:512-285-0302

Close



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY EPAY • ONLINE PAYMENT APPLICATION

Shopping Cart Select Fee Se

Search Transactions Sign Out

Questions or Comments >>

Questions or Comments >>

Sign Out

Print this voucher for your records. If you are sending the TCEQ hardcopy documents related to this payment, include a copy of this voucher.

| ⊤Transac | tion In | format | ion- |
|----------|---------|--------|------|
|----------|---------|--------|------|

| Voucher Number: | 711039 |
|-----------------|--|
| Trace Number: | 582EA000615620 |
| Date: | 06/26/2024 02:48 PM |
| Payment Method: | CC - Authorization 0000265324 |
| Voucher Amount: | \$800.00 |
| Fee Type: | WW PERMIT - FACILITY WITH FLOW >= .10 & < .25 MGD - NEW AND MAJOR AMENDMENTS |
| ePay Actor: | HILARY BOND |
| Actor Email: | hilary@reuseeng.com |
| IP: | 72.106.148.11 |

-Payment Contact Information—

Name:HILARY BONDCompany:REUSE ENGINEERING INCAddress:4411 SOUTH IH-35 SUITE 100, GEORGETOWN, TX 78626Phone:512-285-0302

-Site Information-

Site Name: COOK ADDITIONS WWTP Site Location: APPX 0.65 MI NE OF THE INTERSECTION OF FM 548 AND GATEWAY BLVD IN FORNEY TX

-Customer Information

Customer Name: OAK NATIONAL HOLDINGS LLC

Customer Address: 5763 S STATE HWY 205 STE 100, ROCKWALL, TX 75032

Close



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): <u>0.125</u> 2-Hr Peak Flow (MGD): <u>0.50</u> Estimated construction start date: <u>2025</u> Estimated waste disposal start date: <u>2025</u>

B. Interim II Phase

Design Flow (MGD): 2-Hr Peak Flow (MGD): Estimated construction start date: Estimated waste disposal start date:

C. Final Phase

Design Flow (MGD): 2-Hr Peak Flow (MGD): Estimated construction start date: Estimated waste disposal start date: D. Current operating phase:

Provide the startup date of the facility:

Section 2. Treatment Process (Instructions Page 51)

A. Treatment process description

Provide a detailed description of the treatment process. Include the type of

Page 1 of 80

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 plant is a membrane bio-reactor (MBR) facility, including influent pump station, equalization, fine screen, anoxic, aerobic, and membrane cells with ultraviolet disinfection, a sludge press, and an effluent pump station. The plant is designed for a flow of 125,000 gpd and will be constructed in one phase.

Port or pipe diameter at the discharge point, in inches: $\underline{6}$

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**.

| Treatment Unit Type | Number of Units | Dimensions (L x W x D) |
|---------------------------|--------------------|------------------------|
| Fine Screen | 1 | NA |
| Anoxic Tank I | 1 | 13'x16'x13' |
| Aerobic Tank | 1 | 17'x16'x13' |
| Anoxic Tank II | 1 | 10'x16'x13' |
| Membrane Cells | 1 | 20'x16'x13' |
| Ultraviolent Disinfection | 1 | NA |
| Sludge Press | 1 | |

Table 1.0(1) - Treatment Units

C. Process flow diagrams

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

Attachment: <u>1. Process Flow Diagram</u>

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: <u>2 Site Drawing</u>

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

<u>Cook Additions WWTP will serve a residential development with proposed</u> <u>476 Living Units Equivalents (LUEs).</u>

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 | \boxtimes |
|-----|----|-------------|
| | | |

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.

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? No 🖂

Yes □

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.

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:

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.

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.

See Attachment F of the 10053 Administrative Report. The wastewater treatment facility is either located 150-feet from the nearest property line, or an easement (Odor and Noise Abatement) has been created between the Applicant and the neighboring property into which the buffer zone falls.

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*.

D. Grit and grease treatment

1. Acceptance of grit and grease waste

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

Yes 🗆 🛛 No 🖂

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

2. Grit and grease processing

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

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.

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.

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

or TXRNE 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:

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.

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.

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 \square No \boxtimes

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 BOD₅

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

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?

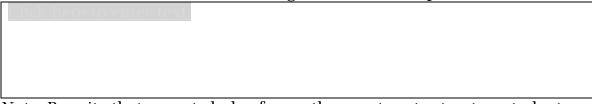
Yes 🗆 🛛 No 🗆

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 BOD₅ concentration of the septic waste, and the design

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



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.

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.

| Dollutant | Average | Max | No. of | Sample | Sample | |
|--------------------------------------|---------|-------|---------|--------|-----------|--|
| Pollutant | Conc. | Conc. | Samples | Туре | Date/Time | |
| CBOD ₅ , mg/l | | | | | | |
| Total Suspended Solids, mg/l | | | | | | |
| Ammonia Nitrogen, mg/l | | | | | | |
| Nitrate Nitrogen, mg/l | | | | | | |
| Total Kjeldahl Nitrogen, mg/l | | | | | | |
| Sulfate, mg/l | | | | | | |
| Chloride, mg/l | | | | | | |
| Total Phosphorus, mg/l | | | | | | |
| pH, standard units | | | | | | |
| Dissolved Oxygen*, mg/l | | | | | | |
| Chlorine Residual, mg/l | | | | | | |
| <i>E.coli</i> (CFU/100ml) freshwater | | | | | | |
| Entercocci (CFU/100ml) | | | | | | |

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

| Pollutant | Average Conc. | Max Conc. | No. of Samples | Sample Type | Sample Date/Time |
|---|------------------|--------------|-------------------|----------------|---------------------|
| saltwater | | | | | |
| Total Dissolved Solids, mg/l | | | | | |
| Electrical Conductivity, µmohs/cm, † | | | | | |
| Oil & Grease, mg/l | | | | | |
| Alkalinity (CaCO ₃)*, mg/l | | | | | |

*TPDES permits only

†TLAP permits only

Table 1.0(3) - Pollutant Analysis for Water Treatment Facilities

| Pollutant | Average | Max | No. of | Sample | Sample |
|---------------------------------------|---------|-------|---------|--------|-----------|
| ronutant | Conc. | Conc. | Samples | Туре | Date/Time |
| Total Suspended Solids, mg/l | | | | | |
| Total Dissolved Solids, mg/l | | | | | |
| pH, standard units | | | | | |
| Fluoride, mg/l | | | | | |
| Aluminum, mg/l | | | | | |
| Alkalinity (CaCO ₃), mg/l | | | | | |

Section 8. Facility Operator (Instructions Page 60)

Facility Operator Name: <u>Not yet contracted</u>

Facility Operator's License Classification and Level:

Facility Operator's License Number:

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 la | and application | site for | beneficial u | ıse |
|-------------------|---------------|-----------------|----------|--------------|-----|
| I climited of | negioter eu n | and application | once non | beneficiar c | auc |

- 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:

B. Sludge disposal site

Disposal site name: <u>Regional Disposal Landfill</u> TCEQ permit or registration number: <u>2294</u> County where disposal site is located: Collin

C. Sludge transportation method

Method of transportation (truck, train, pipe, other): <u>Truck</u>

Name of the hauler: JGRS Hauling

Hauler registration number: <u>26343</u>

Sludge is transported as a:

| Liquid 🗆 | semi-liquid | |
|----------|-------------|--|
|----------|-------------|--|

| semi-solid | \boxtimes | |
|------------|-------------|--|
|------------|-------------|--|

solid \boxtimes

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

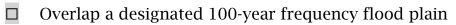
The following maps are required to be submitted as part of the application. For each map, provide the Attachment Number.

- Original General Highway (County) Map: Attachment:
- USDA Natural Resources Conservation Service Soil Map: Attachment:
- Federal Emergency Management Map: Attachment:
- Site map:

Attachment:

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

Check all that apply.



- Soils with flooding classification
- Overlap an unstable area
- □ Wetlands
- □ Located less than 60 meters from a fault
- \Box None of the above

Attachment:

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:

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:

Total Kjeldahl Nitrogen, mg/kg:

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

Phosphorus, mg/kg:

Page 15 of 80

| Potassium, mg/kg: |
|---|
| pH, standard units: |
| Ammonia Nitrogen mg/kg: |
| Arsenic: lick here to enter text |
| Cadmium: Click here to enter text |
| Chromium: Click here to enter text |
| Copper: Click here to enter text |
| Lead: lick here to enter text |
| Mercury: Click here to enter text |
| Molybdenum: Thick 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): |
| Total dry tons stored in the lagoons(s) per 365-day period: |
| enter text. |
| Total dry tons stored in the lagoons(s) over the life of the unit: |
| 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 INO |
| If yes , describe the liner below. Please note that a liner is required. |

D. Site development plan

Provide a detailed description of the methods used to deposit sludge in the

Page 16 of 80

lagoon(s):

Attach the following documents to the application.

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

Attachment:

• Copy of the closure plan

Attachment:

• Copy of deed recordation for the site

Attachment:

• Size of the sludge lagoon(s) in surface acres and capacity in cubic feet and gallons

Attachment:

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

Attachment:

• Procedures to prevent the occurrence of nuisance conditions

Attachment:

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:

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?

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

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:

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: The kinete in enter level

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: <u>N/A – no laboratory tests submitted with New Application</u> Title:

| Signature: | | | |
|------------|--|--|--|
| | | | |

Date: _____

DOMESTIC TECHNICAL REPORT 1.1

The following is required for new and amendment applications

Section 1. Justification for Permit (Instructions Page 66)

A. Justification of permit need

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

There is not currently a central wastewater service that provides for this area. Sewer treatment per individual lot is not practical and connection to nearby systems is not a viable option. See Attachment 3 for the Projection of LUEs & Wastewater Flow to WWTF Capacity Over Time of Development.

B. Regionalization of facilities

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

1. Municipally incorporated areas

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

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

Yes \Box No \boxtimes Not Applicable \Box

If yes, within the city limits of:

If yes, attach correspondence from the city.

Attachment:

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

Attachment:

2. Utility CCN areas

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

Yes 🗆 🛛 No 🖾

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

Attachment:

3. Nearby WWTPs or collection systems

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

Yes 🖂 🛛 No 🗆

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

Attachment: <u>4.1 Utility (Sewer) CCN Map and 4.2 Wastewater</u>

<u>Outfall Map</u>

If yes, attach copies of your certified letters to these facilities **and** their response letters concerning connection with their system.

Attachment: Letters included in Attachment 4 (no response

received).

Does a permitted domestic wastewater treatment facility or a collection system located within three (3) miles of the proposed facility currently have the capacity to accept or is willing to expand to accept the volume of wastewater proposed in this application?

Yes 🗆 No 🖂

If yes, attach an analysis of expenditures required to connect to a permitted wastewater treatment facility or collection system located within 3 miles versus the cost of the proposed facility or expansion.

Attachment:

Section 2. Organic Loading (Instructions Page 67)

Is this facility in operation?

Yes □ No ⊠

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

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

A. Current organic loading

Facility Design Flow (flow being requested in application):

Average Influent Organic Strength or BOD₅ Concentration in mg/l:

Average Influent Loading (lbs/day = total average flow X average BOD₅ conc. X 8.34):

Provide the source of the average organic strength or BOD₅ concentration.

B. Proposed organic loading

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

| Source | Total Average Flow (MGD) | Influent BOD ₅ Concentration (mg/l) |
|--------------------------|-----------------------------|---|
| Municipality | | |
| Subdivision | 0.125 | 300 |
| Trailer park - transient | | |
| Mobile home park | | |
| School with cafeteria | | |

Table 1.1(1) - Design Organic Loading

| Source | Total Average Flow (MGD) | Influent BOD ₅ Concentration (mg/l) |
|---|-----------------------------|---|
| and showers | | |
| School with cafeteria, no showers | | |
| Recreational park, overnight use | | |
| Recreational park, day use | | |
| Office building or | | |
| factory | | |
| Motel | | |
| Restaurant | | |
| Hospital | | |
| Nursing home | | |
| Other | | |
| TOTAL FLOW from all | 0.125 | |
| sources | | |
| AVERAGE BOD ₅ from all sources | | 300 |

Section 3. Proposed Effluent Quality and Disinfection (Instructions Page 68)

A. Existing/Interim I Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: <u>5.0</u>

Total Suspended Solids, mg/l: <u>5.0</u>

Ammonia Nitrogen, mg/l: <u>2.0</u>

Total Phosphorus, mg/l: <u>1.0</u> Dissolved Oxygen, mg/l: <u>5.0</u> Other:

B. Interim II Phase Design Effluent Quality

| Biochemical Oxygen Demand (5-day), mg/l: |
|--|
| Total Suspended Solids, mg/l: |
| Ammonia Nitrogen, mg/l: |
| Total Phosphorus, mg/l: |
| Dissolved Oxygen, mg/l: |
| Other: Click here to enter text |

C. Final Phase Design Effluent Quality Biochemical Oxygen Demand (5-day), mg/l: <u>5</u> Total Suspended Solids, mg/l: <u>5</u> Ammonia Nitrogen, mg/l: <u>2</u> Total Phosphorus, mg/l: <u>1</u> Dissolved Oxygen, mg/l: <u>5</u>

Other:

D. Disinfection Method

Identify the proposed method of disinfection.

- Chlorine: mg/l after minutes detention time at peak flow
 Dechlorination process:
- \boxtimes Ultraviolet Light: <u>1.0</u> seconds contact time at peak flow
- ☑ Other: <u>Membrane</u>

Section 4. Design Calculations (Instructions Page 68)

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

Attachment: <u>5. Design Calculations</u>

Section 5. Facility Site (Instructions Page 68)

A. 100-year floodplain

Will the proposed facilities be located <u>above</u> the 100-year frequency flood level?

Yes ⊠ No □

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

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

FEMA Flood Map Service Center (https://msc.fema.gov/portal/home).

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

Yes □ No ⊠

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

Yes 🗆 No 🗆

If yes, provide the permit number:

If no, provide the approximate date you anticipate submitting your application to the Corps:

B. Wind rose

Attach a wind rose. Attachment: <u>6. Wind Rose</u>

Section 6. Permit Authorization for Sewage Sludge Disposal (Instructions Page 69)

A. Beneficial use authorization

Are you requesting to include authorization to land apply sewage sludge for

Page 26 of 80

beneficial use on property located adjacent to the wastewater treatment facility under the wastewater permit?

Yes □ No ⊠

If yes, attach the completed Application for Permit for Beneficial Land Use of Sewage Sludge (TCEQ Form No. 10451)

Attachment:

B. Sludge processing authorization

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

- □ Sludge Composting
- □ Marketing and Distribution of sludge
- □ Sludge Surface Disposal or Sludge Monofill

If any of the above sludge options are selected, attach a completed DOMESTIC WASTEWATER PERMIT APPLICATION: SEWAGE SLUDGE TECHNICAL REPORT (TCEQ Form No. 10056).

Attachment:

Section 7. Sewage Sludge Solids Management Plan (Instructions Page 69)

Attach a solids management plan to the application. Attachment: <u>7. Solids Management Plan</u>

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

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

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

DOMESTIC 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:

Distance and direction to the intake:

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

Attachment:

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:

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).

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).

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: <u>Constructed drainage swale with</u> <u>outfall to the proposed development's retention/detention basin's spillway</u> ultimately discharging to Mustang Creek.

A. Receiving water type

Identify the appropriate description of the receiving waters.

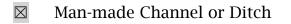
□ Stream

- □ Freshwater Swamp or Marsh
- □ Lake or Pond

Surface area, in acres:

Average depth of the entire water body, in feet:

Average depth of water body within a 500-foot radius of discharge point, in feet:



Open Bay

□ Tidal Stream, Bayou, or Marsh

□ Other, specify:

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: <u>Grading of the proposed development has not been</u>

completed; thus, the manmade channel has not been constructed.

C. Downstream perennial confluences

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

<u>Mustang Creek</u>

D. Downstream characteristics

Do the receiving water characteristics change within three miles downstream of

Page 30 of 80

the discharge (e.g., natural or man-made dams, ponds, reservoirs, etc.)? Yes 🖂 No 🗆

If ves, discuss how.

Mustang Creek flows into two manmade ponds downstream of the proposed discharge point.

E. Normal dry weather characteristics

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

Constructed drainage swale around the perimeter of the adjoining property. The drainage swale has not been constructed pending development of grading plans.

Date and time of observation: Not applicable at this time.

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 | Urban runof |
|----------------------|-------------|
|----------------------|-------------|

| Upstream discharges | |
|---------------------|--|
|---------------------|--|

- П Agricultural runoff
- Septic tanks \bowtie Other(s), specify Anticipated

influences may include urban and agricultural runoff.

B. Waterbody uses

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

Livestock watering Contact recreation

| | Irrigation withdrawal | | Non-contact recreation |
|------------|------------------------------|-------------|---|
| | Fishing | | Navigation |
| | Domestic water supply | | Industrial water supply |
| | Park activities | \boxtimes | Other(s), specify <u>No uses of the</u> |
| <u>dra</u> | inage swale are anticipated. | | |

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 2.1

STREAM PHYSICAL CHARACTERISTICS

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

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

| Section 1. General Information (Instructions Page 75) | | | | | | | | |
|---|--|--|--|--|--|--|--|--|
| Date of study: Time of study: | | | | | | | | |
| Stream name: The shore to enter test | | | | | | | | |
| Location: Lick here to enter text. | | | | | | | | |
| Type of stream upstream of existing discharge or downstream of proposed discharge (check one). Perennial Perennial Intermittent with perennial pools | | | | | | | | |
| Section 2. Data Collection (Instructions Page 75) | | | | | | | | |
| Number of stream bends that are well defined: | | | | | | | | |
| Number of stream bends that are moderately defined: | | | | | | | | |
| Number of stream bends that are poorly defined: | | | | | | | | |
| Number of riffles: | | | | | | | | |
| Evidence of flow fluctuations (check one): | | | | | | | | |
| □ Minor □ moderate □ severe | | | | | | | | |
| Indicate the observed stream uses and if there is evidence of flow fluctuations or channel obstruction/modification. | | | | | | | | |

Stream transects

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

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

Table 2.1(1) - Stream Transect Records

Section 3. Summarize Measurements (Instructions Page 76)

Streambed slope of entire reach, from USGS map in feet/feet:

<u>enter text</u>

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

| Length of stream evaluated, in feet: |
|--|
| Number of lateral transects made: |
| Average stream width, in feet: |
| Average stream depth, in feet: |
| Average stream velocity, in feet/second: |
| Instantaneous stream flow, in cubic feet/second: |
| Indicate flow measurement method (type of meter, floating chip timed over a fixed distance, etc.): |

Size of pools (large, small, moderate, none):

Maximum pool depth, in feet:

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 | | Subsurface application | | | |
|---|-----------------------------|--|---------------------------------------|--|--|--|
| | Irrigation | | Subsurface soils absorption | | | |
| | Drip irrigation system | | Subsurface area drip dispersal system | | | |
| | Evaporation | | | | | |
| | Evapotranspiration beds | | | | | |
| | Other (describe in detail): | | ere to enter text. | | | |
| NOTE: All applicants without authorization or proposing new/amended | | | | | | |

subsurface disposal MUS1 complete and submit Worksheet 7.0.

For existing authorizations, provide Registration Number:

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.

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

Table 3.0(1) – Land Application Site Crops

| Crop Type & Land Use | Irrigation Area | Effluent Application | Public Access? | |
|----------------------|--------------------|-------------------------|-------------------|--|
| | (acres) | (GPD) | 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 |
|----------------|----------------------------|----------------------------------|------------|------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

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

Attachment:

Section 4. Flood and Runoff Protection (Instructions Page 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.

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

Page **37** of **80**

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

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:

- 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:

- 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.

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

Table 3.0(3) – Water Well Data

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

Attachment:

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:

Are groundwater monitoring wells available onsite? Yes \Box No \Box

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

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

Attachment:

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:

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:

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

Table 3.0(4) - Soil Data

| | Depth | | Available | Curve |
|-------------|---------|--------------|-----------|--------|
| Soil Series | from | Permeability | Water | Number |
| | Surface | | Capacity | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| 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.

| Date | 30 Day Avg Flow MGD | BOD5 mg/l | TSS mg/l | рН | Chlorine Residual mg/l | Acres irrigated |
|------|------------------------------|--------------|-------------|----|------------------------------|--------------------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Table 3.0(5) – Effluent Monitoring Data

| Date | 30 Day Avg Flow MGD | BOD5 mg/l | TSS mg/l | рН | Chlorine Residual mg/l | Acres irrigated |
|------|------------------------------|--------------|-------------|----|------------------------------|--------------------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

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

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: Design application frequency: And days/week hours/day Land grade (slope): average percent (%): maximum percent (%): Design application rate in acre-feet/acre/year: Design total nitrogen loading rate, in lbs N/acre/year: Soil conductivity (mmhos/cm): Method of application: Attach a separate engineering report with the water balance and storage volume calculations, method of application, irrigation efficiency, and nitrogen balance. Attachment: **B.** Evaporation ponds Daily average effluent flow into ponds, in gallons per day:

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

Attachment:

C. Evapotranspiration beds

Number of beds:

Area of bed(s), in acres:

Depth of bed(s), in feet:

Void ratio of soil in the beds:

Storage volume within the beds, in acre-feet:

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

Attachment:

D. Overland flow

Area used for application, in acres:

Slopes for application area, percent (%):

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

Slope length, in feet:

Design BOD₅ loading rate, in lbs BOD₅/acre/day:

Design application frequency:

hours/day: And days/week:

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

Attachment:

Section 2. Edwards Aquifer (Instructions Page 82)

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

Yes 🗆 🛛 No 🗆

Page 44 of 80

If yes, attach a report concerning the recharge zone.

Attachment:

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
- \Box Other, specify:

Application area, in acres:

Area of drainfield, in square feet:

Application rate, in gal/square foot/day:

Depth to groundwater, in feet:

Area of trench, in square feet:

Dosing duration per area, in hours:

Number of beds:

Dosing amount per area, in inches/day:

Infiltration rate, in inches/hour:

Storage volume, in gallons:

Area of bed(s), in square feet:

Soil Classification:

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:

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 🗆

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

Yes 🗆 No 🗆

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

DOMESTIC 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.
- **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.

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

Yes 🗆 No 🗆

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

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

Yes 🗆 🛛 No 🗆

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

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

A. Type of system

| | Subsurface Drip Irrigation |
|--|----------------------------|
|--|----------------------------|

□ Surface Drip Irrigation

□ Other, specify:

B. Irrigation operations

Application area, in acres:

Infiltration Rate, in inches/hour:

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

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

Storage volume, in gallons:

Major soil series:

Depth to groundwater, in feet:

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 D No D

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

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

Yes □ No □

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

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

Yes 🗆 🛛 No 🗆

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

Nitrogen application rate, in lbs/gal/day:

D. Dosing information

Number of doses per day:

Dosing duration per area, in hours:

Rest period between doses, in hours:

Dosing amount per area, in inches/day:

Number of zones:

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

Yes 🗆 No 🗆

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

Attachment:

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:

B. Soil evaluation

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

Attachment:

C. Site preparation plan

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

Attachment:

D. Soil sampling/testing

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

Attachment:

Section 4. Floodway Designation (Instructions Page 85)

A. Site location

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

Yes 🗆 No 🗆

B. Flood map

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

Attachment:

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:

B. Buffer variance request

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

state?

Yes 🗆 🛛 No 🗆

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

Attachment:

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 🗆

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

Yes 🗆 No 🗆

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

DOMESTIC 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:

| Pollutant | AVG Effluent Conc. (μg/l) | MAX Effluent Conc. (μg/l) | Number of Samples | MAL (µg/l) |
|--------------------|------------------------------------|------------------------------------|-------------------------|---------------|
| Acrylonitrile | | | | 50 |
| Aldrin | | | | 0.01 |
| Aluminum | | | | 2.5 |
| Anthracene | | | | 10 |
| Antimony | | | | 5 |
| Arsenic | | | | 0.5 |
| Barium | | | | 3 |
| Benzene | | | | 10 |
| Benzidine | | | | 50 |
| Benzo(a)anthracene | | | | 5 |

Table 4.0(1) – Toxics Analysis

Page 53 of 80

| Pollutant | AVG Effluent Conc. (μg/l) | MAX Effluent Conc. (μg/l) | Number of Samples | MAL (µg/l) |
|----------------------------|------------------------------------|------------------------------------|-------------------------|---------------|
| Benzo(a)pyrene | | | | 5 |
| Bis(2-chloroethyl)ether | | | | 10 |
| Bis(2-ethylhexyl)phthalate | | | | 10 |
| Bromodichloromethane | | | | 10 |
| Bromoform | | | | 10 |
| Cadmium | | | | 1 |
| Carbon Tetrachloride | | | | 2 |
| Carbaryl | | | | 5 |
| Chlordane* | | | | 0.2 |
| Chlorobenzene | | | | 10 |
| Chlorodibromomethane | | | | 10 |
| Chloroform | | | | 10 |
| Chlorpyrifos | | | | 0.05 |
| Chromium (Total) | | | | 3 |
| Chromium (Tri) (*1) | | | | N/A |
| Chromium (Hex) | | | | 3 |
| Copper | | | | 2 |
| Chrysene | | | | 5 |
| p-Chloro-m-Cresol | | | | 10 |
| 4,6-Dinitro-o-Cresol | | | | 50 |
| p-Cresol | | | | 10 |

| Pollutant | AVG Effluent | MAX Effluent | Number of | MAL |
|------------------------|-----------------|-----------------|--------------|---------|
| | Conc. (µg/l) | Conc. (µg/l) | Samples | (µg/l) |
| Cyanide (*2) | | | | 10 |
| 4,4'- DDD | | | | 0.1 |
| 4,4'- DDE | | | | 0.1 |
| 4,4'- DDT | | | | 0.02 |
| 2,4-D | | | | 0.7 |
| Demeton (O and S) | | | | 0.20 |
| Diazinon | | | | 0.5/0.1 |
| 1,2-Dibromoethane | | | | 10 |
| m-Dichlorobenzene | | | | 10 |
| o-Dichlorobenzene | | | | 10 |
| p-Dichlorobenzene | | | | 10 |
| 3,3'-Dichlorobenzidine | | | | 5 |
| 1,2-Dichloroethane | | | | 10 |
| 1,1-Dichloroethylene | | | | 10 |
| Dichloromethane | | | | 20 |
| 1,2-Dichloropropane | | | | 10 |
| 1,3-Dichloropropene | | | | 10 |
| Dicofol | | | <u> </u> | 1 |
| Dieldrin | | | | 0.02 |
| 2,4-Dimethylphenol | | | | 10 |
| Di-n-Butyl Phthalate | | | | 10 |

| Pollutant | AVG Effluent Conc. (µg/l) | MAX Effluent Conc. (μg/l) | Number of Samples | MAL (µg/l) |
|--|------------------------------------|------------------------------------|-------------------------|---------------|
| Diuron | | | | 0.09 |
| Endosulfan I (alpha) | | | | 0.01 |
| Endosulfan II (beta) | | | | 0.02 |
| Endosulfan Sulfate | | | | 0.1 |
| Endrin | | | | 0.02 |
| Ethylbenzene | | | | 10 |
| Fluoride | | | | 500 |
| Guthion | | | | 0.1 |
| Heptachlor | | | | 0.01 |
| Heptachlor Epoxide | | | | 0.01 |
| Hexachlorobenzene | | | | 5 |
| Hexachlorobutadiene | | | | 10 |
| Hexachlorocyclohexane (alpha) | | | | 0.05 |
| Hexachlorocyclohexane (beta) | | | | 0.05 |
| gamma-Hexachlorocyclohexane (Lindane) | | | | 0.05 |
| Hexachlorocyclopentadiene | | | | 10 |
| Hexachloroethane | | | | 20 |
| Hexachlorophene | | | | 10 |
| Lead | | | | 0.5 |
| Malathion | | | | 0.1 |

| Pollutant | AVG Effluent Conc. (μg/l) | MAX Effluent Conc. (μg/l) | Number of Samples | MAL (µg/l) |
|---|------------------------------------|------------------------------------|-------------------------|---------------|
| Mercury | | | | 0.005 |
| Methoxychlor | | | | 2 |
| Methyl Ethyl Ketone | | | | 50 |
| Mirex | | | | 0.02 |
| Nickel | | | | 2 |
| Nitrate-Nitrogen | | | | 100 |
| Nitrobenzene | | | | 10 |
| N-Nitrosodiethylamine | | | | 20 |
| N-Nitroso-di-n-Butylamine | | | | 20 |
| Nonylphenol | | | | 333 |
| Parathion (ethyl) | | | | 0.1 |
| Pentachlorobenzene | | | | 20 |
| Pentachlorophenol | | | | 5 |
| Phenanthrene | | | | 10 |
| Polychlorinated Biphenyls (PCB's) (*3) | | | | 0.2 |
| Pyridine | | | | 20 |
| Selenium | | | | 5 |
| Silver | | | | 0.5 |
| 1,2,4,5-Tetrachlorobenzene | | | | 20 |
| 1,1,2,2-Tetrachloroethane | | | | 10 |

| Pollutant | AVG Effluent Conc. (μg/l) | MAX Effluent Conc. (μg/l) | Number of Samples | MAL (µg/l) |
|--|------------------------------------|------------------------------------|-------------------------|---------------|
| Tetrachloroethylene | | | | 10 |
| Thallium | | | | 0.5 |
| Toluene | | | | 10 |
| Toxaphene | | | | 0.3 |
| 2,4,5-TP (Silvex) | | | | 0.3 |
| Tributyltin (see instructions for explanation) | | | | 0.01 |
| 1,1,1-Trichloroethane | | | | 10 |
| 1,1,2-Trichloroethane | | | | 10 |
| Trichloroethylene | | | | 10 |
| 2,4,5-Trichlorophenol | | | | 50 |
| TTHM (Total Trihalomethanes) | | | | 10 |
| Vinyl Chloride | | | | 10 |
| Zinc | | | | 5 |

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

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

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

1260, and 1016.

Section 2. Priority Pollutants

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

Grab 🗆 Composite 🗆

Date and time sample(s) collected:

| Pollutant | AVG Effluent Conc. (μg/l) | MAX Effluent Conc. (µg/l) | Number of Samples | MAL (µg/l) |
|---------------------|------------------------------------|------------------------------------|-------------------------|---------------|
| Antimony | | | | 5 |
| Arsenic | | | | 0.5 |
| Beryllium | | | | 0.5 |
| Cadmium | | | | 1 |
| Chromium (Total) | | | | 3 |
| Chromium (Hex) | | | | 3 |
| Chromium (Tri) (*1) | | | | N/A |
| Copper | | | | 2 |
| Lead | | | | 0.5 |
| Mercury | | | | 0.005 |
| Nickel | | | | 2 |
| Selenium | | | | 5 |
| Silver | | | | 0.5 |
| Thallium | | | | 0.5 |
| Zinc | | | | 5 |
| Cyanide (*2) | | | | 10 |
| Phenols, Total | | | | 10 |

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

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

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

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

Table 4.0(2)B - Volatile Compounds

| Pollutant | AVG Effluent Conc. (µg/l) | MAX Effluent Conc. (µg/l) | Number of Samples | MAL (µg/l) |
|-----------------------|------------------------------------|------------------------------------|-------------------------|---------------|
| Toluene | | | | 10 |
| 1,1,1-Trichloroethane | | | | 10 |
| 1,1,2-Trichloroethane | | | | 10 |
| Trichloroethylene | | | | 10 |
| Vinyl Chloride | | | | 10 |

Table 4.0(2)C - Acid Compounds

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

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

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) |
|--------------------------------|------------------------------------|------------------------------------|-------------------------|---------------|
| Di-n-Butyl Phthalate | | | | 10 |
| 2,4-Dinitrotoluene | | | | 10 |
| 2,6-Dinitrotoluene | | | | 10 |
| Di-n-Octyl Phthalate | | | | 10 |
| 1,2-Diphenylhydrazine (as Azo- | | | | |
| benzene) | | | | 20 |
| Fluoranthene | | | | 10 |
| Fluorene | | | | 10 |
| Hexachlorobenzene | | | | 5 |
| Hexachlorobutadiene | | | | 10 |
| Hexachlorocyclo-pentadiene | | | | 10 |
| Hexachloroethane | | | | 20 |
| Indeno(1,2,3-cd)pyrene | | | | 5 |
| Isophorone | | | | 10 |
| Naphthalene | | | | 10 |
| Nitrobenzene | | | | 10 |
| N-Nitrosodimethylamine | | | | 50 |
| N-Nitrosodi-n-Propylamine | | | | 20 |
| N-Nitrosodiphenylamine | | | | 20 |
| Phenanthrene | | | | 10 |
| Pyrene | | | | 10 |
| 1,2,4-Trichlorobenzene | | | | 10 |

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

Table 4.0(2)E - Pesticides

| Pollutant | AVG Effluent Conc. (µg/l) | MAX Effluent Conc. (µg/l) | Number of Samples | MAL (µg/l) |
|-----------|------------------------------------|------------------------------------|-------------------------|---------------|
| PCB-1248 | | | | 0.2 |
| PCB-1260 | | | | 0.2 |
| PCB-1016 | | | | 0.2 |
| Toxaphene | | | | 0.3 |

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

Section 3. Dioxin/Furan Compounds

- **A.** Indicate which of the following compounds from may be present in the influent from a contributing industrial user or significant industrial user. Check all that apply.
- 2,4,5-trichlorophenoxy acetic acid Common Name 2,4,5-T, CASRN 93-76-5 2-(2,4,5-trichlorophenoxy) propanoic acid Common Name Silvex or 2,4,5-TP, CASRN 93-72-1 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate Common Name Erbon, CASRN 136-25-4 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate Common Name Ronnel, CASRN 299-84-3 2,4,5-trichlorophenol Common Name TCP, CASRN 95-95-4 hexachlorophene Common Name HCP, CASRN 70-30-4 For each compound identified, provide a brief description of the conditions of its/their presence at the facility.

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.

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:

| 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 |

TABLE 4.0(2)F - DIOXIN/FURAN COMPOUNDS

Page 66 of 80

| 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:

48-hour Acute:

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.

TCEQ-10054 (06/01/2017) Domestic Wastewater Permit Application, Technical Reports

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.

| Test Date | Test Species | NOEC Survival | NOEC Sub- lethal |
|-----------|--------------|---------------|---------------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Table 5.0(1) - Summary of WET Tests

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: Thek here to enter text |
| Average Daily Flows, in MGD: |
| Significant IUs – non-categorical: |
| Number of IUs: Thek here to enter text |
| Average Daily Flows, in MGD: |
| Other IUs: |
| Number of IUs: The base to enter text |
| Average Daily Flows, in MGD: |

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.

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.

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.

| 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.

| Concentration | MAL | Units | Date |
|---------------|---------------|--|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | Concentration | Concentration MAL Image: Concentration Image: Concentration Image: Concentration I | ConcentrationMALUnitsImage: ConcentrationImage: Concentration |

Table 6.0(1) - Parameters Above the MAL

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.

| CIICK here to enter text. | | |
|---------------------------|--|--|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

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

A. General information

| Company Name: | | |
|----------------------------|-------------|---------------------|
| SIC Code: | | |
| Telephone number: | Fax number: | Click here to enter |
| | | |
| Contact name: | | |
| Address: | | |
| City, State, and Zip Code: | r 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).

C. Product and service information

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

Page **73** of **80**

| Click here to enter text. | | |
|---------------------------|--|--|
| | | |
| | | |
| | | |

D. Flow rate information

See the Instructions for definitions of "process" and "non-process wastewater." Process Wastewater:

| Discharge, in gallons/day: | |
|--------------------------------------|--------------|
| Discharge Type: 🗆 Continuous 🗆 Batch | Intermittent |
| Non-Process Wastewater: | |
| Discharge, in gallons/day: | |
| Discharge Type: 🗆 Continuous 🗖 Batch | Intermittent |

E. Pretreatment standards

Is the SIU or CIU subject to technically based local limits as defined in the instructions?

Yes 🗆 🛛 No 🗆

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

Yes □ No □

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

| Category: Subca | ategories: | <u>) enter text.</u> 'lick here to | enter text. |
|----------------------|------------|---------------------------------------|-------------|
| Category: Subca | ategories: |) enter text. llick here to | enter text. |
| Category: Subca | ategories: |) enter text. Tlick here to | enter text. |
| Category: Subca | ategories: |) enter text. Tlick here to | enter text. |
| Category: Subcate | gories: |) <u>enter text.</u> k here to en | ter text. |

F. Industrial user interruptions

Has the SIU or CIU caused or contributed to any problems (e.g., interferences, pass through, odors, corrosion, blockages) at your POTW in the past three years?

Yes □ No □

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

WORKSHEET 7.0

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CLASS V INJECTION WELL INVENTORY/AUTHORIZATION FORM

Submit to: TCEQ IUC Permits Team Radioactive Materials Division MC-233 PO Box 13087 Austin, Texas 78711-3087 512-239-6466

For TCEQ Use Only

Reg. No.____

Date Received_

Date Authorized

Section 1. General Information (Instructions Page 102)

1. TCEQ Program Area

Program Area (PST, VCP, IHW, etc.): Program ID: Contact Name: Phone Number: 2. Agent/Consultant Contact Information Contact Name: Address: City, State, and Zip Code: Phone Number: 3. Owner/Operator Contact Information Operator \Box Owner □ Owner/Operator Name: Contact Name: Address: City, State, and Zip Code: Phone Number: 4. Facility Contact Information Facility Name:

TCEQ-10054 (06/01/2017) Domestic Wastewater Permit Application, Technical Reports Page 76 of 80

Address:

City, State, and Zip Code:

Location description (if no address is available):

Facility Contact Person:

Phone Number:

5. Latitude and Longitude, in degrees-minutes-seconds

Latitude: Click here to enter text Longitude: Click here to enter text

Method of determination (GPS, TOPO, etc.):

Attach topographic quadrangle map as attachment A.

6. Well Information

Type of Well Construction, select one:

- Vertical Injection
- □ Subsurface Fluid Distribution System
- □ Infiltration Gallery
- Temporary Injection Points
- □ Other, Specify:

Number of Injection Wells:

7. Purpose

Detailed Description regarding purpose of Injection System:



Attach a Site Map as Attachment B (Attach the Approved Remediation Plan, if appropriate.)

8. Water Well Driller/Installer

| Water Well Driller/Installe | r Name: Click here to enter text. |
|-----------------------------|-----------------------------------|
| City, State, and Zip Code: | Click here to enter text. |

Phone Number:

License Number:

Section 2. Proposed Down Hole Design

Attach a diagram signed and sealed by a licensed engineer as Attachment C.

Table 7.0(1) - Down Hole Design Table

| Name of | Size | Setting | Sacks Cement/Grout - | Hole | Weight |
|---------|------|---------|------------------------|------|-----------|
| String | | Depth | Slurry Volume – Top of | Size | (lbs/ft) |
| | | | Cement | | PVC/Steel |
| Casing | | | | | |
| Tubing | | | | | |
| Screen | | | | | |

Section 3. Proposed Trench System, Subsurface Fluid Distribution System, or Infiltration Gallery

Attach a diagram signed and sealed by a licensed engineer as Attachment D. System(s) Dimensions:

System(s) Construction:

Section 4. Site Hydrogeological and Injection Zone Data

- 1. Name of Contaminated Aquifer:
- 2. Receiving Formation Name of Injection Zone:
- **3.** Well/Trench Total Depth:
- **4.** Surface Elevation:
- 5. Depth to Ground Water:
- 6. Injection Zone Depth:
- 7. Injection Zone vertically isolated geologically? Yes
 No

| Impervious Strata between Injection Zone and nearest Undergroun | d |
|---|---|
| Source of Drinking Water: | |

| Name: | Clic |
|-------|------|
| Name: | |

Thickness:

8. Provide a list of contaminants and the levels (ppm) in contaminated aquifer

Attach as Attachment E.

- **9.** Horizontal and Vertical extent of contamination and injection plume Attach as Attachment F.
- Formation (Injection Zone) Water Chemistry (Background levels) TDS, etc. Attach as Attachment G.
- Injection Fluid Chemistry in PPM at point of injection Attach as Attachment H.
- **12.** Lowest Known Depth of Ground Water with < 10,000 PPM TDS:
- **13.** Maximum injection Rate/Volume/Pressure:
- **14.** Water wells within 1/4 mile radius (attach map as Attachment I):
- **15.** Injection wells within 1/4 mile radius (attach map as Attachment J):
- **16.** Monitor wells within 1/4 mile radius (attach drillers logs and map as Attachment K):
- 17. Sampling frequency:
- **18.** Known hazardous components in injection fluid:

Section 5. Site History

- **1.** Type of Facility:
- 2. Contamination Dates:
- **3.** Original Contamination (VOCs, TPH, BTEX, etc.) and Concentrations (attach as Attachment L):
- 4. Previous Remediation:

Attach results of any previous remediation as attachment M

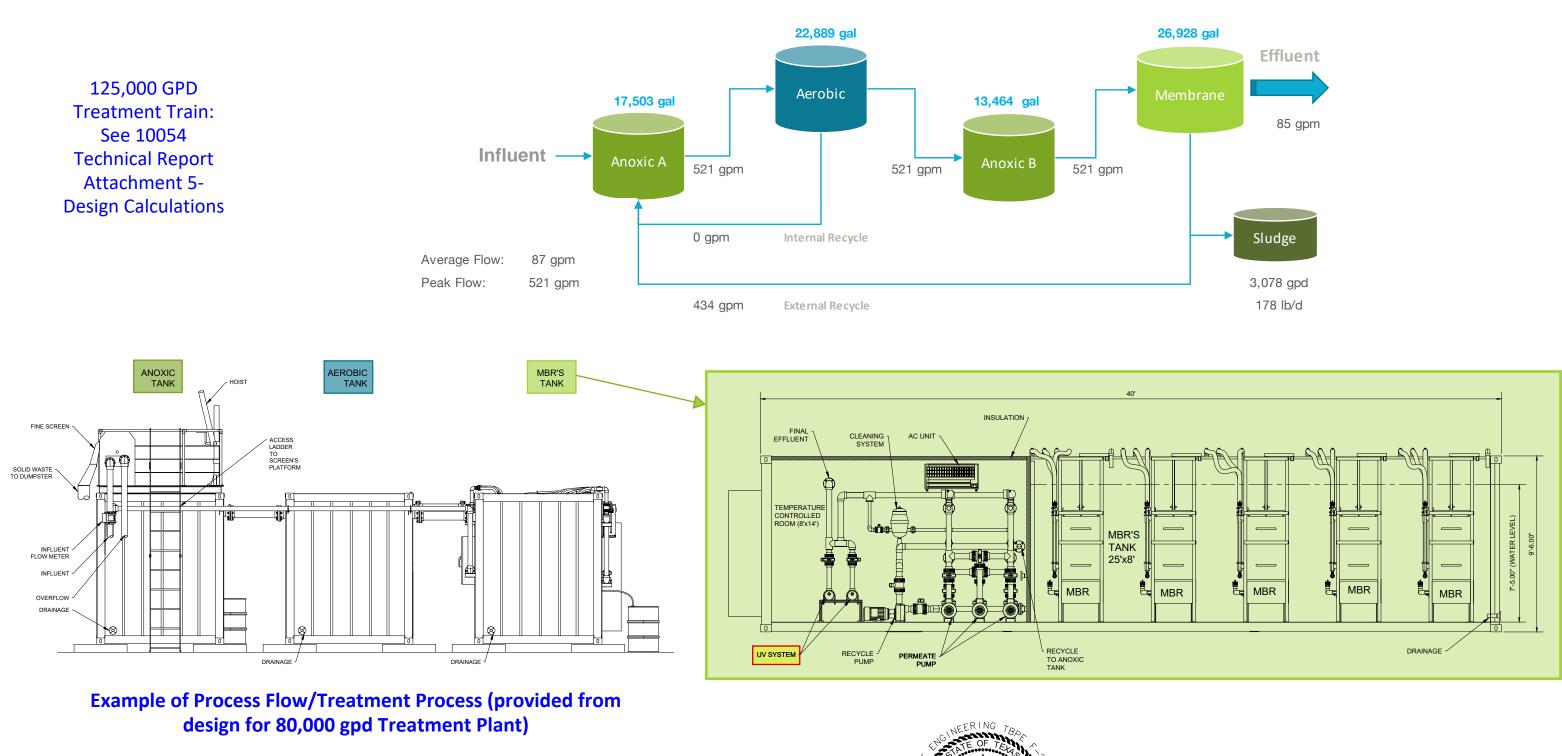
NOTE: Authorization Form should be completed in detail and authorization given by the TCEQ before construction, operation, and/or conversion can

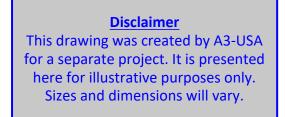
begin. Attach additional pages as necessary.

Class V Injection Well Designations

- 5A07 Heat Pump/AC return (IW used for groundwater to heat and/or cool buildings)
 5A19 Industrial Cooling Water Return Flow (IW used to cool industrial process equipment)
 5B22 Salt Water Intrusion Parrier (IW used to inject fluids to prevent the intrust set of the intervent to intervent the intrust set of the intervent to intervent the intervent to intervent the intervent set of the intervent set of
- 5B22 Salt Water Intrusion Barrier (IW used to inject fluids to prevent the intrusion of salt water into an aquifer)
- 5D02 Storm Water Drainage (IW designed for the disposal of rain water)
- 5D04 Industrial Stormwater Drainage Wells (IW designed for the disposal of rain water associated with industrial facilities)
- 5F01 Agricultural Drainage (IW that receive agricultural runoff)
- 5R21 Aquifer Recharge (IW used to inject fluids to recharge an aquifer)
- 5S23 Subsidence Control Wells (IW used to control land subsidence caused by ground water withdrawal)
- 5W09 Untreated Sewage
- 5W10 Large Capacity Cesspools (Cesspools that are designed for 5,000 gpd or greater)
- 5W11 Large Capacity Septic systems (Septic systems designed for 5,000 gpd or greater)
- 5W12 WTTP disposal
- 5W20 Industrial Process Waste Disposal Wells
- 5W31 Septic System (Well Disposal method)
- 5W32 Septic System Drainfield Disposal
- 5X13 Mine Backfill (IW used to control subsidence, dispose of mining byproducts, and/or fill sections of a mine)
- 5X25 Experimental Wells (Pilot Test) (IW used to test new technologies or tracer dye studies)
- 5X26 Aquifer Remediation (IW used to clean up, treat, or prevent contamination of a USDW)
- 5X27 Other Wells
- 5X28 Motor Vehicle Waste Disposal Wells (IW used to dispose of waste from a motor vehicle site These are currently banned)
- 5X29 Abandoned Drinking Water Wells (waste disposal)

The 125,000 GPD Treatment Facility will be comprised of one (1) treatment train.









OAK NATIONAL HOLDINGS, LLC TPDES PERMIT APPLICATION KAUFMAN COUNTY, TEXAS

PROCESS FLOW DIAGRAM
Attachment 1

Tuesday, June 11, 2024

Authorization Form

This form authorizes reUse to sign and submit any documents required for the TCEQ permit application submittal on your behalf.

| Name | Robert Moehler |
|---------------------------|----------------------------|
| Title | CFO |
| Company/Client Legal Name | Oak National Holdings, LLC |
| Email | robertm@alturahomes.com |

I, Robert Moehler, hereby authorize reUse Engineering, Inc. to act as Authorized Signatory on behalf of Oak National Holdings, LLC for any documents required by TCEQ for the purposes of applying for a Texas Pollutant Discharge Elimination Systems (TPDES).

This includes, but is not limited to, Core Data Form (TCEQ-10400), Domestic Wastewater Administrative Report (TCEQ-10053), Denial of Service requests for CCNs and other nearby facilities, and any letters or follow-up documents that the TCEQ may request in order to submit the TPDES permit application.

Signature

| V | |
|---|--|
| - | |

🛃 Jotform SIGN

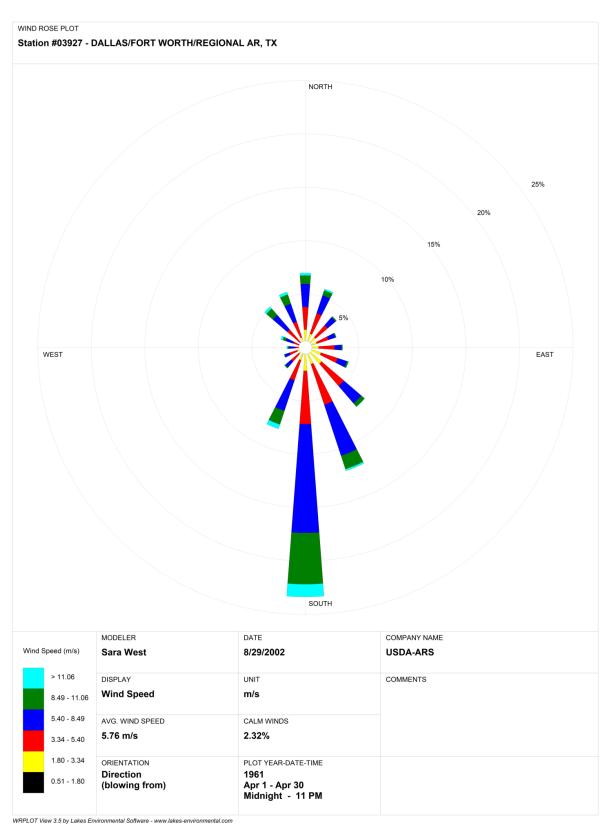
| TITLE | Signature Authorization Form |
|----------------|------------------------------|
| DOCUMENT ID | 241625026797058 |
| DOCUMENT PAGES | 1 |
| STATUS | COMPLETED |
| TIME ZONE | America/New York |

DOCUMENT HISTORY

Signed



Jun 11, 2024 11:23 AM Signed IP: 12.197.167.2







OAK NATIONAL HOLDINGS, LLC TPDES PERMIT APPLICATION KAUFMAN COUNTY, TEXAS

WIND ROSE **Attachment 6**



SOLIDS MANAGEMENT PLAN

Influent Design Flow:

Phase 1: 0.125 Million Gallon Per Day (MGD), Total Influent BOD Concentration: 300 milligram per Liter (mg/L) MBR Basin MLVSS: 8,359 mg/L

See **Attachment 1 - Process Flow Diagram** and **Attachment 5 - Design Calculations**. Attachment 5 shows calculations for one (1) 125,000 gallons per day (gpd) (0.125 MGD) treatment train.

| Tuble 1 – Sludge Production Jor 0.125 MGD Design Flow | | | | |
|---|-------|-------|-------|------|
| Solids Generated | 100% | 75% | 50% | 25% |
| Lbs./d Influent BOD₅ | 313.0 | 234.7 | 156.5 | 78.2 |
| Lbs./d Dry Sludge Produced | 178.0 | 133.5 | 89.0 | 44.5 |

Table 1 – Sludge Production for 0.125 MGD Design Flow

Sludge will be sent from the Recycled Activated Sludge flow stream to the Sludge Screw Press. Calculations are based on 3,078 gpd of waste sludge, which equates to 178 lb./d (Table 1). The sludge will be pressed in the Sludge Screw Press to remove liquids and produce a dry sludge cake. All liquid will be decanted from the Screw Press and returned to the headworks for treatment. No wet solids will be produced through the treatment process. Dry sludge will be removed from the screw press and deposited into 4 cubic yard (CY) roll-off containers for disposal on a regular basis (Table 2).

| | | 5 | | | |
|--------------------------|-------|-----------|-----------|------------|--------|
| Removal Schedule | 100% | 75% | 50% | 25% | Unit |
| Dry Waste Sludge | 178.0 | 133.5 | 89.0 | 44.5 | lb/d |
| Wet Waste Sludge | 3,078 | 2,309 | 1,539 | 770 | gpd |
| Wet Sludge | 411.5 | 308.6 | 205.7 | 102.9 | CF/d |
| Wet Sludge | 15.2 | 11.4 | 7.6 | 3.8 | CY/d |
| Reduction Factor | 18.0 | (provided | by MBR WW | TP manufac | turer) |
| Dry Sludge | 0.8 | 0.6 | 0.4 | 0.2 | CY/d |
| Dumpster Volume | 4.0 | 4.0 | 4.0 | 4.0 | CY |
| Recurring Sludge Removal | 5 | 6 | 9 | 19 | days |

Table 2 – Sludge Removal Schedule

The Sludge Age (Solids Retention Time) for a Total Reactor Volume of approximately 80,784 gallons is 25 days, with an annual average sludge production of 64,970 lbs. dry sludge produced at 100% capacity. The dewatered sludge will be transported by a registered hauler, JGRS Hauling (TCEQ Sludge Registration ID #26343) to Regional Disposal Landfill (TCEQ Sludge Registration ID #2294) in Collin County, Texas.

Item N/A to this application.

Erwin Madrid

| From: | Hilary Bond <hilary@reuseeng.com></hilary@reuseeng.com> |
|--------------|---|
| Sent: | Sunday, July 7, 2024 8:33 PM |
| То: | WQ-ARPTeam |
| Subject: | WQ0016566001 TPDES Permit App - Corrected Document |
| Attachments: | 10053 XE Photos - CForney.pdf |

To whom it may concern,

I hope you had a wonderful weekend! A TPDES application was submitted Friday, June 28, 2024 for permit number WQ0016566001 for Oak National Holdings, LLC (Cook Additions WWTP). We cannot access the application to be certain, but we believe one of the documents attached may have contained a prior revision that needs to be updated. Please see attached for the correct version of 10053 Attachment E - Original Photographs.

Please let me know if there is anything else needed. It was our first time submitting through STEERS so we believe we included everything necessary but will send additional information if needed. Or, if there is a way to update the application via STEERS, we can do so.

Thank you, Hilary



Office 737-275-2271 *Mobile* 512-285-0302 *Address* 4411 South IH-35 Suite 100, Georgetown, TX 78626

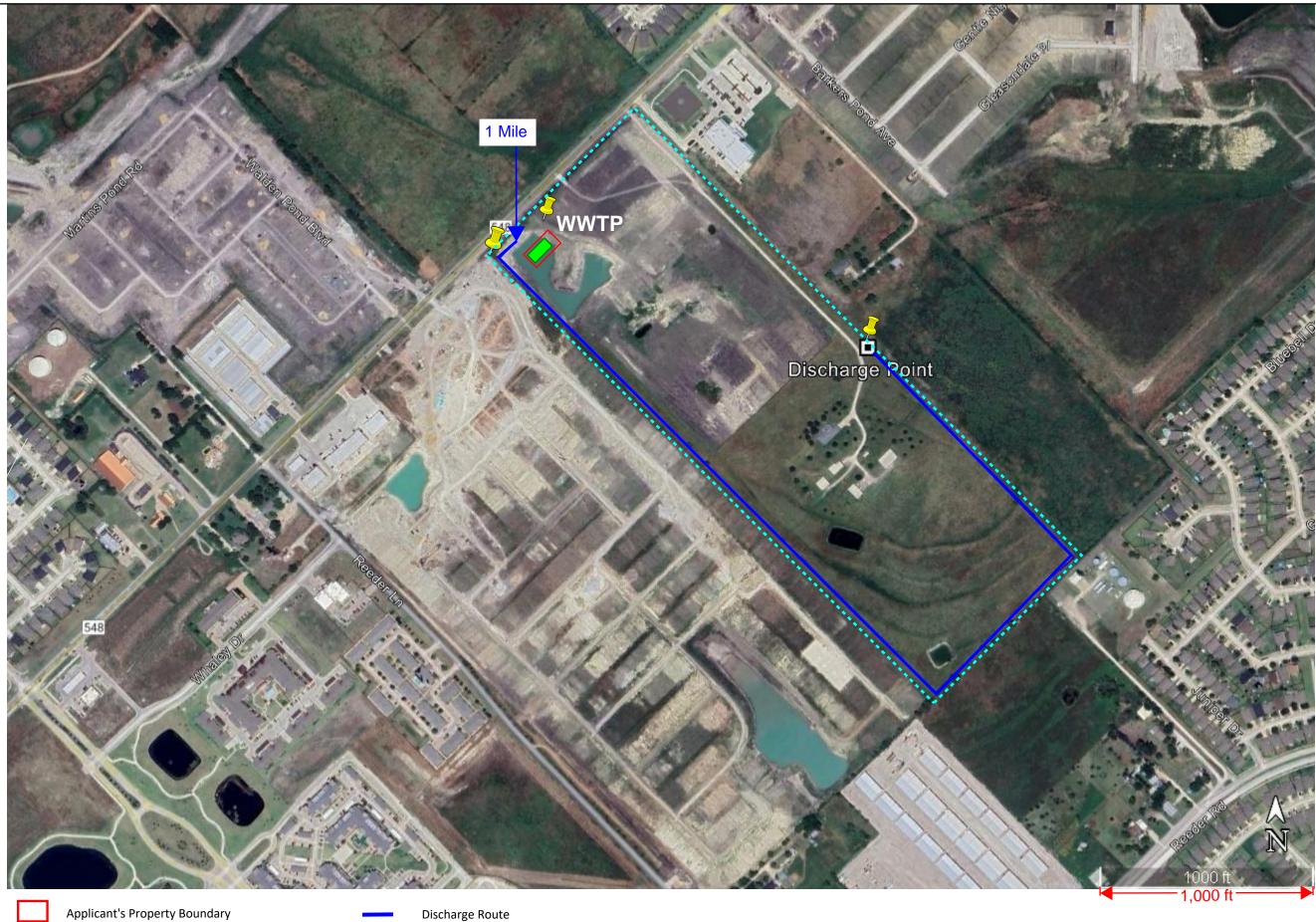








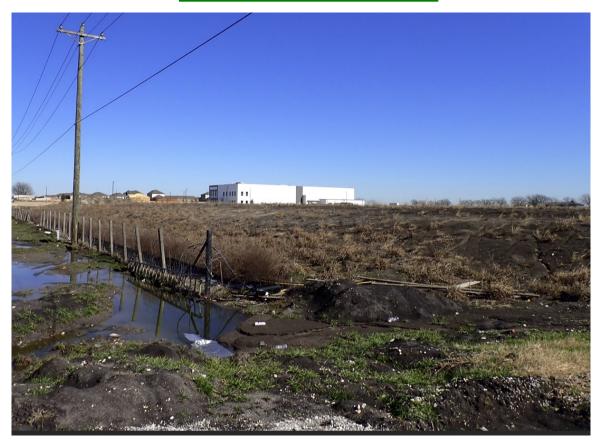
Photo Location

reuse ENGINEERING 4411 SIH 35, Suite 100 Georgetown, TX 78626 TX Firm No. 21880

OAK NATIONAL HOLDINGS, LLC TPDES PERMIT APPLICATION KAUFMAN COUNTY, TEXAS

ORIGINAL PHOTOGRAPHS Attachment E

WWTF



View facing East off FM 548



View to the Southwest

DISCHARGE POINT



View upstream (northwest)



View downstream (southeast)